

SUPPLEMENT

TO THE

NEW ZEALAND GAZETTE

OF

FRIDAY, JANUARY 24, 1902.

Published by Authority.

WELLINGTON, FRIDAY, JANUARY 24, 1902.

CONTENTS.

	Page
Complete Specifications accepted .. ..	143
Provisional Specifications accepted .. ..	150
Letters Patent sealed .. ..	150
Letters Patent on which Fees have been paid .. ..	150
Subsequent Proprietors of Letters Patent .. ..	150
Request to amend Specification .. ..	151
Application for Letters Patent withdrawn .. ..	151
Applications for Letters Patent abandoned .. ..	151
Applications for Letters Patent lapsed .. ..	151
Letters Patent void .. ..	151
Applications for Registration of Trade Marks .. ..	151
Trade Marks registered .. ..	153

illustrated. (4.) The combination and arrangement of parts comprising my improvements in wool and fibre scouring and washing machines and the like, substantially as set forth and illustrated.

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

No. 13495.—26th March, 1901.—ARTHUR JOHN HEWETSON, of St. Vincent Street, Nelson, New Zealand, Mechanic. Improvements in brackets for supporting or holding cycles.\*

*Extract from Specification.*—My invention consists of an apparatus for supporting or holding bicycles above the floor, and the apparatus is attached to screws or pegs in a wall at a convenient distance from the floor, and it is made of wood or metal or other suitable material, and the component parts (in the case of wood being used for bicycles constructed for the use of men—that is, with a straight top bar) are two brackets with the arms thereof connected with a grooved bar secured to the top of the outer ends of the said arms. And for strengthening purposes the said brackets are also connected by a cross-bar fastened to the lower ends of the back bars of the brackets, and in each bracket there is a bar connecting the said arm and back of the bracket so as to form a triangle, and on each of the said back bars there is a hole or slot so constructed as to permit of the apparatus being easily lifted on or off the said screws or pegs. And (in the case of bicycles constructed for the use of ladies—that is, without a straight top bar) the component parts for either wood or metal are two brackets constructed in the same way as those for men's bicycles, but not connected with the grooved bar or cross-bar, and having two slots to each to fit on to the screws or pegs in the wall, and so formed as to be easily lifted on or off, the brackets being placed on the wall with sufficient interval to allow the frame of the bicycle to rest against the grooved blocks (b) at the top of the outer end of the arms. When the apparatus for men's bicycles is made of metal, then the bracket need not be joined together, and the grooved bar and the cross-bar may be dispensed with, another hole or slot being made as in the brackets hereinbefore described for ladies' bicycles, and the top bar or arm being grooved horizontally at the outer end to receive the top straight bar of the bicycle.

*Claim.*—The described apparatus respectively for supporting or holding bicycles with and without a top straight bar. (Specification, 1s. 6d.; drawings, 1s.)

No. 13687.—6th June, 1901.—WILLIAM DAVIDSON PEACOCK, of New Wharf, Hobart, Tasmania, Manufacturer. An improvement in closing the ends of tins for perishable comestibles.

Notice of Acceptance of Complete Specifications.

Patent Office,  
Wellington, 22nd January, 1902.

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. 13432.—26th February, 1901.—FRANK KETTLE, of High Street, Roslyn, New Zealand, Wool-buyer. Improvements in machines for scouring wool or other fibres.\*

*Claims.*—(1.) In combination, a trough for containing liquid, endless chains passing over sprocket-wheels mounted above the trough, a harrow pivoted to the said chains and working within said trough, and means by which said sprocket-wheels are revolved, substantially as and for the purposes set forth. (2.) In a wool and fibre scouring and washing machine and the like, in combination, a trough provided with slides, endless chains passing over sprocket-wheels, and a harrow pivoted to the said chains, substantially as set forth. (3.) A wool and fibre scouring and washing machine and the like, comprising in combination a trough for containing liquid, endless chains passing over sprocket-wheels mounted above said trough, a harrow having a hinged forward section and pivoted to the said chains, and sloping slides arranged to guide the hinged section of the harrow, with means for revolving said sprocket-wheels, substantially as set forth and

*Claim.*—An improvement in closing the ends of tins for perishable comestibles, consisting in placing narrow gutter-percha rings in the annular groove or recess on one or both the end pieces, heating same to cause the rings to adhere, and then securing said end pieces to the body in a double seaming or turning-over machine in order to form an airtight joint, substantially as set forth.

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

No. 14009.—17th September, 1901.—GEORGE WILLIAM THOMAS, of Opaki, New Zealand, Driver. An improved bread-toaster.\*

*Claims.*—(1.) A bread-toaster consisting of a frame composed of wire bent into such form as to constitute holding-clips for the bread and stands for the frame, such frame being loosely suspended from and articulated to the forked ends of a handle of suitable length, as specified. (2.) The general arrangement, construction, and combination of parts in my improved bread-toaster, as described and explained, as illustrated in the sheet of drawings, and for the purposes set forth.

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

No. 14112.—10th October, 1901.—FRITZ EISENBEIS, of Wellesweiler, Germany, Engineer, and FERDINAND GARELLY, of Saarbrücken, Germany, Manufacturer. Improvements in stone cutting and drilling machines.

*Claims.*—(1.) A machine for drilling, cutting, or splitting stones or rocks, and in which the drilling-device *a*, connected to a toothed sector *r*, which may be regulated horizontally and vertically at any point of the supporting column *s*, is movable horizontally or vertically according to the position of the said sector, and this by means of an endless screw fitted to the said drilling-machine, and gearing with the sector for the purpose of grooving and splitting rocks, as described and as shown. (2.) A drill consisting of several cutting-teeth, each of which is provided with an outer flat triangular face, two adjacent faces inclined inwardly, and an inner triangular face, as described, and as shown in the drawings. (3.) The application of the machine claimed in No. 1 for bringing down masses of rock, the machine after having made the groove being brought into position in order to drill the hole for bringing down the rock, and remaining in this position after having drilled the hole, the drill being replaced by a hammer *l* in order to cause the wedge to advance, placed in the axial line of the hole, so as to bring down blocks without the use of any explosive whatever, as described, and as shown in the drawings.

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

No. 14168.—28th October, 1901.—JOHN WILLIAM HARDELEY and SAMUEL HARDELEY, Jun., both of Ashburton, New Zealand, Plumbers, &c. An improved spouting-bracket.

