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Patent Office,
Wellington, 21st June, 1899.

IT is hereby notified that

CHARLES PRENDERGAST KNIGHT, LL.D.,

of Wellington, New Zealand, Solicitor, has been registered as a Patent Agent.

F. WALDEGRAVE,
Registrar.

Notice of Acceptance of Complete Specifications.

Patent Office,
Wellington, 21st June, 1899.

COMPLETE specifications relating to the under-mentioned 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. 10908.—25th August, 1898.—GEORGE MORING WRIGHT, of 54, Lambton Quay, Wellington, New Zealand, Accommodation-house Keeper. An improved utensil for grilling meat, toasting bread, and like purposes.*

Claims.—(1.) In a utensil for grilling meat, a frame provided with a hinged side, the said frame and side being crossed with wires vertically and horizontally, a hinged handle, a securing-loop having a dropper and eye and passing over arms upon the frame and side, an eye upon the arm of the frame large enough to prevent removal of the securing-loop, and feet for raising the utensil, substantially as set forth. (2.) In a utensil for grilling meat, a frame provided with a hinged side, feet upon the hinged side, the said frame and side being crossed with wires vertically and horizontally, a hinged handle, a securing-loop, an eye upon the arm of the frame large enough to prevent removal of the securing-loop, and hinged feet, substantially as set forth. (3.) The improved utensil for grilling meat, toasting bread, and like purposes, consisting of parts constructed, arranged, and combined substantially as set forth.

(Specification, 3s.; drawings, 5s. 6d.

No. 10925.—30th August, 1898.—CHARLES ANKETELL, of 54, Lambton Quay, Wellington, New Zealand, Farmer. An improved potato-planter.*

Claims.—(1.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, blades upon the belt, and a mouldboard, substantially as set forth. (2.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a marker, a lever for raising the mouldboard and the marker, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, blades upon the belt, and a mouldboard, substantially as set forth. (3.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, blades upon the belt divided by a partition and arranged alternately, and a mouldboard, substantially as set forth. (4.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, blades upon the belt, a clutch for throwing the belt out of gear, and a mouldboard, substantially as set forth. (5.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, a tension for tightening the belt, blades upon the belt, and a mouldboard, substantially as and for the purposes set forth. (6.) In a potato-planter, in combination, a frame mounted upon carrying-wheels and a steering-wheel, a driving sprocket-wheel on the carrying-axle, a sprocket-chain, a driven sprocket-wheel, a belt running upon rollers, blades upon the belt, a mouldboard, a box for containing the supply of potatoes, a loose bottom to the box, and chains, handle, and a bar for raising the loose bottom, substantially as set forth. (7.) A potato-planter having a continuous belt or the like operated by the carrying-wheel, and supplied with compartments into which the potatoes may be deposited by hand and then be delivered to the ground behind the mouldboard, substantially as set forth. (8.) The improved potato-planter consisting of parts constructed, arranged, and combined substantially as set forth.

(Specification, 6s. 3d.; drawings, 8s.)

No. 10933.—1st September, 1898.—FRANCIS ELLERSHAUSEN, of 24, Green Street, Blackfriars, London, England, Gentleman. Improvements in the treatment of refractory sulphide ores.*

Claim.—The improved process of smelting refractory sulphide ores in an ordinary cupola or blast furnace consisting in the use, together with the ordinary blast, of an exhaust sufficiently powerful to prevent any zinc accretions forming in the furnace.

(Specification, 1s. 9d.)

No. 10951.—8th September, 1898.—JAMES LANG ANDERSON, of 54, Lambton Quay, Wellington, New Zealand, Farmer. An improved tree-stump extractor.*

Claims.—(1.) In a tree-stump extractor, in combination, a lever pivoted upon a fulcrum-shackle attached to an anchor-stump, and having hauling-shackles provided with claws for engaging the links of a hauling-chain secured to the stump to be extracted, substantially as set forth. (2.) In a tree-stump extractor, in combination, a lever, a drawbar, a fulcrum-shackle and hauling-shackles upon the lever, a chain around the anchor-stump and connected to the fulcrum-shackle, claws connected to the hauling-shackles, a hauling-chain, and a hauling-cable, substantially as set forth. (3.) In a tree-stump extractor, in combination, a lever mounted upon wheels, a fulcrum-shackle and hauling-shackles upon the lever, a chain around the anchor-stump and connected to the fulcrum-shackle, claws having split heads connected to the hauling-shackles, a hauling-chain, and a hauling-cable, substantially as set forth. (4.) A tree-stump extractor consisting of parts constructed, arranged, operating, and combined substantially as set forth.

(Specification, 4s. 3d.; drawings, 8s.)

No. 10975.—15th September, 1898.—JOHN COCKERELL, of Plenty Road, South Yan Yean, Victoria, Blacksmith, and WILLIAM CAIRNS HARPER, of 352, Flinders Lane, Melbourne, Victoria, Merchant. An improved potato-plough.*

Claims.—(1.) In a potato-plough, a circular, pronged, or sifting device as D, supported obliquely on the implement by a central axle, and having rotary motion imparted to it by its rim or points engaging the land during the onward movement of the implement, substantially as described. (2.) In a potato-plough, a circular sifting-device as D, provided with prongs to separate the tubers and earth, and arranged to lie obliquely on the implement in order to deliver the potatoes, substantially as described. (3.) In a potato-plough, in combination, a circular, pronged, or sifting device as D, supported at an oblique angle on the implement by a central axle, and a share as B, having backwardly projecting prongs or fingers which lie adjacent to said circular pronged device, substantially as described and shown. (4.) In a potato-plough, in combination, a circular pronged device as D, furnished with a central axle as D^1, and an adjustable bracket as F supporting the axle-box, secured on the sole-plate of plough, substantially as described and shown. (5.) In a potato-plough, in combination, a circular pronged device as D, and a series of prongs as H arranged to lie above said circular pronged device, substantially as described and shown. (6.) In a potato-plough, a share as B, designed to cut the land under and about a row of potatoes, secured at its top to the beam of plough, and at the fore part of its bottom to the sole-plate, substantially as described and shown.

(Specification, 4s. 9d.; drawings, 11s.)

No. 11059.—13th October, 1898.—MARIE LILIENTHAL SQUIRE, of Fairview, near Timaru, New Zealand, Tesoro Manufacturer. A medicine for the cure of toothache, neuralgia, and suchlike ailments.*

Claim.—A medicine consisting of ground pepper and cayenne pepper, essence of pepper, spirits of wine, ground cloves, essence of vanilla, essence of bergamot, substantially as for the purpose described.

(Specification, 9d.)

No. 11154.—14th November, 1898.—ANDREW MCKAY WATERS, of Gore, Otago, New Zealand, Cover-maker. An improved potato digger, bagger, and separator.

Claims.—(1.) The improved potato-digger consisting of an iron box furnished with a steel sock, in combination with an elevator carrying an endless canvas belt, to which are fixed at regular spaces wooden or iron straps, which receive and carry the potatoes to the top of the elevator, as shown on drawing. (2.) The separators consisting of two riddles having different-sized meshes, and worked by a cog-wheel fixed on to one of the hind wheels of the machine, to which is attached an iron shaft, which causes the riddles to oscillate vertically, and by a reciprocal motion by means of endless belts deliver sideways to the right- and left-hand sides. (3.) As the potatoes arrive at the top of the elevators (Nos. 2 and 3) bags await them which are automatically filled. (4.) The combination and arrangements of the several parts as described, and as shown in the drawings, forming an improved potato digger, and bagger, and separator.

(Specification, 3s. 9d.; drawings, 8s.,

No. 11366.—10th February, 1899.—JAMES BRYSON, of Pumpherston Oil-works, Pumpherston, Midlothian, North Britain, Engineer; JAMES JONES, of Dalmeny Oil-works, Dalmeny, Linlithgow, North Britain, Managing Director; and WILLIAM FRASER, of 24, St. Vincent Place, Glasgow, North Britian, Managing Director of the Pumpherston Oil Company, Limited. Improvements in or relating to retorts for the distillation of shale and other bituminous substances, or for the calcining of ironstone, lime, or other substances, also applicable to gas-producers.

Claims.—(1.) In retorts for the distillation of shale and other bituminous substances, or for the calcining of ironstone, lime, or other substances, forming retorts with a tapered or contracted lower end, having an outlet-hopper with supporting table and movable scraper with the steam-pipe arranged below such table, whereby a retort is produced in which the material within it is prevented from fluxing or dandering during the treatment; said arrangement also enabling all, or nearly all, of the carbon contained in the waste or partly treated material to be decomposed for utilisation in heating the retort, and so practically dispensing with the use of other fuel. (2.) The arrangement and construction of the hopper E, supporting table B, revolving scraper C, and their connections, whereby the material or substance being treated in the retort is intermittently, or continuously or nearly so, discharged from the retort, as described, and shown in Figs. 1, 2, 3 and 10 of the drawings. (3.) The modification of the foregoing consisting of the convexed or curved table G with rocking scraper G^1, and their connections, as described, and shown in Figs. 4 and 5 of the drawings. (4.) The modification consisting of the rectangular table H, with movable push-plate J, and their connections, as described, and shown in Figs. 6 and 7 of the drawings. (5.) The modification consisting of the raised-up or sloping table K, with the two movable push-plates L and their connections, as described, and shown in Figs. 8 and 9 of the drawings. (6.) In retorts of the kind referred to in claim 1, arranging the outlet-openings of two opposite retorts in such a manner that the waste material may be simultaneously discharged into a hutch or conveyer from both retorts, as described and shown in the drawings. (7.) In gas-producers and the like, providing a supporting table and movable scraper, whereby the material being treated is kept in agitation, and so prevented from fluxing or dandering in the producer, and the ashes and clinker removed and discharged without interfering with the production of gas from the producer, as described and shown in Fig. 11 of the drawings. (8.) In retorts for the distillation of shale and other bituminous substances, or for the calcining of ironstone and other substances, providing each pair of retorts with one hopper having an outlet or discharge-door situated at the lower end thereof, whereby the contents of the retorts can be discharged through the said doors, substantially as described, and shown in the drawings. (9.) In retorts of the kind referred to in claim 8, the means for operating the discharge-door of the hopper, substantially as described, and shown in Figs. 12 and 13, and the modifications of the same as shown in Figs. 14 to 19 of the drawings.

(Specification, 8s. 9d.; drawings, £2 12s. 6d.)

No. 11400.—22nd February, 1899.—HENRY AUGUSTUS SCOTT, of 183, Hereford Street, Christchurch, New Zealand, Labourer. Apparatus for sinking post-holes.*

Claim.—An apparatus for sinking post-holes consisting of a cylindrical tube having a longitudinal division, and a cutting-edge on its lower end, said tube having an operating-handle fixed thereto, substantially as and for the purposes described, and illustrated in the drawings.

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

No. 11522.—7th April, 1899.—CHARLES HAROLD HANSEN, of Mackay Street, Greymouth, New Zealand, Sail- and Tent-maker. An improved fastener for horse-covers.

Claim.—The improved method of securing a horse-cover by means of a loose strap passing through two loops (fastened to the cover), thence round the respective thighs of the animal, and fastened at the back of the hind legs, substantially as described, and as illustrated in the drawings.

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

No. 11587.—4th May, 1899.—OSCAR BERNHARD HELLSTRÖM, of Sydney, New South Wales, Clerk. A combined cornice and curtain-hanger.

Claims.—(1.) In combination, a cornice-frame, with or without a hinged top and ends, two articulated folding slips, between which the curtain is placed, and a retaining flange or batten for retaining in the folded position the pleated slips and curtain, as specified. (2.) A suitably ornamented front plate, which is provided with a hinged top and ends, two articulated or jointed slips hinged to the rear side of the front plate and so arranged that they can be folded into pleats, means for securing the free ends of the jointed slips, means for securing and retaining in the folded position the folded slips, and means for securing all the hinged or articulated parts of the appliance firmly together, as and for the purposes set forth. (3.) The general arrangement, construction, and combination of parts in the combined cornice and curtain-hanger as and for the several purposes specified.
(Specification, 2s. 6d.; drawings, 5s. 6d.)

No. 11639.—20th May, 1899.—HENRIETTA SCHNEIDER, of 182, Salisbury Street, Christchurch, New Zealand. An improvement in corsets.

Claim.—A corset fitted with casings consisting of pockets as described, in which supports made of whalebone, steel, steel-wire, cane, or any other material may be inserted.
(Specification, 1s. 3d.; drawings, 3s.)

No. 11656.—26th May, 1899.—LEON SAUBAIN DE CLEENE, of Campbell Street, Palmerston North, New Zealand, Carpenter. An improved lifting-jack.

Claims.—(1.) In lifting-jacks, the combination of pieces whereby motion is transmitted to the bar L by means of the plate A, as per drawing. (2.) The holding-piece A′, which retains the bar L in position during downward motion of A.
(Specification, 1s.; drawings, 3s.)

No. 11664. — 1st June, 1899. — CHARLES CAMPBELL WORTHINGTON, of Dunnfield, Warren County, New Jersey, United States of America, Mechanical Engineer. Improvements in steam-engines.

Claims.—(1.) The combination with two steam-cylinders of a valve-device carrying a valve or valves controlling the ports of both cylinders, pistons on said device for moving it in opposite directions, and valve mechanism controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (2.) The combination with two steam-cylinders of a valve-device carrying a valve or valves controlling the ports of both cylinders, pistons at opposite ends of said device, and separate valves controlling the admission and exhaust of steam outside said pistons for moving the device in opposite directions, substantially as described. (3.) The combination with two steam-cylinders of a valve-device carrying a valve or valves controlling the ports of both cylinders, pistons on said device for moving it in opposite directions, and valve mechanism mechanically actuated by the engine and controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (4.) The combination with two steam-cylinders of a valve-device carrying a valve or valves controlling the ports of both cylinders, pistons at opposite ends of said device, and separate valves mechanically actuated by the engine and controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (5.) The combination with two steam-cylinders of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons at opposite ends of said device, and separate valves mechanically actuated by the engine and controlling the admission and exhaust of steam outside said pistons for moving the valves in opposite directions, substantially as described. (6.) The combination with two steam-cylinders of a piston-valve device carrying a piston-valve or -valves controlling the ports of both cylinders, pistons on said device for moving it in opposite directions, and valve mechanism mechanically actuated by the engine and controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (7.) The combination with two steam-cylinders of separate piston-valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said device for moving it in opposite directions, and valve mechanism controlling the admission and exhaust of steam for actuating said pistons to move the valves, substantially as described. (8.) The combination with two steam-cylinders of separate piston-valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said device for moving it in opposite directions, and valve mechanism mechanically actuated by the engine and controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (9.) The combination with high- and low-pressure cylinders arranged side by side, their steam-ports, and connections for conducting exhaust steam from the high-pressure cylinder to the low-pressure cylinder, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said device for moving it in opposite directions, and valve mechanism for controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (10.) The combination with high- and low-pressure cylinders arranged side by side, their steam-ports, and connections for conducting exhaust steam from the high-pressure cylinder to the low-pressure cylinder, of separate valves controlling the ports of the two cylinders, and connected to move as a single device, pistons on said device for moving it in opposite directions, and valve mechanism mechanically actuated by the engine and controlling the admission and exhaust of steam for actuating said pistons, substantially as described. (11.) The combination with high- and low-pressure cylinders arranged side by side, their steam-ports and connections for conducting exhaust steam from the high-pressure cylinder to the low-pressure cylinder, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons at opposite ends of said device, and separate valves mechanically actuated by the engine and controlling the admission and exhaust of steam outside said pistons for moving the valves in opposite directions, substantially as described. (12.) The combination with the pump-cylinders, plungers, and rocking-beam of a direct-acting beam-pump, and a steam-cylinder and piston on one or both sides of the pump, of a valve-device controlling the steam-ports, pistons on said device for moving it in opposite directions, and valve mechanism actuated by a moving part of the pump and controlling the admission and exhaust of steam for actuating said pistons on said device, substantially as described. (13.) The combination with the pump-cylinders, plungers, and rocking-beam of a direct-acting beam-pump, and a steam-cylinder and piston on one or both sides of the pump, of a valve-device controlling the steam-ports, pistons at opposite ends of said device, separate valves controlling the admission and exhaust of steam outside said pistons for moving the valve-device in opposite directions, and means for actuating said separate valves from a moving part of the pump, substantially as described. (14.) The combination with the pump-cylinders, plungers, and rocking-beam of a direct-acting beam-pump, and a steam-cylinder and piston on one or both sides of the pump, of a piston-valve device controlling the steam-ports, valve-actuating pistons on said device, control-valve mechanism controlling the admission and exhaust of steam outside said valve-actuating pistons for moving the valve-device in opposite directions, and means for actuating said control-valve mechanism from a moving part of the pump, substantially as described. (15.) The combination with the steam- and pump-cylinders, pistons, and plungers on opposite sides, and the rocking-beam of a direct-acting beam-pump, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said device for moving it in opposite directions, valve mechanism controlling the admission and exhaust of steam for actuating said pistons, and means for actuating said valve mechanism from a moving part of the pump, substantially as described. (16.) The combination with the steam- and pump-cylinders, pistons, and plungers on opposite sides, and the rocking-beam of a direct-acting beam-pump, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons at opposite ends of said device, separate control-valves controlling the admission and exhaust of steam outside said pistons for moving the valves in opposite directions, and means for actuating said control-valves from a moving part of the pump, substantially as described. (17.) In a compound direct-acting beam-pump, the combination with the high- and low-pressure cylinders arranged side by side, their steam-ports and connections for conducting exhaust steam from the high-pressure cylinder to the low-pressure cylinder, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said device for moving it in opposite directions, valve mechanism for controlling the admission and exhaust of steam for actuating said pistons, and means for actuating said valve mechanism from a moving part of the pump, substantially as described. (18.) In a compound direct-acting beam-pump, the combination with the high- and low-pressure cylinders arranged side by side, their steam-ports, and connections for conducting exhaust steam from the high-pressure cylinder to the low-pressure cylinder, of separate valves controlling the ports of the two cylinders and connected to move as a single device, pistons on said member for moving it in opposite directions, separate control-valves controlling the admission and exhaust of steam for actuating said pistons, and means for actuating said control-valves