*Claims.*—(1.) A supporting bracket for house spouting or guttering, consisting of an inner piece upon which the spouting or guttering rests, and an outer piece placed against the face of and fastened to the inner piece in such a manner that its tendency shall be to spring against the inner piece, such outer piece being formed on its outer extremity with a curved portion adapted to fit upon the curved outer edge of the spouting, as specified. (2.) A supporting bracket for house spouting or guttering, consisting of an inner and an outer piece secured together in such a manner that the tendency of the outer piece shall be to spring upon the inner, the extremity of the outer piece being formed with a curved portion and with an extension thereto, in combination with a stay-piece the bottom end of which is adapted to be fastened to the extension of the outer spring-piece, while the top end is adapted to be fastened to the roof or other part of the building, as specified.

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

No. 14927.—12th December, 1901.—DAVID HERLIHY, of Aorangi, Feilding, New Zealand, Farmer. An improved tank for measuring milk and other liquids.

*Claim.*—In means for measuring off milk and other liquids, a tank or receptacle provided with an inlet-pipe, a glass-covered slot extending throughout the height of the tank, and a gauge parallel with the slot with markings thereon corresponding to the capacity of the tank at different heights, as specified.

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

No. 14378.—30th December, 1901.—THE BRITISH CHARRIER WOOD-CARVING COMPANY, LIMITED, of 49, St. Mary Axe, London, England, Carved-moulding Manufacturers (as-

signees of Leon Constant Henri Charrier, of Vendôme, Loir-et-Cher, France, Engineer). Improvements in wood-carving machines.

*Extract from Specification.*—The object of this invention is to provide an improved construction of such machines, wherein the various operations are performed in a more efficient manner than heretofore, with great certainty, and in such manner as to increase the output of the machine. To this end, and according to our invention, we provide the machine with a suitably supported and counterbalanced reciprocating beam, which is adapted to carry a number of independently working tools and pressers, whilst the said beam also serves to actuate other tools carried by the frame of the machine above the table, and the said beam also acts in conjunction with a movable part of the frame below the work to actuate other tools, and also to automatically clear said tools from the work independently of the movement of the beam, in order to be clear of the tools at the proper time. We also provide the machine with mechanism adapted to so coact with the other parts of the machine that the work is fed with greater ease and accuracy.

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

(Specification, 13s.; drawings, 9s.)

No. 14382.—30th December, 1901.—WILLIAM FREDERIC SINGER, of Bridgeport, Connecticut, United States of America, Inventor and Manufacturer. Refrigerating systems.

*Claims.*—(1.) In a refrigerating system, and in combination, a gas-compressor, a circulatory pipe-system leading into said compressor, means for removing the heat of compression, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve converted into a refrigerating coil or chamber, and means interposed between said compressor and said expansion-valve and connected with and operated by the reduced pressure in said refrigerating-coil for regulating the flow of fluid through the system, substantially as described. (2.) In a refrigerating system, and in combination, a gas-compressor, a circulatory pipe-system leading into said compressor, means for removing the heat of compression, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond the said valve converted into a refrigerating coil or chamber, a fluid-controlling valve in said pipe-system between said compressor and said expansion-valve, and a tube connecting said refrigerating coil with said fluid-controlling valve whereby the flow of fluid through said system is automatically regulated by variations of pressure in said refrigerating-coil, substantially as described. (3.) In a refrigerating system, and in combination, a gas-compressor, a circulatory pipe-system leading into said compressor, means for removing the heat of compression, an expansion-valve in said pipe-system whereby expansion of the controlled fluid is permitted and the portion of said pipe-system beyond said valve converted into a refrigerating coil or chamber, a fluid-controlling valve in said pipe-system between said compressor and said expansion-valve, a diaphragm operating said fluid-controlling valve, and a tube connecting said refrigerating-coil with the diaphragm-chamber of said fluid-controlling valve, whereby the flow of fluid through said system is automatically regulated by variations of pressure in said refrigerating-coil acting upon said diaphragm, substantially as described. (4.) In a refrigerating system, and in combination, a gas-compressor, a cooling-jacket surrounding said compressor, a circulatory pipe-system leading into said compressor, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond the said valve converted into a refrigerating coil or chamber, and means automatically operated by variations of pressure in said refrigerating-coil for regulating the supply of water to said cooling-jacket, substantially as described. (5.) In a refrigerating system, and in combination, a gas-compressor, a cooling-jacket surrounding said compressor, a condenser, a pipe leading from said cooling-jacket to said condenser, a circulatory pipe-system leading into said compressor, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve converted into a refrigerating coil or chamber, and means automatically operated by variations of pressure in said refrigerating coil for regulating the supply of water to said cooling-jacket and condenser, substantially as described. (6.) In a refrigerating system, and in combination, a gas-compressor, a cooling-jacket surrounding said compressor, a circulatory pipe-system leading into said compressor, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve converted

into a refrigerating-coil or chamber, a feed-pipe leading to said cooling-jacket, an automatic valve in said feed-pipe, and a tube connecting said refrigerating-coil with said valve whereby the supply of water to said cooling-jacket is automatically regulated by variations of pressure in said refrigerating-coil, substantially as described. (7.) In a refrigerating system, and in combination, a gas-compressor, a cooling-jacket surrounding said compressor, a condenser, a tube leading from said cooling-jacket to said condenser, a circulatory pipe-system leading into said compressor, an expansion-valve in said system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve converted into a refrigerating coil or chamber, a feed-pipe leading to said cooling-jacket, an automatic valve in said feed-pipe, and a tube connecting said refrigerating-coil with said valve whereby the supply of water to said cooling-jacket and condenser is automatically regulated by variations of pressure in said refrigerating-coil, substantially as described. (8.) In a refrigerating system, and in combination, a gas-compressor, a circulatory pipe-system leading into said compressor, a cooling-jacket surrounding said compressor, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve is converted into a refrigerating coil or chamber, means interposed between said compressor and said expansion-valve for automatically regulating the flow of fluid through said system, and means for automatically regulating the flow of water for cooling and condensing the refrigerating-gas, both said means being connected with and operated by variations of pressure in said refrigerating-coil, substantially as described. (9.) In a refrigerating system, and in combination, a gas-compressor, a circulatory pipe-system leading into said compressor, a cooling-jacket surrounding said compressor, an expansion-valve in said pipe-system whereby expansion of the contained fluid is permitted and the portion of said pipe-system beyond said valve is converted into a refrigerating coil or chamber, an automatic valve interposed between said compressor and said expansion-valve for regulating the flow of fluid through said system, and an automatic valve for regulating the flow of water for cooling and condensing the refrigerating-gas, both said valves being connected with and operated by variations of pressure in said refrigerating-coil, substantially as described. (10.) In a refrigerating-apparatus, the combination with a compartment of an expansion-chamber within said compartment, valve-mechanism for controlling the entrance of fluid to said expansion-chamber, an exhaust-pipe leading from the expansion-chamber, a pump connected to said exhaust-pipe, a regulator also connected to said exhaust-pipe, a condenser, a tank in which said condenser is located, means for supplying water to said tank, a valve in the water-supply, means and devices controlled by the regulator for actuating said valve, substantially as described.

(Specification, 7s. 6d.; drawings, 2s.)

No. 14384. — 30th December, 1901. — JAMES THOMAS HUNTER, of Queen's Chambers, Wellington, New Zealand, Engineer (nominee of Raoul Pierre Pictet, of 14, Bendlerstrasse, Berlin, Germany, Professor of the University of Geneva, and late Professor of the University of Berlin, Germany, and Manufacturer of Chloroform at Berlin). Improvements in the method of, and apparatus for, the separation of gases from their mixtures.

*Extract from Specification.*—The object of this invention of "improvements in the method of, and apparatus for, the separation of gases from their mixtures," is the provision of processes and arrangements of apparatus which shall enable the separation of gases, especially those forming the air, to be accomplished more economically than has been possible by the means hitherto provided, and to enable the separation of gases to be effected completely, or to any extent which may be desirable from time to time. For convenience of description, I will first describe my invention as applied in the separation of the elements constituting air. In accomplishing the object of my invention I adopt the processes and arrangements following, namely: (1.) The atmospheric air to be separated into its constituent gases is first filtered, compressed, and freed from water, in order that all the water-vapour which it contains, and which is often considerable, may be taken away. (2.) The dry and compressed air is cooled to the temperature of its point of liquefaction—namely, about  $-194^{\circ}$  centigrade. (3.) The condensed and liquefied air is filtered to remove the solid carbonic acid which it holds in suspension. (4.) The liquid and filtered air is evaporated again in order to separate first the more volatile constituent—namely, nitrogen—and afterwards the less volatile constituent—namely, oxygen. (5.) The evaporation of the liquid air is utilised for the liquefaction of the compressed air to be separated into its con-

stituent gases. (6.) An arrangement enabling the pressure of liquefaction to be regulated in order to insure a continuous working of the apparatus. (7.) An arrangement which, without needing attention, when once adjusted will permit the separated nitrogen and oxygen to leave the apparatus in such condition as to have the commercial or industrial value requisite from time to time, and also to permit the escape of mixtures of gases too nearly resembling atmospheric air. For the filtration of the air to be separated into its constituent gases I employ cotton-wool or other suitable material, and (which is of importance) I do not allow the air to traverse the filtering-material at too great a speed. In order that this may be efficiently accomplished I provide a chamber of relatively large section, to which the air to be operated upon is led by means of a pipe of any suitable material, or in any other suitable manner, and provided with two or more partitions, perforated or made of wire gauze, so as to be divided into a suitable number of compartments, one or more of which is or are filled with cotton-wool or other suitable filtering-material, so placed that there are no parts through which the air can pass without being filtered. Two or more filters may be arranged, so that one or more may be put into or out of action from time to time, and so that the filtering-material may be changed without interruption of the action of the other parts of the apparatus employed. A pipe or passage, or pipes or passages, of any suitable kind is or are provided to convey the filtered air to an apparatus by which it is to be compressed.

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

(Specification, £1 8s.; drawings, 2s.)

No. 14386. — 30th December, 1901. — ARTHUR AUGUSTUS BROOKS, Engineer, and GEORGE ANDREW WATSON, Merchant, both of 23, Tower Buildings, Liverpool, Lancaster, England. Improvements in or connected with photographic cameras.

*Extract from Specification.*—This invention relates to photographic cameras, and especially to that part of the camera in which the sensitised plates or films (hereinafter termed "films") are contained and exposed to the object through the lens, and usually termed "dark-slide and change-box," and our invention consists in a new constructive arrangement which forms a combined change-box, film-magazine, and dark-slide, by the construction, arrangement, and use of which a dark-room is only required by the operator for the purpose of developing and fixing the image on the films after exposure, as, in accordance with the system under which the operations are carried out, films to a convenient number are packed in cases adapted to fit in the change-box, and each case is adapted to be retained therein until all the films have one by one been withdrawn, exposed, and returned to the case again while it remains in the camera or change-box; which case can then be removed, and a fresh one containing films can be substituted for it. After the films have been removed in a dark-room from the case after exposure, the case, being cheaply made, is not further required. The chief object of this invention is to obviate the necessity of a dark-room for the purpose of changing the camera, dark-slide, or change-box, especially when a large number of films are required for immediate use. In accordance with the system upon which our invention is based, we first adapt the already sensitised films of any standard size to a case or magazine formed to hold and to retain, say, one dozen such films. We make a dark-slide in which the shutter, or light-excluding sliding-cover, is formed as a hollow case or sheath adapted to receive the said magazine without the lid or cover thereof, and in which, by means of suitable mechanism provided, the lid of the magazine is first removed without admitting light to the said dark-slide or change-box, and the plates or films are exposed to the object through the lens, and received again into the magazine by the sliding in and out of the said shutter. When all the parts composing the dark-slide or change-box are assembled, and the latter is attached to the back of the camera in the usual way, in order to expose a film the shutter is drawn out and a film is left behind in the frame or case of the dark-slide or change-box, and upon depressing the shutter the said film is forced flat against the rim round the exposure-aperture. After exposure, in order to receive the film back again into the magazine the shutter is again drawn out, and upon a second time depressing it the film is guided into the magazine. The operation of exposing a film and taking it back into the magazine again is completed in four movements in and out of the shutter.

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

(Specification, 15s.; drawings, 4s.)

No. 14389.—30th December, 1901.—JAMES BISHOP, of Wellington, New Zealand, Consulting Mining Engineer. Improved dredging-apparatus.