from a moving part of the pump, substantially as described. (19.) The combination with a steam-cylinder and its steam-piston and valve of a valve-actuating piston on the valve-rod, and valve mechanism actuated by the steam-piston and controlling the admission and exhaust of steam for moving the valve-actuating piston, said valve mechanism having separate ports for the admission and exhaust of steam, substantially as described. (20.) The combination with a steam-cylinder and its steam-piston and valve of valve-actuating pistons on the valve-rod at opposite sides of the valve, and valve mechanism actuated by the steam-piston and controlling the admission and exhaust of steam outside said pistons for moving the valve in opposite directions, said valve mechanism having separate ports for the admission and exhaust of steam, substantially as described. (21.) The combination with a steam-cylinder and its steam-piston and valve of valve-actuating pistons on the valve-rod, and separate valves for the valve-actuating pistons actuated by the steam-piston and controlling the admission and exhaust of steam for moving the valve in opposite directions, substantially as described. (22.) The combination with two steam-cylinders arranged side by side of valve mechanism for said cylinders, a single steam-chest for said cylinders, and steam-ports for the cylinders controlled by said valve mechanism for admitting steam to one or both of the cylinders independently of the space within the valve-chest, and for exhausting one or both of said cylinders to the space within the valve-chest, substantially as described. (23.) The combination with two steam-cylinders arranged side by side of separate valves for said cylinders, a single steam-chest for said cylinders, and separate steam-ports for the cylinders controlled by said valves for admitting steam to one or both of the cylinders independently of the space within the valve-chest and for exhausting one or both of said cylinders to the space within the valve-chest, substantially as described. (24.) The combination with two steam-cylinders arranged side by side of a steam-chest having valve-chambers and ports for the two cylinders at opposite ends of the chest, piston-valves for the two cylinders in said chambers, and means for moving said valves in opposite directions, substantially as described. (25.) The combination with two steam-cylinders arranged side by side of a steam-chest having valve-chambers and ports for the two cylinders at opposite ends of the chest, piston-valves for the two cylinders in said chambers, and connections between the valves whereby the valves move together in both directions, substantially as described. (26.) The combination with high- and low-pressure cylinders arranged side by side of a single steam-chest for the cylinders, valves for the two cylinders, and steam-ports for the cylinders controlled by said valves to admit steam to the high-pressure cylinder independently of the space within the steam-chest, and to exhaust the high-pressure cylinder into the space within the steam-chest, and to admit steam to the low-pressure cylinder from the space within the steam-chest, and to exhaust the low-pressure cylinder independently of the space within the steam-chest, substantially as described. (27.) The combination with the steam-cylinder A of steam-chest G, having valve-chamber K, piston-valve L, in said chamber, admission-port H connecting with the valve-chamber independently of the space within the steam-chest, exhaust-port I communicating with the space within the steam-chest, and ports controlled by said valve for admitting steam to the cylinder from admission-port H and for exhausting steam from cylinder A to the space within the steam-chest, substantially as described. (28.) The combination with the high- and low-pressure cylinders A, A^1, of steam-chest G, valve-chambers K, K^1, at opposite ends of the steam-chest and opening into the space between the valve-chambers, piston-valves L, L^1, in said valve-chambers, admission-port H connecting with the valve-chamber K independently of the space between the valve-chambers, exhaust-port I communicating with the valve-chamber K^1, and ports controlled by said valves for admitting steam to the cylinder A from admission-port H and exhausting into the space between the valve-chambers and for admitting steam from the space between the valve-chambers to the cylinder A^1 and exhausting from the cylinder A^1 to the exhaust-port I, substantially as described. (29.) The combination with the high- and low-pressure cylinders A, A^1, of steam-chest G, having valve-chambers K, K^1, at opposite ends of the steam-chest and opening at their inner ends into the space between the valve-chambers, exhaust-passage i^2, and admission-passage k^2, connecting the outer ends of the valve-chambers with the space between the valve-chambers, admission-port H communicating with the valve-chamber K, exhaust-port I communicating with the valve-chamber K^1, and ports controlled by said valves for admitting steam from admission-port H to the cylinder A, and exhausting from cylinder A to the space between the valve-chambers from the inner end of valve-chamber K or through passage i^2, and for admitting steam to the cylinder A^1 from the space between the valve-chambers through the inner end of the valve-chamber K or through passage k^2, and for exhausting from cylinder A^1 through exhaust-port I, substantially as described. (30.) Steam-chest G, having valve-chambers K, K^1, and piston-valves L, L^1, in said chambers and connected together, pistons M, M^1, outside the valves, and steam-chambers for said pistons, substantially as described. (31.) Steam-chest G, having valve-chambers K, K^1, and piston-valves L, L^1, in said chambers and connected together, piston M, M^1, outside the valves, steam-chambers for said pistons, admission- and exhaust-ports for said steam-chambers, and control-valves m, m^1, at opposite ends of the steam-chest, substantially as described. (32.) Steam-chest G, having valve-chambers K, K^1, and piston-valves L, L^1, in said chambers and connected together, pistons M, M^1, outside the valves, admission- and exhaust-ports 1, 2, 3, 4, at opposite ends of the steam-chest for admitting and exhausting steam outside said pistons, and control-valves m, m^1, substantially as described. (33.) Steam-chest G, having steam-ports for two cylinders at opposite ends, and admission- and exhaust-ports H, I, and valves controlling the ports for admitting steam from port H independently of the space within the steam-chest between the valves, and for exhausting through said space, substantially as described. (34.) Steam-chest G, having valve-chambers K, K^1, for two cylinders at opposite ends, admission- and exhaust-ports H, I, and ports connecting the cylinder-ports with the admission- and exhaust-ports H, I, of the valve-chest, and connected piston-valves L, L^1, in said valve-chambers, substantially as described. (35.) Steam-chest G, having ports for two cylinders at opposite ends, admission-port H connecting with one of the cylinders, exhaust-port I connecting with the other cylinder, and ports connecting each of said cylinders with the space within the valve-chest for conducting the exhaust from one cylinder through the valve-chest to the other cylinder, substantially as described. (36.) Steam-chest G, having valve-chambers K, K^1, at opposite ends, admission- and exhaust-ports H, I, connecting respectively with valve-chambers K, K^1, ports for connecting said valve-chambers with the steam-cylinder ports of two steam-cylinders, and passages i^2, k^2, connecting the outer exhaust-port of chamber K and the outer admission-port of chamber K^1 with a receiver between the chambers with which the inner ports of the chambers connect, substantially as described. (37.) The combination with the steam- and pump-cylinders, pistons, plungers, and rocking-beam of a direct-acting beam-pump, of admission- and exhaust-ports for the steam-cylinders arranged to secure the closing of the exhaust-port in each cylinder by the piston for cushioning at only one end of each cylinder, substantially as described. (38.) The combination with the steam- and pump-cylinders, pistons, plungers, and rocking-beam of a direct-acting beam-pump of a single port forming the admission- and exhaust-port for each end of each cylinder, the port at one end only of each cylinder being arranged to be closed by the pistons to cushion the latter, substantially as described. (39.) The combination with the vertical steam- and pump-cylinders, pistons, plungers, and rocking-beam of a vertical direct-acting beam-pump, of a single port forming the admission- and exhaust-port for each end of each cylinder, the port at the upper end only of each cylinder being arranged to be closed by the pistons to cushion the latter, substantially as described. (40.) The combination with the steam- and pump-cylinders, pistons, plungers, and rocking-beam of a direct-acting beam-pump, of a single port at each end of each cylinder forming the admission- and exhaust-port, said port at one end of each cylinder having a main exhaust-connection with the cylinder closed by the piston as it approaches the end of its stroke for cushioning, and another connection with the cylinder outside of and not closed by the piston, substantially as described. (41.) The combination with two steam-cylinders and their pistons, and a rocking-beam connecting said pistons, of ports for the admission and exhaust of steam, a valve mechanism arranged to permit the free exhaust of steam during the main part of each stroke, and arranged to cushion each piston by the exhaust steam at one end only of each cylinder, and to permit the slow exhaust of the cushioning steam and the admission of steam behind the piston for beginning the next stroke, substantially as described. (42.) The combination with two steam-cylinders, pistons, and piston-rods, and a rocking-beam connecting said piston-rods, of single admission- and exhaust-ports k, l, k^1, l^1, for the respective cylinders, said ports k, k^1, having a connection with the cylinder closed by the piston as it approaches the end of its stroke, passages 7 connecting said ports k, k^1, with the cylinder-ports 6 beyond the movement of the piston, and adjustable valves for controlling said port 6, substantially as described. (43.) In a steam or similar engine, the combination with the steam-chest and steam-actuated valve therein of a starting-device extending outside the steam-chest, and stationary during the operation of the engine, substantially as described. (44.) In a steam or similar engine, the combination with the steam-chest and

steam-valve therein of a starting-lever extending outside the steam-chest, and having an arm within the steam-chest between abutments connected to the valve, and arranged to engage one of said abutments for moving the valve in either direction when the lever is operated, and out of the path of movement of the abutments when in its normal position, whereby the lever is stationary during the operation of the engine, substantially as described. (45.) In a beam-engine, the combination with a rod made in two parts of connecting-piece x, beam F, link y connected to the connecting-piece x, and pivot 14 connecting the end of the beam F to the link y and extending through an opening in the connecting-piece x formed to permit the movement of the pivot across the line of the rod, substantially as described. (46.) In a beam-engine, the combination with a divided rod of piece x for the beam connection, having the internally threaded split hub 10 for receiving the threaded end of one part of the rod, and one or more clamping-bolts 12 for clamping the hub upon the rod, substantially as described.

(Specification, £1 14s.; drawings, £1 6s.)

No. 11670.—5th June, 1899.—GEORGE ARTHUR PEARSON, of 54, Lambton Quay, Wellington, New Zealand, Engineer. Improvements in hand signalling-lamps.

Claims.—(1.) In hand signalling-lamps, a weight fixed to an inner casing capable of revolving, the said weight being placed at a distance from the axis of the casing, substantially as set forth. (2.) In hand signalling-lamps, in combination, an outer casing, an inner casing capable of revolving, a weight fixed to the inner casing near its circumference, and a catch for securing the inner casing, substantially as set forth. (3.) In hand signalling-lamps, in combination, an outer casing, an inner casing capable of revolving upon pivots, one of which is removable, a weight fixed to the inner casing near its circumference, and a catch for securing the inner casing by engaging in notches in the inner casing, substantially as set forth. (4.) In hand signalling-lamps, in combination, an outer casing, an inner casing capable of revolving upon pivots, a weight fixed to the inner casing near its circumference, a catch for securing the inner casing, and a lamp-carrier having a stem for forming a stop for the inner casing, substantially as set forth. (5.) The improvements in hand signalling-lamps consisting of parts constructed, arranged, and operating substantially as set forth.

(Specification, 4s. 9d.; drawings, 8s. 6d.)

No. 11675.—6th June, 1899.—MICHAEL GAFFY, of Glanmore Park, Mooroopna, Victoria, Orchardist. Improvements in pruning-shears.

Claims.—(1.) Pruning-knives having rebated lever-handles, as A1, B1, with blades, as A, B, having their outer faces bevelled and their inner faces on a plane, and arranged to cut equally towards one another, means for maintaining a constant pressure of the blades against one another, substantially as set forth. (2.) In combination, two cutting-blades, as A, B, attached to or forming part of rebated handles, as A1, B1, secured together by pin, as D, and nut, as E, having tangentially toothed rim, as F, and a pawl, as G, centred upon a handle for engaging with same, and a spring set within recesses formed in the handles, substantially as described, and as illustrated on the sheet of drawings.

(Specification, 2s. 9d.; drawings, 5s. 6d.)

No. 11679.—6th June, 1899.—THE "NEILD" SLEEVE ELECTRIC JOINT SYNDICATE, LIMITED, of Bloomfield House, London Wall, London, England, Manufacturers (assignees of Harry William Neild, of 89, Blackheath Road, Kent, England, Engineer). Improved joint for telegraph and other wires conveying electricity.

Claims.—(1.) A sleeve open at one side for part of its length, and coated internally with solder. (2.) The combination of a sleeve open at one side for part of its length, two conductors lying side by side in the sleeve, and solder filling the interstices between the conductors and the sleeve. (3.) The combination of a sleeve open at one side for part of its length, two conductors lying side by side in the sleeve, their ends protruding beyond the sleeve, and being bent at an angle to their length, and solder filling the interstices between the conductors and the sleeve. (4.) Joints for electric conductors substantially as described, and illustrated in the drawings.