*Claims.*—(1.) In dredging-apparatus, a grab-hook pivoted to a specially designed link so as to move freely forward, thus automatically increasing the space between the hooks and the next bucket behind them, substantially as and for the purpose described. (2.) In dredging-apparatus, a grab-hook attached to the links of the bucket-chain by a pivoting pin or pins instead of being rigidly attached, substantially as and for the purpose described.

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

No. 14402.—6th January, 1902.—PORCHERINE, LIMITED, of 11, Queen Victoria street, London, England (assignees of Paul Porchère, of 34, Rue Ferrandière, Lyons, France, Chemist. Improvements in the production of sweetening-liquids.

*Claims.*—(1.) The preparation of sweetening-liquids by—(a) mixing one or two parts of anhydro-benzoic-orthosulphamide or paraphenetol-carbamide or of their salts with two or three parts of glycerine of a density of about 20° to 30°, the mixing being operated at a high temperature of the glycerine; (b) mixing one or two parts of anhydro-benzoic-orthosulphamide or paraphenetol-carbamide or of their salts with two or three parts of water, the mixing being operated at a high temperature of the water; (c) mixing one or two parts of anhydro-benzoic-orthosulphamide or paraphenetol-carbamide or of their salts with two or three parts of alcohol, the mixing being operated at a high temperature of the alcohol; (d) mixing one or two parts of anhydro-benzoic-orthosulphamide or paraphenetol-carbamide or of their salts with two or three parts of glucose, the mixing being operated at a high temperature of the glucose; (e) mixing one or two parts of anhydro-benzoic-orthosulphamide or paraphenetol-carbamide or of their salts with two or three parts of syrup of sugar, the mixing being operated at a high temperature of the syrup of sugar. (2.) The combination of such liquids, prepared as described in claim 1, with cane-sugar, coarse brown sugar, glucose, perfumed essences, acids, or other substances, in order to modify the density, the reaction, the colour, or odour of the preparation.

(Specification, 2s. 3d.)

No. 14403.—6th January, 1902.—BALFOUR FRASER McTEAR, of Brook Cottage, Rainhill, Lancaster, England, Engineer. Improvements in or connected with the manufacture of steel or hard-metal tubes or tubular bodies.

*Claims.*—(1.) The described improvement in the manufacture of tubes or hollow bodies, consisting in producing tubes or hollow bodies of equal thickness throughout from hollow rough blanks or tubes by rolling same circularly while in a highly heated state at a high velocity between internal and external rollers having positive adjustment in relation to each other, and by external side-supporting rollers, whereby, by a small pressure and high velocity, a tube-blank can be trued or made of equal thickness throughout, and its thickness reduced rapidly, substantially as set forth. (2.) A machine for rolling tubes or hollow bodies or cylinders circularly, and internally and externally, comprising external and internal rollers, and external side-supporting rollers having an oblique movement, this oblique movement being such that the said side rollers always support the body being rolled at or near the extreme diameter or sides, and follow this diameter as the body increases. (3.) A machine for rolling tubes or hollow bodies or cylinders circularly, and internally and externally, comprising external and internal rollers, and external side-supporting rollers, the said side-supporting rollers having their axes adapted to be tilted in opposite directions, to prevent the body being rolled from moving longitudinally along the rolling rollers, substantially as described. (4.) In the manufacture of tubes or hollow bodies or cylinders, the described improvement, consisting in effecting the removal of scale and other matters from the internal surface of the hot body to be operated on prior to rolling, by scraping it by one end of the internal roller employed, which is adapted to act as a scraper, in passing said roller through the body preparatory to rolling, substantially as described. (5.) In the manufacture of tubes or hollow bodies or cylinders, the described improvement, consisting in preventing the interior of the tube being pitted or of irregular surface by projecting a jet of fluid longitudinally on to and along the interior of the tube or body, and through same, from one end to the other, while it is being rolled between inside and outside rollers, and in a highly heated state. (6.) In the manufacture of tubes or hollow bodies or cylinders, the improvement consisting in giving such tubes a black-planished or smooth surface by rolling the hollow body between internal and external rollers

while red-hot, at a high velocity, until the thickness of metal or diameter required is reached, and then continuing to roll the body in the same manner, but without reducing its thickness materially, and subjecting its surface to the action of water poured on to it, until it is black and hard, and its surfaces planished. (7.) The process of manufacturing seamless tubes or cylinders consisting in first piercing a solid billet or body of steel or hard metal by a piercing mandril forced axially through it while in a red-hot state, and then rolling said pierced body or billet while in a red-hot state, circumferentially internally and externally, by rollers having positive adjustment in relation to each other, and adapted to act only on the thicker parts of the tube or hollow body, until said thicker parts are rolled off, and the thickness of the walls is uniform, substantially as described. (8.) A machine for rolling tubes or hollow bodies or cylinders circularly, and internally and externally, comprising, in combination, a large horizontal external lower driven roller, and upper internal small non-driven loose roller, directly above the lower roller, for rolling on the internal surfaces, and adjusted vertically by positive adjusting means, and external side-supporting rollers on either side, for supporting the sides of the hollow cylinder, adapted to be moved away from and towards the vertical longitudinal plane of the machine.

(Specification, 10s.; drawings, 4s.)

No. 14404.—7th January, 1902.—WILLIAM THOMAS LOCKE TRAVERS, of Wellington, New Zealand, Barrister and Solicitor (nominee of Benjamin Garver Lamme, of 230, Stratford Avenue, Pittsburg, Pennsylvania, United States of America, Electrical Engineer). Improvements in windings for electrical machines.

*Claim.*—For electrical machines, bar windings having their ends spaced apart in the radial direction and connected by double strap connectors in the manner described, and shown in the drawings.

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

No. 14410.—10th January, 1902.—ADOLF GENTZSCH, of 1, Siftgasse, Vienna, Austria, Mineralogist. Improvements in the manufacture of a gutta-percha substitute.

*Extract from Specification.*—The present invention has reference to improvements in the manufacture of a gutta-percha substitute, and relates more especially to a process for obtaining artificial gutta-percha by mixing and kneading, with or without the addition of oils, caoutchouc with wax of a high natural melting-point, or the melting-point of which has been raised artificially by a special process, which consists in adding water, alone or with an admixture of certain salts, to the heated wax. But not only wax, but also resin, asphalt, tar, and pitch, furnish, according to the present invention, a substitute for gutta-percha when mixed with caoutchouc, if these substances have been treated according to the referred-to special process, whereby the melting-point of the wax, resin, and asphalt is raised, and the inspissation of the tar and pitch enhanced.

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

(Specification, 2s. 6d.)

No. 14412.—10th January, 1902.—GUSTAV HUHN, of 15, Cuxhavenerstrasse, Berlin, Germany, Manufacturer. Improvements in metallic packing-rings.

*Claims.*—(1.) A metallic packing for stuffing-boxes, consisting of hollow metal rings of circular cross-section, substantially as described and shown, and for the purpose set forth. (2.) A metallic packing for stuffing-boxes as claimed under (1), consisting of hollow metal rings filled with a suitable lubricant, and provided with openings for the outflow of the lubricant, the rings made of a metal composition consisting of an easily fusible metal with a metal the temperature of fusion of which is high and of sufficient hardness, substantially as described and shown, and for the purpose set forth. (3.) In a metallic packing-ring, as claimed under No. 2, the application of an outer cover of wax or other material the fusion of which takes place at over 50° C., only for the purpose of preventing the outflow of the lubricant during transport, substantially as described and shown, and for the purpose set forth. (4.) In combination with metallic packing-rings as claimed under No. 2, the improvement of the stuffing-box therein, consisting that a cylinder closed at the bottom, composed of two parts, is inserted into the stuffing-box, and closely fitting the stuffing-box in size and shape, and connected with the same by screws screwed through the upper flange of the cylinder for the purpose of facilitating the removal of the packing from the stuffing-box, substantially as described and shown, and for the purpose set forth. (5.) A modification in the construction of the metallic

packing-ring, claimed under No. 2, in which spiral springs are provided in the outer surface of the ring, located in suitable hollows for the purpose of keeping the inner surface of the packing-ring in close contact with the surface of the piston-rod, substantially as described and shown, and for the purpose set forth.

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

No. 14414.—8th January, 1902.—JOHN POMEROY, of Invercargill, New Zealand, Fish-curer. Improvements in hat-fasteners.

*Claims.*—(1.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head and operated by elastic bands, means for guiding and stopping the travel of said combs, substantially as described. (2.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head, and operated by elastic bands, eyelets embracing two or more teeth of said combs, substantially as described. (3.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head, and operated by elastic bands, keepers embracing said elastic bands, substantially as described. (4.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head, and operated by elastic bands, eyelets embracing two or more teeth of said combs, and keepers embracing said elastic bands, substantially as described. (5.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head, and operated by elastic bands, said combs being provided with projecting backs having a flange, lugs, or tags, substantially as described. (6.) In a hat-fastener, having combs formed to grip the wearer at the sides of the head, and operated by elastic bands, said combs being provided with projecting backs having a flange, lugs, or tags, eyelets embracing two or more teeth of said combs, and keepers embracing said elastic bands, substantially as described.

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

No. 14418.—6th January, 1902.—WILLIAM STEWART, of Hume Street, Albury, New South Wales, Builder. A pneumatic-cushion appliance usable as a fire-escape and for other purposes.

*Claims.*—(1.) An appliance for the purpose specified, consisting of the combination of the tube as A, closed at top and open at bottom, and furnished at its top end with an air-regulating valve or cock as A<sup>3</sup>, a weighted piston within the tube, a rope connection as C between the piston and cage or other load-carrier, and an overhead sheave as J, substantially as described and shown. (2.) In an appliance for the purpose specified, a weighted piston, composed of the weight-plug E, hollowed at its upper end, expansion-washer F, leather G, washer I, expansion-ring H, and screwed rod D and nut D<sup>1</sup>, combined with pipe or tube as A and the rope as C, substantially as described and shown. (3.) In an appliance for the purpose specified, a closed-top tube or pipe furnished with an air-regulating valve, combined with a weighted piston, and with a rope which passes out through top or cap of tube or pipe, substantially as described and shown.

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

No. 14419.—6th January, 1902.—FREDERICK KLAERR and ALEXANDER LAW, of Inkerman Street, St. Kilda, Victoria, Plumbers (assignees of Alexander Linard, of Belgravia House, Oak Grove, Balaclava, Victoria, Mechanic). Improvements in or relating to wire mattresses.

*Claims.*—(1.) In wire mattresses, a cambered rail or roller to which the woven-wire fabric is attached, substantially as described and explained, and as illustrated in our drawings. (2.) In wire mattresses, a cambered rail or roller mounted in bearings on suitable brackets attached to or forming part of the bedstead, and having the woven-wire fabric attached thereto, substantially as described and explained, and as illustrated in our drawings. (3.) Adjustable brackets for use in supporting woven-wire fabric on bedsteads, having a slotted or recessed portion adapted to engage the horizontal flange of an iron bedstead on which it may slide, and to which it may be secured by a thumbscrew, substantially as described and explained, and as illustrated in our drawings.

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

No. 14426.—14th January, 1902.—WILLIAM JOSHUA FOOT, of 114, New North Road, Islington, London, N., England, Knife-cleaning-machine Manufacturer. An improved method of and means for the fixation of the track-rails of tramway and railway lines.

*Claims.*—(1.) In an improved method of and means for the fixation of the track-rails of tramway and railway lines, the construction, use, and application of a supporting rail or base into which may be seated and fixed the track-rail proper, substantially as and for the purposes set forth and shown. (2.) In an improved method of and means for fixing the track-rails of tramway-lines, the combination of a base or supporting rail A, consisting of a flange or base B, B, and vertical central web C, the latter having a longitudinal groove D for receiving the central web F of the track-rail E, connected to the rail A by the means of bolts and nuts G, and having boxes R and R<sup>1</sup>, with lids or covers R<sup>2</sup> sunk into the roadway at each side of the supporting rail A, substantially as and for the purposes described, and shown by Figs. 1 and 2 of the drawings. (3.) In an improved method of and means for fixing the track-rails of railway-lines, the combination of a base or supporting rail A, consisting of a flange or base B, B, and vertical central web C, the latter having a longitudinal groove D for receiving the central web F of a track-rail E, connected to the rail A by the means of bolts and nuts G, the said supporting rail A being connected to sleepers such as S, or imbedded in a concrete foundation such as V, substantially as and for the purposes described, and shown by Figs. 3 and 4 of the drawings. (4.) In an improved method of and means for fixing the track-rails of tramway-lines, the combination of a support A consisting of base or flange B, B, and central web C, the latter arranged to engage with the webs F and F<sup>1</sup> of the track-rail E, substantially as described and shown by Fig. 5 of the drawing.