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

No. 11680.—6th June, 1899.—HORACE LENOARD SHORT, of New Malden, Surrey, England, Consulting Mechanical Engineer. Improvements in methods of and apparatus for increasing the volume of sounds from telephonic or phonographic instruments, and transmitting such sounds to distances.

Claims.—(1.) The reproduction upon a magnified scale of sounds, articulate, musical, or of any kind (obtained in the usual way in the first place by the vibration, by means of such sounds, of the diaphragms of telephones, telephonic instruments, or the like), by causing vibrations produced by such sounds to produce corresponding synchronous undulations in a column of air, steam, gas, or vapour, which consequently gives forth through a trumpet-shaped or other distributing mouthpiece sounds identical with the originating sounds, but very much magnified or increased in volume and power. (2.) In the reproduction upon a magnified scale of sounds, articulate, musical, or of any kind, as claimed in claim 1, the recording of such magnified sounds upon the cylinders or discs of phonographic apparatus, from which they can be reproduced whenever desired. (3.) In the reproduction upon a magnified scale of sounds, articulate, musical, or of any kind, as described and claimed in claim 1, the method of further magnifying such sounds by using them to cause the corresponding vibration of additional diaphragms, the vibrations of which are used to reproduce corresponding sounds still more magnified. (4.) For the purpose of reproducing upon a magnified scale sounds, articulate, musical, or of any kind, the apparatus consisting of a receiving telephonic diaphragm g, chamber a, cylinder b, cylindrical valve c having a flange c^1, larger cylinder d, valve e, openings c^3 and f, cap l, spring m, opening n, chamber o, inlet-passage a^1 and outlet-passage p, substantially as described, and illustrated in Fig. 1 of the drawing. (5.) In apparatus of the kind described in claim 4 and illustrated in Fig. 1, the use, instead of the vibrating telephonic diaphragm g, of a phonographic cylinder having the sounds to be reproduced in a magnified form recorded by depressions upon its surface, such depressions operating the valve c when the cylinder is revolved at the proper speed, substantially as described. (6.) In apparatus of the kind described and claimed in claim 4, in combination with the diaphragm g, chamber a, cylinder b, cylindrical valve c having a flange c^1, larger cylinder d, valve e, openings c^3 and f, cap l, springs m, and openings n, the spindle r, operated by the valve e, and causing a cutting point or tool s to cut helically upon a revolving phonographic cylinder t deep depressions corresponding with the vibrations of the sound-operated diaphragm g, and capable of reproducing such sounds upon a magnified scale by means of a suitable phonographic diaphragm, substantially as described, and illustrated in Fig. 2 of the drawings. (7.) In apparatus of the kind described in claim 6, the use, instead of the vibrating telephonic diaphragm g, of a phonographic cylinder having the sounds to be reproduced in a magnified form recorded by depressions upon its surface, such depressions operating the valve c when the cylinder is revolved at the proper speed, substantially as described. (8.) In apparatus of the kind described and claimed in claim 1, the modification consisting of a mouthpiece u, the telephonic diaphragm g, chamber a, cylinder b, valve c, larger valve e, spindle r, cap l, and escape-passage p for a column of air, steam, gas, or vapour forced in through the inlet-passage a^1, in which column undulations are produced by the movements of the valve c, the sounds being reproduced in a greatly magnified form by such column passing from d to a distributing trumpet-shaped opening, whilst the spindle r attached to the valve e may be used either (1) for transmitting the movements of the valve to a second diaphragm of a kind similar to g, which operates a second valve similar to valve c, by which means undulations are caused in a second more powerful column of air, steam, gas, or vapour, and the sounds are still further magnified, or (2) for actuating a cutting-instrument by which records are cut upon a revolving phonographic cylinder in the manner illustrated in Fig. 7, substantially as described and illustrated. (9.) For the purpose of reproducing and largely magnifying the sounds, articulate by means of the human voice, musical, or of any kind, produced in the diaphragm of a receiving telephonic instrument, the combination of the mouthpiece u, the vibrating diaphragm g, chamber a, inlet-passage a^1 through which air, steam, gas, or vapour is forced, partition x having parallel openings through it, valve y consisting of tongues fitting such openings, spindle v connecting the valve y with the diaphragm g, cap w, spring m, and sound-delivery opening z, substantially as and for the purpose described, and illustrated in Figs. 8, 9, 10, 11, and 12 of the drawings. (10.) In the apparatus described and claimed in claim 9, and illustrated in Fig. 8, the substitution for the mouthpiece u and diaphragm g of the cutting-instrument M operated by a phonographic cylinder N, upon which the sounds to be reproduced in a magnified form have formed or cut depressions helically round the cylinder by means of a

phonograph, substantially as described, and illustrated in Figs. 13 and 14 of the drawings. (11.) In apparatus of the kind described and claimed in claim 1, the modification consisting of a diaphragm *g* vibrated by the sounds to be reproduced, chamber *a*, valve *c*, larger valve *e*, arranged and operating as described, and illustrated in Fig. 1, in combination with the larger valve H, spindle *r*, spring *m*, valve-seat *x*, valve *y* attached to spindle *r*, inlet-opening a^1 into which air, steam, gas, or vapour is forced, pipe F communicating with a chamber round the valve *c*, discharge-openings *n*, and trumpet-shaped sound-distributing opening *z*, substantially as described, and illustrated in Fig. 15. (12.) In apparatus in which undulations are produced in a column of air, steam, gas, or vapour by means of a valve operated by the vibrations of the diaphragm of a telephone or telephonic instrument caused by sound, or by the movements of a point or stylus over the depressions made upon a phonographic cylinder or disc by sound, the combination with the valve so operated of an additional vibrating disc or diaphragm fixed at a short distance from the valve and having perforations through it, substantially in the manner and for the purpose described, and illustrated in Figs. 19 and 20 of the drawings. (13.) The apparatus for reproducing musical notes upon a magnified scale by means of a revolving cylinder having such notes recorded upon its surface, in the form of parallel rings of depressions made by means of a phonographic instrument, each ring of depressions representing a separate note, and actuating or setting into vibration a tongue which covers an opening through which a column of air, steam, gas, or vapour is forced, in which column corresponding undulations are caused, reproducing upon a magnified scale the original note represented by the ring of depressions, pins upon or connected with the vibrating tongues being brought into contact with the corresponding ring of depressions round the cylinder by means of keys upon a keyboard depressed by a performer, so that as each key is depressed a corresponding note is sounded of any desired loudness, or if two or more keys are depressed simultaneously a corresponding number of notes forming chords or harmonies are produced, substantially as described. (14.) In apparatus of the kind described and claimed in claim 13, the use of sets of several adjoining rings of depressions round the cylinder for each note, all the rings in such set representing the same note in the musical scale, but each being produced by a different musical instrument, voice, or combination of instruments or voices, or both, and a separate vibrating tongue being provided for each ring of depressions, and being set in vibration when required to produce corresponding undulations in a column of air, steam, gas, or vapour, the tongues corresponding with all the notes relating to each particular instrument or character of tone being capable of being made to vibrate singly or in any number by being brought in contact when required with the particular rings of depressions corresponding with them by means of keys arranged upon a keyboard, and depressed by a performer, substantially as described. (15.) In apparatus of the kind described and claimed in claims 13 and 14, the combination of a cylinder 1, having round its circumference rings or sets of rings of depression 9, 10, 11, formed by the action of sound in a phonographic instrument, each set of rings being produced by the same note, but each ring of such set being produced by that note from a different instrument; longitudinal chambers 4, as many in number as the different instruments whose tone is to be reproduced; movable plates 12, springs 13, tongues 15, and points 16, the tongues in each of the chambers 4 being actuated by the rings of depressions relating to that chamber or to the instruments whose tone it is to reproduce; bars 18, pivoted bell-cranks 21, wires 24, and handle 19, all arranged and operating so that undulations corresponding with the vibrations of the tongue or tongues are communicated to a column of air, steam, gas, or vapour forced into the space 25, and discharged through the passage and dispersing-tube 5, 6, and 7, substantially in the manner and for the purpose described, and illustrated in Figs. 16, 17, and 18 of the drawings. (16.) In the apparatus described and claimed in claim 15, the combination with the sets of rings of depressions round the cylinder 1, chambers 4, plates 12, tongues 15 and points 16, bar 18, pivoted bell-cranks 21, and wires 24, of the separate rings 22, having openings operating the bell-cranks 21, each ring caused to move round separately on its axis by the depression by the performer of the particular key or note upon the keyboard to which it relates, substantially in the manner and for the purpose described, and illustrated in Figs. 16, 17, and 18 of the drawings. (17.) In the apparatus described and claimed in claims 15 and 16, and illustrated in Figs. 16, 17, 18, the substitution for the plates 12, vibrating tongues 15, and points 16, of small piston-valves resembling those shown at *c* in Fig. 1, to which rapid movements backward and forward can be communicated by bringing points connected with them into contact with the particular rings of depression to which each is related, the said piston-valves producing in the ways already described corresponding undulations in a column of air or other elastic fluid, each of the chambers containing the small piston-valves being connected with one of the keys of the keyboard, so that the valve can be made to oscillate backward and forward when required, by being brought into contact with the corresponding ring of depressions when the key is depressed, substantially in the manner and for the purpose described.

(Specification, £1 10s.; drawings, £1 6s.)

No. 11683.—6th June, 1899.—FRASER AND CHALMERS, LIMITED, of 43, Threadneedle Street, London, England, Engineers and Manufacturers (assignees of Ross Egerton Browne, of Nevada Block, San Francisco, California, United States of America, Engineer, but at present of Hotel Cecil, London, England). Improved means for raising water from mine-shafts or other places.

Claims.—(1.) The improved means of raising water from mine-shafts or other places consisting of a vacuum-tank adapted to be raised and lowered in the shaft, a vacuum-producer adapted to create a vacuum in said tank, and means for dumping or discharging the water from the tank when same has been raised, substantially as described. (2.) In an apparatus for raising water from mines or shafts, the combination of a frame at the head of the shaft, a tank supported upon the frame adapted to be raised and lowered in the shaft, and having a suction-pipe communicating with the tank and depending therefrom, a vacuum-generator at the shaft-head, an adjustable pipe connecting the vacuum-generator with the tank, hoisting mechanism, and a flexible connection between such mechanism and a tank, substantially as described. (3.) In an apparatus for raising water from mines or shafts, the combination of a frame at the head of a shaft, a tank supported upon a frame adapted to be raised and lowered in the shaft, said tank having a suction-pipe, and a valve-controlled discharge-opening at its lower end, a vacuum-generator at the shaft-head, an adjustable pipe connecting the generator with the tank, hoisting mechanism for raising and lowering the tank, and means for automatically opening the discharge-opening of the tank when the same reaches the discharge-point in its upward movement, substantially as described.

(Specification, 4s. 3d.; drawings, 6s.)

No. 11692.—8th June, 1899.—EDWARD LLOYD PEASE, of the Parkfield Works, Stockton-on-Tees, Durham, England, Engineer. Roofs and the like structural work.

Claims.—(1.) In a structural arrangement adapted for use as the framework of a roof, the combination with ordinary struts and tie-bars of slotted tubular rafters *c*, whereby a shell covering is readily interlocked to principals of great strength, simplicity of construction, and lightness, substantially as described, and illustrated by way of example in Figs. 1, 3, 4, and 12. (2.) In the construction of roofs and other structural arrangements having slotted tubular rafters or the like tubular elements in the framework thereof, the combination with longitudinally slotted tubes of panels interlocked therewith by inset edges or angle-strips, and stiffeners such as *e* inserted between the said slotted tubes, whereby tension is imparted to the panels and rigidity to the general structure, substantially as described and illustrated in Fig. 2. (3.) In the construction of roofs having slotted tubular rafters, the combination with said rafters of upper and under panels *d* and *d'* interlocked therewith by inset edges, the said panels being of a different curvature to enclose a crescent-shaped space, supported by partitions *h* and preferably by stiffeners *e*, substantially as described with reference to Figs. 5, 15, and 16. (4.) In combination with slotted tubular rafters or the like beam-like elements, of panels interlocked therewith by inset edges of distance-pieces such as *j*, running the whole length of the joint between the edges of the adjoining panels or places at intervals, the said distance-pieces taking the form of a double-headed rail fitting between the inset edges of adjoining panels, and thereby imparting increased rigidity to the structure, substantially as described, and illustrated in Fig. 7. (5.) In combination with slotted tubular rafters or the like beam-like elements, of panels interlocked therewith by inset edges, of distance-pieces such as *k* running the whole length of the joint between the edges of the adjoining panels or placed at intervals, the said distance-pieces taking the form of a rail-head, with sides or webs constricted and set out to follow the contour of the inset edges of the panels, and thereby imparting rigidity to the structure, substantially as described, and illustrated in Fig. 8. (6.) In a structural arrangement adapted for use as the framework of a roof, and leaving the headway or span clear of obstruction, the combination with struts and tie-bars arranged externally to the span of the roof of slotted tubular rafters *c*, whereby a shell covering is readily interlocked to

principals of great strength, simplicity of construction, and lightness, substantially as described, and illustrated by way of example as to the main construction in Figs. 17 and 22, and by way of detail in Figs. 18, 19, and 23. (7.) In a structural arrangement as characterized by claim 6, the use of slotted tubular rafters set to a curve requiring no ties or struts, whereby a shell covering is readily interlocked to principals of great strength, simplicity, and lightness, and without rivets or bolts on the roof-surface, substantially as described, and illustrated in Fig. 20, and by way of detail in Fig. 21. (8.) In roofs and the like structural work, the use, in substitution of slotted tubes and panels interlocked therewith by inset flanges, of beams or bearers recessed between upper and lower flanges for the reception of the panel-edge, interlocked tongue-and-groove fashion into the upper flange by wedges and the wedge-shaped ends of stiffeners, substantially as described, and illustrated by way of example in Figs. 24 and 25.

(Specification, 12s. 6d.; drawings, £1 2s.)

No. 11693.—4th November, 1898.—GUY DE BECHI, of 17, Boulevard de la Madeleine, Paris, France, Chemical Engineer. Improvements in the treatment of complex ores.

[NOTE.—This is an application under section 106 of the Act, the date given being the official date in Great Britain.]

Claims.—(1.) The method of treating ores consisting in roasting the ore and an alkaline chloride salt in separate furnaces into which steam is injected, passing the vapours and gases from the ore over and in contact with the salt so as to produce a sulphate, recovering the gases finally issuing from the roasting-chamber, lixiviating the roasted ore with the liquor containing said gases, and separating the metals dissolved in said liquor by fractional precipitation, substantially as described. (2.) In the method referred to in claim 1, the mixture of pyrites with the ore, substantially as and for the purposes specified. (3.) The method of treating complex ores for the recovery of metals therefrom substantially as described and for the purposes specified.

(Specification, 7s. 6d.)

No. 11694.—8th June, 1899.—ALFRED MALLABONE LINNEY, of Bedworth, Warwickshire, England, Ironmonger. Improvements in or relating to pneumatic-tire air-tubes and the like.

Claims.—(1.) A detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, consisting of a flexible and sufficiently incompressible ring at one end of the tube, overlapped by the other end of the tube. (2.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, a flexible and sufficiently incompressible ring formed on one end of the tube, or the like. (3.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, a flexible and sufficiently incompressible ring attached to one end of the tube, or the like. (4.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, a flexible and sufficiently incompressible ring placed within and separable from one end of the tube, or the like. (5.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, comprising a ring of the kind referred to, forming such ring with one or more circumferential grooves. (6.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, forming the overlapping end of reduced transverse circumference. (7.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, providing the overlapping end with one or more strengthening ribs or bands. (8.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, providing the overlapping end with one or more contracted portions or corrugations. (9.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, contracting the overlapping end on to the ring by the elasticity of such overlapping end. (10.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, contracting the overlapping end on to the ring by means of elastic bands or cords, or the like. (11.) In a detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, smearing the contacting surfaces with birdlime or a like adhesive. (12.) A detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, constructed substantially as described with reference to Figs. I. and II. of the drawings. (13.) A detachable joint for a continuous-chambered pneumatic-tire air-tube, or the like, constructed with the modifications substantially as described with reference to Fig. III. of the drawings.

(Specification, 5s.; drawings, 3s.)

No. 11697.—8th June, 1899.—THOMAS CLEMENTS, of Launceston, Tasmania, Superintendent of Launceston Benevolent Asylum. Improvements in door-adjusting apparatus.

Claims.—(1.) In mechanism for holding in position, or controlling the movements of, hinged doors and gates of every description, when open or unfastened, the combination of the following essential parts: A bolt, or bar, enclosed in a suitable casing, in which it slides vertically and freely, carrying at its lower end a rubber-faced wheel or roller, which travels on the floor or ground, and is pressed firmly down thereto by a spiral spring coiled within the said casing, substantially as described by this specification and illustrated by drawings. (2.) In mechanism as referred to in claim 1, and in connection with the combination of parts therein described, an adjusting screw or nut, fitted into a screw-thread in the upper end of the casing, and regulating the pressure of the wheel on the floor or ground by either compressing or relaxing the spiral spring which exerts that pressure, substantially as described, and illustrated by drawings. (3.) In mechanism as referred to in claim 1, and in connection with the combination of parts therein described, or the further combination included in claims 1 and 2, a crank-arm, or eccentric disc and strap, attached to the door-handle and connected with the upper end of the sliding bolt in such a way that on turning the handle to open the door the bolt and wheel are raised clear of the floor or ground, and remain inoperative until the handle is released, the spiral spring then bringing the wheel down instantly to the floor or ground again, substantially as described, and illustrated by drawings.

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

No. 11702.—9th June, 1899.—GEORGE GIRLING, of New Plymouth, Taranaki, New Zealand, Labourer. An improvement in stonebreakers' hammers.

Claim.—In a stonebreaker's hammer, a head of solid steel in the shape of a disc with chamfered edges, fitted with a hole for the reception of a handle, substantially as described.

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

No. 11703.—12th June, 1899.—JOHN PENDER, of Tinning Street, Brunswick, Victoria, Horseshoe-nail Manufacturer. Improvements in the motor and in the driving and controlling mechanism of power-propelled vehicles, and in the construction of such vehicles.

Claims.—(1.) In the motor of a power-propelled vehicle, in combination, a cylinder or explosion-chamber A provided with inlet- and exhaust-passages, and with an enlarged pump-chamber A^1 at each end, two trunk-pistons B–B^1, rods C connecting pistons with crank-shafts D and the ignition-gear Y, Y^1, and Y^2, arranged between the pistons, substantially as described, and shown in Figs. 4 and 5. (2.) In the motor of a power-propelled vehicle, a cylinder as A, having inlet- and outlet-passages, and furnished with electric ignition-gear located between two pistons as B, which work to and from each other, combined with a valve-chest as G, furnished with valves G^2, G^3, and G^4, for admitting carburetted vapour and air when operated by cams such as F^1 and F^2, substantially as described, and shown in Figs. 2, 2^a, 4, and 5. (3.) In the motor of a power-propelled vehicle, a cylinder and pump-chamber as A–A^1, provided with a passage in pump-chamber which acts alternatety as an induction and eduction air-way, and a trunk-piston as B–B^1 combined with a valve-chest as A^3 furnished with non-return valve a and inlet-valve a^1, said chest A^3 being connected by pipes with carburetter K and a receiver A^5, substantially as described and shown. (4.) In the motor of a power-propelled vehicle, a cylinder as A and pump-chamber as A^1, having a communicating passage-way as b^2 between them, and the cylinder provided with an inlet-passage for the charge of explosive mixture, and exhaust-passages as b^1, combined with the valves G^4, a^2, and a^3, substantially as described, and shown in Fig. 5^a of the drawings. (5.) In the motor of a power-propelled vehicle, a cylinder as A, provided with inlet- and exhaust-ports, and having a pump-chamber as A^1 at each end in communication with cylinder by passsages as b^2, combined with the trunk-pistons as B–B^1, rods C connected with crank-shafts, valves G^4, a^2, and a^3, and the ignition-gear, substantially as described, and shown in Fig. 5^a of the drawings. (6.) In power-propelled vehicles, a motor composed of triple cylinders A having enlarged pump-chambers A^1 at each end, and two trunk-pistons as B–B^1 working in said cylinders, rods C connecting the pistons at both ends with a three-throw crank-shaft having crank-discs D^2 at their ends coupled by rods D^1, one of which latter imparts motion by an arm Y^9 to crank Y^8 operating the ignition-gear Y, Y^1, Y^2, Y^5, Y^6, Y^7, combined with valve-chest G, having valves G^2 and G^3 operated by cams F^1 and F^2 on shaft F, worked by arms