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

No. 14427.—14th January, 1902.—EDWARD FENTON COLBORN, of Salt Lake City, Utah, United States of America, Attorney-at-law (assignee of Albert Hayes, of Salt Lake City aforesaid, Inventor). Improvements in explosive engines.

*Claims.*—(1.) The described method of forming an explosive mixture for explosive engines by forcing liquid hydrocarbon, with or without water, into the cylinder, and converting it into gas within the cylinder by the direct action of flame. (2.) The described explosive engine, comprising in combination a working cylinder and piston, means for maintaining a flame within the cylinder, means for forcing into said cylinder a stream or spray of liquid hydrocarbon or liquid hydrocarbon and water, and means for converting the stream or spray of hydrocarbon or hydrocarbon and water into gas within the cylinder by the direct action of said flame thereon.

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

No. 14428.—14th January, 1902.—EDWARD FENTON COLBORN, of Salt Lake City, Utah, United States of America, Attorney-at-law. Improvements in the production of combustible gas from hydrocarbon oils.

*Claims.*—(1.) The described method of forming a fixed or substantially fixed gas from hydrocarbon oil, which consists in first vaporising the oil and subsequently forcing the vapour through a flame without igniting it therein, and mixing air with the gas formed by the action of the flame on the vapour. (2.) The described apparatus by which the method specified in claim 1 is effected.

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

No. 14429.—14th January, 1902.—JAMES ALBERT CHAMBERS, of Pittsburg, Allegheny, Pennsylvania, United States of America, Glass-manufacturer (assignee of John Henry Lubbers, of New Kensington, Pennsylvania aforesaid, Glass-worker). Improvements in the manufacture of glass articles, and apparatus therefor.

*Claims.*—(1.) The method of manufacturing glass cylinders or like articles by drawing the article from a heated body of molten glass, shielding the article from the heat, and chilling it by radiation near where it is drawn, substantially as described. (2.) In drawing a hollow glass article as above set forth, supplying air to its interior, and increasing the air-supply as the article increases in length, substantially as described. (3.) The method of manufacturing hollow glass cylinders by first drawing a neck portion from a body of molten glass, supplying air to enlarge the diameter, and then continuing the drawing operation and an increasing air-supply, substantially as described. (4.) Glass-drawing apparatus comprising a furnace or receptacle containing molten glass, means for heating that portion of the glass from which the article is drawn, and a shield extending

down nearly to the surface of the bath to shield the article from the heat where it is drawn, substantially as described. (5.) In combination with glass-drawing apparatus such as is set forth in the preceding claim, glass-drawing mechanism arranged to act upon the glass substantially as described. (6.) In glass-drawing apparatus a drawing-pipe connected to a supply of air or other fluid under pressure, and mechanism for automatically regulating the fluid-supply during the drawing-operation, substantially as described. (7.) Glass-drawing apparatus comprising a receptacle containing molten glass, a frame above it, mechanism for moving the frame vertically, and a blowing-pipe detachably secured to the frame, substantially as described. (8.) In combination with the receptacle containing molten glass having its bottom within a heating-chamber, a water-cooled ring above the level of the glass, substantially as and for the purpose set forth. (9.) In glass-drawing apparatus, a tank furnace having a front extension, means for heating the glass in the extension, and means for shielding the glass from the heat near the point of drawing, substantially as described. (10.) Glass-drawing apparatus comprising a tank furnace having a front extension supplied with molten glass feeds from the tank, glass-drawing mechanism arranged to draw from the glass in the extension, means for heating that portion of the glass from which the article is drawn, a device for chilling the article by radiation near where it is drawn, and a shield for protecting it, where it is drawn, from the external heat, substantially as described. (Specification, 7s.; drawings, 3s.)

No. 14434.—15th January, 1902.—GEORGE WESTINGHOUSE, of Westinghouse Building, Pittsburg, Pennsylvania, United States of America, Manufacturer. Improvements in internal-combustion engines.

*Claims.*—(1.) An internal-combustion engine with a plurality of co-axial explosion-cylinders, the pistons of which are connected in tandem, explosive charges being supplied to each end of one cylinder and to one end of the other cylinder, so that three impulses may be given to the piston during every two revolutions of the engine-crank. (2.) In a gas-engine having a plurality of co-axial explosion-cylinders, inlet and exhaust valves for admitting explosive mixture to the adjacent ends of the cylinders and exhausting the products of combustion therefrom, said valves being all located in a casing between the adjacent ends of the cylinders, and being arranged to move at right angles to the line of movement of the pistons, substantially as described. (3.) In an internal-combustion engine having a plurality of explosion-cylinders or a double-acting cylinder, the provision of valves for cutting off the supply of explosive mixture from either or both ends of the double-acting cylinder or from any of the cylinders at will, so as to effect economy in operation. (4.) Internal-combustion engines with two or more co-axial cylinders constructed and operating substantially as described with reference to the drawings. (Specification, 5s. 3d.; drawings, 2s.)

No. 14436.—7th June, 1901.—EDWARD COVERLY NEWCOMB, of 1071, Centre Street, Jamaica Plain, Massachusetts, United States of America, Mechanical Engineer, and PHILIP VAN VOLKENBURGH, of 45, Cedar Street, New York City, New York, United States of America, Lawyer. Improvements in method and means for generating steam or vapour.

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

*Extract from Specification.*—My invention has special reference to methods of and apparatus for generating steam or vapour, although some of the features of the invention may be advantageously employed for other purposes, such as the heating of air, water, or other fluids. In order to maintain a supply of steam at a substantially uniform pressure and temperature it has been the universal practice heretofore to utilise potentially active reserve energy in one form or another to compensate for the variations in the demand upon the supply. In the ordinary steam-boiler the reserve energy is mainly supplied by the body of water in the boiler, which is maintained at the temperature and the pressure of the steam generated therein. When the demand for steam is below normal this body of water absorbs the heat supplied in excess of that necessary to generate the steam being used, and when the demand for steam exceeds that generated by the normal source of heat the heat stored in the water supplies the deficiency. According to another type of steam-generator, a supply of heat is maintained which is in excess of that necessary to generate sufficient steam to meet the maximum demand of the apparatus, and