F^3 and F^4 from coupling-rod D^1, and valve-chests A^8 provided with valves *a*, *a*^{1}, substantially as described and shown. (7.) In power-propelled vehicles, a carburetter for producing the explosive vapour for the motor, consisting of oil-plug K^5, fed by pipe K^4, and provided with nozzle K^6 and whirl-vanes K^2, combined with pipes A^4 and A^{14} and receiver A^5 and reservoir A^7, having a screen A^9 between them, substantially as described and shown. (8.) In a power-propelled vehicle, a governor-valve for the purpose specified, consisting of an outer casing H^2 having a tubular valve-casing H^1 within it to receive valve H, said casing H^1 and valve H being provided with suitable ports, and the space between casings H^1 and H^2 being divided into three compartments *h*^{6}, *h*^{7}, and *h*^{8}, the compartment *h*^{7} being connected by pipe A^8 with receiver A^5 and with scavenging air-pipe Z^1, the compartment *h*^{8} connected by pipe G^1 with the valve-box G, and the compartment *h*^{6} being in direct communication with the vaporised gas in reservoir A^7, substantially as described and shown. (9.) In a power-propelled vehicle, a governor-valve H, as described in the preceding claim, having ports *h*, *h*^{1}, and *h*^{2} in it to govern the supply of air and gas entering through ports *h*^{3}, *h*^{4}, and *h*^{5} of the valve-casing H^1, said valve H being adapted to slide vertically when operated by the governor, and to be rotated by hand regulation, substantially as described and shown. (10.) In power-propelled vehicles, in combination, the oil-plug K^5 in casing K, valve H arranged in casing H^2 on the reservoir A^7, and the governor U on cam-shaft F, and connected with oil-plug K^5 by parts marked U^1 to U^9, substantially as described and shown. (11.) In power-propelled vehicles, the combination of the triple-cylinder engine composed mainly of cylinders A–A^1, pistons B–B^1, ignition-gear Y–Y^1 and Y^2, connecting-rods C, three throw-cranks D, discs D^2, and coupling-rods D^1, valve-chests G and A^8, and their connecting-pipes G^1, Z, Z^1, Z^2, and *z*, *z*^{1}, with the carburetter oil-valve K, carburetter reservoirs A^5 and A^7, and pipes A^4 and A^{14}, and the governor-valve H, all substantially as described and shown. (12.) In a power-propelled vehicle, the combination of a three-cylinder motor with enlarged pump or compressing-parts having pistons, cranks, valves, ignition- and coupling-gear, all mounted on a separate frame, having a ball joint and flexible bearings and pneumatic-cushion supports, and connected to the main driving-axle by a variable-speed transmission-gear, substantially as described and shown. (13.) In power-propelled vehicles, a reversible axle driving-clutch composed of three main parts—viz., a body as J, having an internal gripping-surface as *j*^{7}, said body being adapted to rotate a shaft as L, a body as *j*^{2} having two rings of reversely arranged recesses as *j*^{8} in it, said body being adapted to have a reciprocating motion imparted to it, and two sets of grooved gripping- and releasing-rollers, as *j*^{4}, retained in said recesses *j*^{8} by straps as *j*^{6}, and adapted to grip the internal face *j*^{7} of body J by either set of grip-rollers, in order to carry said body in the direction desired, substantially as described and shown. (14.) In power-propelled vehicles, a reversible axle driving-clutch J, consisting of a drum provided with deep bosses, adapted to slide on a feather *j*^{1} on main axle L, and said bosses having arranged loosely upon them two annuli as *j*^{2}, carrying in recesses *j*^{3} in their periphery grooved gripping- and releasing-rollers *j*^{4}, held in position by straps *j*^{6}, one set of said rollers being designed to grip in one direction, whilst the other set grip in the reverse direction, and said drum J being adapted to slide on axle in order to place either set of gripping-rollers upon the internal working-face *j*^{7} of drum, the annuli *j*^{2} having annular grooves *j*^{5} in them to fit upon rim of drum, and said annuli being attached by arms J^{17} to the rods E^8 of the variable-stroke driving-gear, substantially as described and shown. (15.) In a power-propelled vehicle, the combination of a motor mounted on a separate frame, connected at two of its crank-pins to the driving-axle by a speed-varying transmission-gear, with clutch mechanism mounted on the driving-axle to operate it in either direction, substantially as described and shown. (16.) In power-propelled vehicles, a reversible and independent wheel-clutch, composed of a drum, as J^6, adapted to slide on a feather on axle, and having arranged in its surface, within a metallic wheel-hub provided with internal gripping-surfaces *j*^{7}, four rings of grooved gripping- and releasing-rollers *j*^{4}, located in reversely arranged recesses, and held therein by straps *j*^{6}, substantially as described and shown. (17.) In power-propelled vehicles, in combination, the reversible axle driving-clutches J, the reversible and independent wheel-clutches J^6 arranged in hubs of wheels M, main drive-axle L, straps J^1 and J^7 connecting sliding parts of clutches to fork-piece J^2, shaft J^3 and lever J^4 for operating the clutches, all substantially as described and shown. (18.) In a power-propelled vehicle, the combination of a motor having two of its crank-pins connected by a speed-varying gear to the reversible driving-clutches on the main axle, said driving-clutches being linked to the wheel-clutches so that all can be moved longitudinally by the one lever to obtain a forward or backward motion of the vehicle, at the same time leaving one of the wheels free on axle in order to take curves, substantially as described and shown. (19.) In power-propelled vehicles, in combination, the operating-lever I, centred on pins E^6, and the motor starting-gear consisting of link I^5, clutch-arm I^6, provided with friction-rollers which grip the internal surface *d*^{2} of discs D^2, such gear being adapted to be operated when trip-levers I^1 and I^2 release the gears under their control, substantially as described and shown. (20.) In power-propelled vehicles, in combination, the operating-lever I centred on pins E^6, and the speed-regulating mechanism consisting of trip-lever I^2, rod *i*^{2}, which engages a gap in quadrant-bar I^3, rod E connecting lever I with compass-lever E^1, and jointed pitman E, disc D^2, cross-head E^7, guides E^9, rods E^8, friction-clutches J, which rotate driving-axle L, and releasing trip-lever I^1, substantially as described and shown. (21.) In power-propelled vehicles, the combination of lever I with the motor-starting and the speed-regulating mechanism as claimed in the two preceding claims, and with the brake-gear Q to Q^4, and the hubs of driving-wheels M, all substantially as described and shown. (22.) In a power-propelled vehicle, the combination of a motor having its crank-shaft connected to the main driving-axle by a speed-varying gear having a lever and trips by which the speed-varying part of the mechanism can be disconnected and left at a standing position, the lever being then free to be used for operating a friction-clutch for revolving the crank-shaft for the purpose of starting the motor, substantially as described and shown. (23.) In power-propelled vehicles, the construction of the wheel-spokes in such a manner that they are compressible radially, the spokes being secured to a jointed or hinged rim, and each spoke telescoping a boss on wheel-hub, and either compressed outwards by pneumatic cushions or bags as O^2, connected together by pipes O and O^1 (*Fig.* 9), or by being seated on a volute-spring as M^3 (Figs. 9 and 10^b), substantially as described and shown. (24.) In a power-propelled vehicle, the combination of a motor mounted on a frame, the motor being connected to the main driving-axle by speed-varying mechanism linked to clutches in wheels having spokes which telescope on bosses on hub, and kept in extension by pneumatic, volute spiral, or coil springs substantially as described and shown. (25.) In power-propelled vehicles, the front wheel-fork P, attached by lazy-tongs levers as P^2 to the axle, and seated thereon upon double volute-springs, as P^1, arranged about a stem as P^3, which passes into the hollow fork-stem, or seated on a pneumatic cushion or bag as P^4 or P^{10}, substantially as described and shown. (26.) In power-propelled vehicles, the front wheels steering-gear, consisting of short axles having rearward arms *p* attached to them, said arms being connected together by rod *p*^{1}, and said gear being adapted to be operated by hand-lever P^7 on stem P^8, substantially as described and shown. (27.) In power-propelled vehicles, supporting the fore-end of the body R of vehicle about and upon the fork-stems P^8, upon pneumatic cushions R^2, located between a flange P^9 on body and a flange P^{10} on fork-stem, substantially as described and shown. (28.) In a power-propelled vehicle, the combination of a metallic body-frame having pneumatic-spring supports, which are mounted on the roller-bearings of driving-axle at rear, and also pneumatic cushion inserted in a recess and supported on a flange on stem of the steering-wheel forks at forward end, and lazy-tongs links and spring connection between the front-wheel axle and ends of fork-stem, substantially as described and shown. (29.) In power-propelled vehicles, supporting rear end of body-frame on pneumatic springs W^6, and fore end of motor-frame by a ball-seating P^{11}, carried by a pneumatic cushion P^{12}, arranged between suitable supports, substantially as described and shown. (30.) In a power-propelled vehicle, the combination of a three-cylinder motor having enlarged pump-chambers, pistons, ignition- and valve-gear, three throw-cranks and connecting- and coupling-rods, all mounted on a separate frame, which is supported at one end on main driving-axle, and at other end carried in a ball-joint supported on a pneumatic cushion arranged in the body-frame, substantially as described and shown. (31.) In power-propelled vehicles, constructing the framing R, for the body, of sheet-metal, having its edges rounded or beaded as at *s*^{2}, with the marginal edge of the beading secured down by eyelets as *s*^{3}, and forming flanges as *s*^{4} for the floor- or cross-boards of body, substantially as described and shown. (32.) In a power-propelled vehicle, the combination of a metallic body-frame mounted on pneumatic-spring supports, with sockets at one end to receive the fork-stems of steering-wheels, steering-lever-stem, and a ball-socket for supporting the frame on which the motor and its varying-speed gear is mounted, substantially as described and shown. (33.) In power-propelled vehicles, arranging each seat T upon a stem T^2 carried by guides in the transverse body-stays, and supporting each stem vertically upon a pneumatic cushion as T^1, and also, when desired, by a spring T^3, substantially as described and shown. (34.) In a power-propelled vehicle, the combination in a motor having three cylinders—that is, three explosive chambers with enlarged

pump-chambers at each end—six pistons, one piston at each end being common to the explosion- and pump-chambers, connecting-rods with oil-grooves cut in them, splash-tanks at each end containing oil, into which the crank-shafts dip at every revolution, thereby splashing oil in every direction, and so lubricating the working-parts, substantially as described. (35.) In a power-propelled vehicle, the combination in a motor having three cylinders with enlarged pump-chambers, pistons common to the explosive and pump chambers, connecting-rods with oil-grooves, crank-shafts, splash-tank at each end for holding oil to lubricate the working-parts, coupling-rods operating the igniting-gear, revolving cam-shaft, cams for operating valves, valves for admitting air to scavenge the cylinder, valves for admitting gas for the explosions and the exhaust-ports, all arranged and assembled substantially as described and shown. (36.) In power-propelled vehicles, in combination, a triple-cylinder motor, each cylinder comprising an explosion-chamber and air-compressors, an electric ignition-gear located between the pistons and operated from the coupling-rod, valves and valve-gear controlling the admission of carburetted vapour and air, a carburetter comprising a spraying-nozzle, gas receiver and reservoir; a governor controlling the admission-valves, a frame carrying the motor seated on flexible and pneumatic cushion-bearings and supports, a variable-speed transmission-gear and a starting-gear, reversible friction driving-clutches located on main axle, friction-clutches arranged in the hubs of main wheels, brake-straps operating on the hubs of said wheels, a front-wheel steering-gear, and front wheels connected therewith, and a body-frame formed of sheet-metal mounted on pneumatic or spring cushions, a lever for controlling the motor transmission-gear, starting-gear, and brakes, and the pliable or pneumatic wheels, all substantially as described and shown.

(Specification, £1 12s.; drawings, £5 5s.)

No. 11705.—12th June, 1899.—JOHN FOSTER STEPHENSON, of Cranmore Street, Glenferrie, Victoria, Moulder. Improvements in or connected with the supporting-frames of bedsteads.

Claims.—(1.) A socket-piece having a cavity to fit upon a bedstead-post, and a box or shoe to receive a rail-end, and means for securing same within the shoe, substantially as and for the purposes set forth. (2.) A socket-piece having a conical cavity, with key-ways and a shoe, substantially as and for the purposes set forth. (3.) A socket-piece having a shoe and a conical cavity with key-ways, in combination with a standard having a cone to correspond with the cavity, and provided with key, substantially as and for the purposes set forth.

(Specification, 3s.; drawings, 5s. 6d.)

No. 11707.—12th June, 1899.—ALBERT EDVARD JENS VALDEMAR JOHAN THEILGAARD, of 30, Wiedeweltsgade, Copenhagen, Denmark, Chemist. Improvement in the process of disvulcanising caoutchouc, indiarubber, gum-elastic, and similar materials.

Claim.—The process of disvulcanising caoutchouc, indiarubber, gum-elastic, and similar materials, characterized by subjecting the vulcanised material to a treatment with sulphites.

(Specification, 1s. 3d.)

No. 11711.—12th June, 1899.—CHARLES WILLIAM CURTIS, of 3, Gracechurch Street, London, England, Explosive-manufacturer, and LEYSHON DAVIES, of Kyles of Bute, Argyleshire, Scotland, Joint Manager of Kames Gunpowder-mills. An improved explosive.

Consists of a mixture of nitrate of potash and carbon in the form of lignite or brown coal, in which is or may be added a small amount of sulphur.

Claim.—An improved explosive compounded as described.

(Specification, 1s.)

No. 11718.—16th June, 1899.—THEODOR TEVLEV, of Kisslovodsk, Terek, Northern Caucasus, Russia, Overseer of Mines. Improvements in explosives.

Claims.—(1.) An explosive consisting of a powder and a liquid, the powder being a mixture of potassium-chlorate with manganese-peroxide or ferric oxide, or both, and the liquid being petroleum or oil of turpentine or a mixture of these, with or without the addition of almond or other aromatic oil, substantially as described. (2.) Enclosing the powder in a porous envelope, and impregnating the same with the liquid shortly before use, substantially as described.

(Specification, 3s. 6d.)

F. WALDEGRAVE,
Registrar.

NOTE.—The cost of transcribing the specification, and an estimate of the amount required for copying the drawings, have 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.

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

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

Provisional Specifications.

Patent Office,
Wellington, 21st May, 1899.

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

No. 11185.—25th November, 1898.—WILLIAM HENRY HARTLEY and WILLIAM ADOLPH KÖNEMAN, both of 23, Moorfields, London, England, Civil and Mining Engineers. Improvements in furnaces for roasting ores and the like.

No. 11547.—13th April, 1899.—JOHN MANNERS MORRAN, of Lorne Street, Auckland, New Zealand, Mackintosh-clothing Manufacturer. An improved method of joining seams of mackintosh garments.

No. 11644.—18th May, 1899.—DAVID RANKEN SHIRREFF GALBRAITH, of Ladies' Mile, Remuera, Auckland, New Zealand, Analytical Chemist. Supplementary treatment of butter.

No. 11658.—23rd May, 1899.—ROBERT MCCULLOCH, Box-maker, and THOMAS THOMPSON, Manager, both of 53, Esk Street, Invercargill, New Zealand. Improvements in crates for freezing, carrying, and holding rabbits and suchlike.

No. 11671.—5th June, 1899.—ROBERT CRAWFORD, of Feilding, New Zealand, Blacksmith. An improved fencing-tool.

No. 11672.—5th June, 1899.—GEORGE STEVENSON, of 24, Manse Street, Dunedin, New Zealand, Mill-owner. An improvement in steam-engines.

No. 11674.—6th June, 1899.—DAVID WATTS, of 33, Bridge Street, Ballarat, Victoria, Gentleman. Improvements in two-speed gearing for cycles.

No. 11676.—6th June, 1899.—EDMUND RILEY, Jun., of Flinders, Victoria, Telegraph Operator. An improved machine for cutting fern and scrub.

No. 11677.—6th June, 1899.—ALBERT HENDRIK VAN DER VIJGH, of 4, Bosboom, Toussaint Street, Amsterdam, Holland, Timber Merchant, and HENDRIK VAN DER VIJGH, Architect, and GERHARD VAN DER VIJGH, Manufacturer, both of 2, Bosboom, Toussaint Street aforesaid. Improvements in the manufacture of artificial stone.

No. 11678.—6th June, 1899.—BENJAMIN GARVER LAMME, of 230, Stratford Avenue, Pittsburg, Pennsylvania, United States of America, Electrical Engineer. Improvements in systems of electrical distribution and regulation.

No. 11681.—6th June, 1899.—DENIS MADDEN, of Avoca Cottage, Parkes, New South Wales, Gentleman. A new eye ointment.

No. 11685.—6th June, 1899.—FERDINAND HEINRICH DANNHARDT, of 114, Coppin Street, Richmond, near Melbourne, Victoria, Mechanical Engineer, and MELROSE MAILER, of 685, Rathdowne Street, North Carlton, near Melbourne aforesaid, Medical Practitioner. An improved earth- or rock-drill.

No. 11686.—7th June, 1899.—WILLIAM JONES, of Camden Street, Feilding, New Zealand, Contractor. An improved appliance for drawing staples.

No. 11690.—8th June, 1899,—NORMAN ROWE, of 1215, Wood Street, Wilkinsburg, Pennsylvania, United States of America, Electrical Engineer. Improvements relating to the regulation of electro-motive force.

No. 11691.—8th June, 1899.—THOMAS STEEL PERKINS, of Idlewood, Pennsylvania, United States of America, Electrical Engineer. Improved starting mechanism for electric motors.

No. 11695.—8th June, 1899.—WILLIAM ERNEST HUGHES, of 54, Lambton Quay, Wellington, New Zealand, Patent Agent (nominee of Harry Phillips Davis, of 327, Neville Street, Pittsburg, Pennsylvania, United States of America, Electrical Engineer). Improvements in fuse-blocks for electric circuits.

No. 11696.—8th June, 1899.—BENJAMIN GARVER LAMME, of 230, Stratford Avenue, Pittsburg, Pennsylvania, United States of America, Electrical Engineer. Improvements in rotary transformers or synchronous motors.

No. 11699.—8th June, 1899.—GEORGE KIDD ASKIN, of Tancred Street, Ashburton, Canterbury, New Zealand, Machinist. Improved means for supporting bicycles in a railway-van, or wagon, or in a warehouse, shop, store, or other building.

No. 11700.—8th June, 1899.—ARTHUR JOHN CUMING, of 183, Hereford Street, Christchurch, New Zealand, Journalist. Improved method of and apparatus for marking meat.

No. 11704.—12th June, 1899.—ROBERT MARTIN, of Manners Street, Wellington, New Zealand, Painter and Paperhanger. An improved attachment for artists' easels.

No. 11709.—12th June, 1899.—THOMAS GALLAGHER, of 253, Rundle Street, Adelaide, South Australia, Engineer. Improved seat and handle adjustment for bicycles and other velocipedes.

No. 11710.—12th June, 1899.—THOMAS LORD TAYLOR, of Windsor Villa, Darebin Street, Northcote, near Melbourne, Victoria, Gentleman. Improved automatic advertisement-displayer, principally for hotels, shops, and clubs.

No. 11712.—9th June, 1899.—GEORGE WILFRED PLUMMER, of Auckland, New Zealand, Straw-hat Manufacturer. Improved method of bleaching and cleaning flax.

No. 11713.—14th June, 1899.—JOHN PAASKE, of Carterton, New Zealand, Carpenter. Improvements in bicycle driving-gear.

No. 11715.—13th June, 1899.—PETER GEORGE KELLY, of Birkenhead, Auckland, New Zealand, Engineer. A mechanical billiard-cue chalker.

No. 11716.—16th June, 1899.—HARRY GULLIVER, of Claremont, near Perth, Western Australia, Gentleman. An improved sash-holder, principally for railway- and tram-cars.