the water is supplied to the generator in limited quantities, the attempt being to generate only sufficient steam to meet the demand from time to time. In order to meet variations in the demand for steam in generators of this type without maintaining the source of heat at its maximum, a supply of heat in reserve is always maintained in practice by providing a body of suitable heat-absorbing material, which acts as a reservoir of heat to supplement the normal source of heat when the demand for steam is in excess of the normal. Generators of the first type are dangerous, especially in the hands of careless or inexperienced operators, by reason of the explosive nature of the body of water therein, as when suddenly released from pressure. Generators of the second type are unreliable in operation, and they are short-lived, and when used for motive-power they require engines and other apparatus of special construction, which apparatus is also short-lived and unreliable in operation. Generators of both types, moreover, require considerable experience and skill for their successful manipulation. They are also more or less inefficient as to the absorption and utilisation of the heat, and they are more or less bulky and heavy and expensive to construct and maintain. It has been found impracticable, furthermore, to deliver steam from the generators of either class hitherto devised at a substantially uniform degree of superheat, although it is well known that for power purposes steam in a substantially uniform superheated condition is much more efficient than when in a saturated or a nearly saturated condition. My invention has for an object to provide methods of and apparatus for generating steam by which the defects above referred to are practically overcome. While some of the features of my invention may be embodied in apparatus designed for various purposes, as for heating air, water, or other fluids, my invention is more particularly addressed to the provision of an apparatus whereby a supply of steam or vapour may be uniformly maintained at any desired degree of superheat, and at any desired pressure, regardless of any variations of demand within the capacity of the apparatus that may be made upon the supply, and also to the provision of an apparatus whereby such a supply of steam or vapour may be maintained without involving the use of a considerable quantity of potentially active reserve energy. Other objects of my invention are to provide an apparatus of the character referred to which is automatic in its operation and easy to control, and one which at the same time is safe and reliable and efficient, even in the hands of careless or inexperienced operatives; also one which may be put into active condition without delay, and which is sensibly instantaneous in its ability to accurately adjust itself to greatly varying loads or demands upon it, and to otherwise simplify and render more practical and efficient the use of steam, and especially superheated steam, for power purposes, and particularly in situations where the demand for power varies greatly and the variations are sudden and irregular, as in the propulsion of automobiles.

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

(Specification, £3 18s.; drawings, 4s.)

No. 14437.—16th January, 1902.—THE BARWEST COASTER BRAKE COMPANY, a corporation having their principal office at 99, Chambers Street, New York, United States of America (assignees of George Fisher Barton, of 614, West Gray Street, Elmira, New York aforesaid, Engineer). Improvement in driving and braking mechanism for wheels.

*Claims.*—(1.) A driving and braking mechanism for wheels comprising a wheel-hub provided with an internal flange, a driving-member extending within the wheel-hub and rotatable independently thereof, and a clutch-dog provided with a slot embracing the flange on the hub and being wider than the flange to permit rocking thereon, said clutch-dog having rocking and driving engagement with the driving-member whereby it may be caused to engage with said hub-flange and thereby rotate the hub when the driving-member is rotated in a forward direction, substantially as set forth. (2.) A driving and braking mechanism for wheels comprising a wheel-hub provided with an internal flange, a driving-member and a brake-actuating member within the hub and rotatable independently thereof, and a clutch-dog having rocking and driving engagement with the driving-member and being adapted to engage the flange on the wheel-hub when rocked in one direction from a neutral position, and to engage with the brake-actuating member when rocked in the opposite direction from a neutral position, substantially as set forth. (3.) A driving and braking mechanism for wheels comprising a wheel-hub provided with an internal toothed driving-flange, a driving-member and a brake-actuating member within the hub, said brake-actuating member being provided with a toothed flange arranged opposite and concentric with the flange on the hub, and a clutch-dog having oppositely inclined slots on opposite sides embracing said flanges, and being wider than the flanges to permit rocking

thereon, said clutch-dog having rocking and driving engagement with the driving-member whereby it may be caused to engage either of said flanges according to the direction in which the driving-member is rotated from a neutral position, substantially as set forth. (4.) A driving and braking mechanism for wheels comprising a wheel-hub, a driving-member, and a brake-actuating member within the hub, a plurality of clutch-dogs having rocking and driving engagement with the driving-member, and adapted to engage either the hub or the brake-actuating member according to the direction in which the driving-member is rotated from a neutral position, and a spacing-ring connecting said clutch-dogs to hold same in proper relation to each other, but permitting a slight radial movement thereof, substantially as set forth. (5.) In a driving and braking mechanism for wheels, the combination with a plurality of clutch-dogs of a spacing-ring connecting said dogs to hold same in proper relation to each other, and pivoted to each of said dogs so as to permit a slight radial movement thereof, said spacing-ring extending slightly beyond the outer surface of each clutch-dog so as to come into frictional contact with the interior of the wheel-hub, substantially as set forth. (6.) A driving and braking mechanism for wheels comprising a wheel-hub, a driving-member, and a brake-actuating member within the wheel-hub and rotatable independently thereof, a brake within the hub comprising a split brake-ring adapted to be expanded to engage the hub, means arranged between the ends of the brake-ring and engaging with the brake-actuating member for expanding the brake-ring when said member is rotated, and a clutch-dog having rocking engagement with the driving-member and adapted to engage with the brake-actuating member to rotate same when the driving-member is rotated backward, substantially as set forth. (7.) In a driving and braking mechanism for wheels, the combination with a wheel-hub, a driving-member, and a brake-actuating member within the hub and rotatable independently thereof, and a cam secured to or formed integral with the brake-actuating member, of a brake comprising a split ring, a wedge-block between the ends of the brake-ring and engaging with the said cam whereby the brake-ring can be expanded when the brake-actuating member is rotated, and means for rotating the brake-actuating member only when the driving-member is rotated backward, substantially as set forth.

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

No. 14438.—16th January, 1902.—ALEXANDER LION and MAURICE EDWARD MOSELY, both of 44, Carrington Street, Sydney, New South Wales, Merchants. An improved press and improved adjusting base or abutment for stamping and marking articles, specially sock-linings of made-up shoes.