No. 11717.—16th June, 1899.—CHARLES HENRY HOLDER, of 103, Queen Street, Auckland, New Zealand, Settler. Improvements in automobile vehicles.

No. 11723.—14th June, 1899.—JAMES DICK, of Greenhead, Glasgow, North Britain, temporarily of Menzies' Hotel, William Street, Melbourne, Victoria, Gentleman (nominee of W. Ross Hutton, of 93, Hope Street, Glasgow aforesaid, Consulting Chemist). Improved process for the treatment of sulphidic ores or compounds.

No. 11724.—14th June, 1899.—WILLIAM MCAUSLIN, of Alford Forest Road, Ashburton, Canterbury, New Zealand, Wool-spinner. An improved generator for acetylene-gas lamps.

No. 11725.—14th June, 1899.—WILLIAM BLANNIE DICK, of Hamilton, New South Wales, Engineer. An improved machine for portioning, moulding, and printing butter, lard, and the like.

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 2nd June, 1899, to the 16th June, 1899, inclusive:—

No. 10285.—W. Madder, door-sill.
No. 10387.—G. H. Kemp, branding-composition.
No. 10404.—C. A. Nielsen, fishing-gear.
No. 10434.—F. Parsons and W. Nelson, water-heater.
No. 10736.—G. A. Montgomery, fastening horse-cover.
No. 10875.—S. Priest and S. Priest, jun., cycle-brake.
No. 11111.—T. B. Abbott, kerosene-tin handle.
No. 11239.—G. McCaul, bath.
No. 11240.—J. Metzger, rabbit-crate.
No. 11269.—R. Pearson, fire-alarm.
No. 11377.—T. Barnet, telephone time-indicator.
No. 11404.—W. P. Trevaskis and G. Archer, butter-box.
No. 11436.—W. R. S. Jones, buffer and draw-gear for railway vehicles.
No. 11482.—W. H. Steenson, lifting-jack.

F. WALDEGRAVE,
Registrar.

Letters Patent on which Fees have been paid.

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

SECOND-TERM FEES.

NO. 7665.—A. I. Littlejohn and P. Still, levelling-head for theodolite (W. G. Entwistle). 10th June, 1899.
No. 7712.—W. A. Dimick, horse-cover. 19th June, 1899.
No. 7718.—N. J. Suckling, stamp-battery. 8th June, 1899.
No. 7721.—H. P. Holt, motor-car. 16th June, 1899.
No. 7757.—Bickford and Huffman Company, grain-drilling machine (G. W. Kirkpatrick). 8th June, 1899.

THIRD-TERM FEES.

No. 5524.—L. M. Jones and J. K. Wedlake, sheaf-carrier for harvester-binder. 15th June, 1899.
No. 5525.—Massey-Harris Company, Limited, binder (L. M. Jones and J. K. Wedlake). 15th June, 1899.
No. 5595.—C. J. Fauvel, ore-furnace. 7th June, 1899.
No. 5608.—C. A. Folly, W. L. Flanagan, and D. W. C. Ward, screw-joint. 12th June, 1899.
No. 5609.—J. Gresham, vacuum-brake. 6th June, 1899.
No. 5612.—The Pfaudler Vacuum Fermentation Company, manufacturing beer (A. J. Metzler). 6th June, 1899.
No. 5613.—The Pfaudler Vacuum Fermentation Company, manufacturing beer (A. Hummel). 6th June, 1899.

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. 3047.—The Northern Roller-milling Company, Limited, whose registered office is in Quay Street, Auckland, New Zealand, a food. [J. C. Firth.] 12th June, 1899.

No. 9160.—Matilda Lavinia Gibbons, wife of Nicholas Gibbons, of Manurewa, Auckland, New Zealand, Contractor, roller-slip for launching timber-logs. [N. Gibbons.] 8th June, 1899.

No. 9655.—The Acetylene Gas Company of Australasia, Limited, a duly incorporated company, of Sydney, New South Wales, burner. [E. F. Green.] 8th June, 1899.

No. 10613.—Arthur Francis Bridges, of Gisborne, New Zealand, Settler, filter. [J. S. Allan.] 16th June, 1899.

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 June, 1899, to the 21st June, 1899, inclusive:—

No. 10215.—J. W. Taylor and J. Mather, composition for covering steam-boilers, &c.
No. 10226.—A. Coubrough, smelting ironsand.
No. 10227.—E. S. McGill, road-grader.

F. WALDEGRAVE,
Registrar.

Letters Patent void.

LIST of Letters Patent void through non-payment of fees from the 8th June, 1899, to the 21st June, 1899, inclusive:—

THROUGH NON-PAYMENT OF SECOND-TERM FEES.

No. 7481.—N. S. Keith, separating gold and silver from other materials.
No. 7487.—A. Niemczik, starting gas- or petroleum-engine.
No. 7488.—C. Ewing, rolling-stock for single-line tramways, &c.
No. 7489.—T. H. James and G. H. Saywell, race-starter.
No. 7492.—J. J. Allen, paper-feeder for printing-machine.
No. 7493.—The Newall-Cuningham Sheep-shearing Machine Syndicate, Limited, wool-clipping machine (J. W. Newall).
No. 7494.—J. J. Varley, stoppering bottles.
No. 7495.—A. A. Walters, treating auriferous material.
No. 7496.—B. Hale, connecting parts of telephone apparatus (P. Rabbidge).
No. 7497.—A. A. Walters, concentrator and separator.

THROUGH NON-PAYMENT OF THIRD-TERM FEES.

No. 5464.—H. S. Chipman, sheaf-carrier for reaper-and-binder (D. Edwards).
No. 5473.—G. T. Beilby, manufacturing cyanides.

F. WALDEGRAVE,
Registrar.

Design Registered.

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

No. 107.—Elizabeth Thomson Williams, of Picton, New Zealand, wife of Charles Williams, of Picton aforesaid, Road Engineer; Class 5; 3rd May, 1899.

F. WALDEGRAVE,
Registrar.

Applications for Registration of Trade Marks.

Patent Office,
Wellington, 21st May, 1899.

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: 2630.

Date: 7th April, 1899.

TRADE MARK.

NAME.

ELLEN HUDSON (trading as "The Onehunga Glue-manufacturing Company"), of Birkenhead, Auckland, New Zealand.

No. of class: 1.

Description of goods: Glue and size.

No. of application: 2674.

Date: 5th June, 1899.

TRADE MARK.

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

NAME.

H. J. BARRACLOUGH, of 131, Adelaide Road, Wellington, New Zealand, Wholesale and Retail Medical Herbalist.

No. of class: 3.

Description of goods: Herbal remedies and medical requisites for human use.

No. of application: 2675.

Date: 5th June, 1899.

TRADE MARK.

The essential particulars of this trade mark are the combination of devices, and the word "Hansa"; and the applicant disclaims any right to the exclusive use of the added matter except his predecessor's name and address.

NAME.

FRITZ SCHAPER, of 13, Hermann Strasse, Hamburg, Germany, Manufacturer.

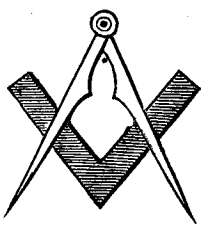
No. of class: 45.

Description of goods: Cigars.

No. of application: 2676.
Date: 5th June, 1899.

TRADE MARK.

NEPOTISM



NAME.

EDWARD SHEPHERD DIXON, of Masterton, New Zealand, Cordial-manufacturer.

No. of class: 3.

Description of goods: A medicine for the cure of rheumatic gout, nervous rheumatism, and other rheumatic diseases.

No. of application: 2680.
Date: 8th June, 1899.

TRADE MARK.

TRENCH'S REMEDY

The essential particular of the trade mark is the device; and any right to the exclusive use of the added matter is disclaimed.

NAME.

TRENCH'S REMEDIES, LIMITED, of 33, South Frederick Street, Dublin, Ireland.

No. of class: 3.

Description of goods: Chemical substances prepared for use in medicine and pharmacy.

No. of application: 2686.
Date: 12th June, 1899.

TRADE MARK.

The word

TANGLEFOOT

NAME.

THE O. AND W. THUM COMPANY, of Grand Rapids, Michigan, United States of America, Manufacturers.

No. of class: 2.

Description of goods: Adhesive paper for catching flies, moths, and other insects.

No. of application: 2687.
Date: 14th June, 1899.

TRADE MARK.

The words

OSBORNE AND BLANCHE'S
TOHUNGA
OINTMENT.

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

NAME.

EDMUND OSBORNE, of Foxton, New Zealand, Draper.

No. of class: 3.

Description of goods: Ointment.

No. of application: 2688.
Date: 14th June, 1899.

TRADE MARK.

The word

SNOWFLAKE.

NAME.

AULSEBROOK AND CO., of corner St. Asaph and Montreal Streets, Christchurch, New Zealand, Manufacturers of Biscuits, Cakes, &c.

No. of class: 42.

Description of goods: Biscuits.

F. WALDEGRAVE,
Registrar.

Trade Marks registered.

LIST of Trade Marks registered from the 8th June, 1899, to the 21st June, 1899, inclusive:—

No. 2064; 2560.—A. Sharp; Class 3. (*Gazette* No. 2, of the 5th January, 1899.)

No. 2065; 2619.—The Rewa Co-operative Dairy Company, Limited; Class 42. (*Gazette* No. 25, of the 16th March, 1899.)

No. 2066; 2621.—F. Lamb and H. Barlow; Class 2. (*Gazette* No. 25, of the 16th March, 1899.)

No. 2067; 2620.—R. Thorne and Sons, Limited; Class 43. (*Gazette* No. 25, of the 16th March, 1899.)

No. 2068; 2533.—Sargood, Son, and Ewen; Class 35. (*Gazette* No. 28, of the 30th March, 1899.)

F. WALDEGRAVE,
Registrar.

Subsequent Proprietors of Trade Marks registered.

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

NO. 1011/1303.—The Ballance Co-operative Dairy Company, Limited, of Ballance, Wellington, New Zealand. [The New Zealand Loan and Mercantile Agency Company, Limited.] 9th June, 1899.

F. WALDEGRAVE,
Registrar.

By Authority: JOHN MACKAY, Government Printer, Wellington.