*Claims.*—(1.) An improved press for stamping and marking, consisting essentially of a plunger, a holder linked to said plunger for a stamp or die, a fulcrum-carrier to which said holder is elastically connected, inking-mechanism actuated by the movement of said carrier, and a base or abutment, substantially as described and explained. (2.) In a press of the class set forth, the combination with a plunger of a carrier such as 10, thrust-rod such as 12, holder such as 13 jointed to said rod 12 as at 14, link such as 15, stamp or die such as 17, spring such as 19, pin or stop such as 20, rod such as 21, and spring such as 22, substantially as described and explained, and as illustrated in the drawings. (3.) In a press of the class set forth, the combination with spring thrust-rod such as 12 of a set-screw such as 23 and a tapered flat such as 24, substantially as described and explained, and as illustrated in the drawings. (4.) In a press of the class set forth, the combination with a carrier and a stamp or die below same of an elastically held inking-roller such as 25, swinging-arm such as 29, pinion such as 33, sector such as 35, spring-rod such as 36, and tappet such as 38, with or without stop-pin such as 40, substantially as described and explained, and as illustrated in the drawings. (5.) In a press of the class set forth, the combination with the stamping and marking mechanism of a base or abutment adapted to adjust its contour to suit the article to be stamped or marked, and to be fixed in such adjustment, substantially as described and explained. (6.) In a press of the class set forth, the combination with a fixed base of an adjusting base or abutment consisting of a casing such as 42, pivoted links such as 46, 47, and 48, springs such as 50 and 51, clamping-plate such as 54, and screw such as 55, with or without shaped spring-piece such as 44, and with or without protecting band such as 52, substantially as described and explained, and as illustrated in the drawings.

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

No. 14447.—15th January, 1902.—WILLIAM ARTHUR CAMERON WALLER, of 7, Stamford Hill, London, England, Commercial Traveller. An improved block or plate for use in constructing partition walls.

*Claims.*—(1.) A tile having a recess centrally located on one of its edges, said recess being so shaped that the end half of each of two correspondingly shaped tiles will when reversed and fitted together form the exact counterpart of and fit accurately said recessed edge, a straight edge on the opposite edge of said tile to said recessed edge, a continuous groove extending all round the edge of said tile, including the recessed edge and the said opposite straight edge, and a central passage right through said tile located equidistant from each end of the tile, substantially as and for the purposes set forth. (2.) A tile having a recess centrally located on one of its edges, said recess being so shaped that the end half of each of two correspondingly shaped tiles will when reversed and fitted together form the exact counterpart of and fit accurately said recessed edge, a straight edge on the opposite edge to said recessed edge, a continuous groove extending all round the edge of said tile, including the recessed edge and the said opposite straight edge, and a central vertical passage right through said tile located equidistant from each end of the tile, in combination and arranged to act in conjunction with vertical tie-rods such as *e*, substantially as and for the purposes set forth. (3.) A tile having a recess centrally located on one of its edges, said recess being so shaped that the end half of each of two correspondingly shaped tiles will when reversed and fitted together form the exact counterpart of and fit accurately said recessed edge, a straight edge on the opposite edge to said recessed edge, a continuous groove extending all round the edge of said tile, including the recessed edge and the said opposite straight edge, in combination and arranged to act in conjunction with horizontal tie-rods such as *f* inserted in the grooves along said adjoining straight edges, substantially as and for the purposes set forth. (4.) A tile having a recess centrally located on one of its edges, said recess being so shaped that the end half of each of two correspondingly shaped tiles will when reversed and fitted together form the exact counterpart of and fit accurately said recessed edge, a straight edge on the opposite edge to said recessed edge, a continuous groove extending all round the edge of said tile, including the recessed edge and the said opposite straight edge, a central vertical passage right through said tile located equidistant from each end of the tile, and vertical tie-rods such as *e*, in combination and acting in conjunction with horizontal tie-rods *f* and junction pieces or unions *g*, substantially as and for the purposes set forth. (5.) A block or plate for partition walls constructed, arranged, and adapted to be used substantially in the manner and for the purposes described with reference to and as illustrated in Figs. 1 and 2 of the drawings. (6.) Corner blocks for return walls constructed and arranged to act substantially as and for the purposes described with reference to and as illustrated in Figs. 3 and 4 of the drawings.

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

No. 14448.—15th January, 1902.—JOHN ELIOT HOWARD, of 63, Queen Victoria Street, London, England, Engineer. Improvements in engines driven by compressed fluid.

*Claims.*—(1.) An engine having a hollow cylindrical distribution-valve geared to the crank-shaft, and provided with a longitudinal inlet-port or series of ports on its outer surface, and an exhaust-port or series of ports cut through it to its interior, substantially as described. (2.) An engine having a plurality of cylinders, and a hollow cylindrical distribution-valve geared to the crank-shaft, and provided with longitudinal inlet-ports or series of ports on its outer surface, and exhaust-ports or series of ports cut through it to its interior, the ports for one cylinder being in advance of those for the next, substantially as described. (3.) The means of rendering engines claimed in the preceding claims reversible, substantially as described. (4.) The means of rendering engines claimed in claims 1 and 2 double-acting, substantially as described. (5.) Engines substantially as described and illustrated.

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

J. C. LEWIS,  
Deputy Registrar.

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

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

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

## Provisional Specifications.

Patent Office,  
Wellington, 22nd January, 1902.

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

No. 14352.—16th December, 1901.—ANDREW MCLEOD, of Arch Hill, Auckland, New Zealand, Commission Agent. An improved appliance for extracting stumps, breaking up land and roads, and for other similar purposes.

No. 14354.—19th December, 1901.—RICHARD JENNISON BALL, of Te Kopuru, Northern Wairoa, Auckland, New Zealand, Engineer. An improved circular-saw guard and protector.

No. 14367.—19th December, 1901.—ALEXANDER STORRIE, of Invercargill, New Zealand, Implement-maker. A positive automatic concave roller and cleaner.

No. 14398.—4th January, 1902.—JAMES NEAGLE, of Dannevirke, Hawke's Bay, New Zealand, Saddler. Improvements in or relating to lead-bags for racehorses.

No. 14400.—6th January, 1902.—THOMAS HOBBY BROWN, of Wellington, New Zealand, Manager. An improved artificial fuel.

No. 14406.—8th January, 1902.—EDMUND ALBERT ANGUS, of Eglinton Street, Moonee Ponds, near Melbourne, Victoria, Contractor. Improved passenger-guard and driver's communication on trains and trams.

No. 14407.—8th January, 1902.—FRANK HORNBY, of 13, Hawarden Avenue, Sefton Park, Liverpool, England, Manager. Improvements in toy or educational devices for children and young people.

No. 14408.—8th January, 1902.—JOHN RUSSELL BRUNT and RICHARD CHARLES PITT, both of Christchurch, New Zealand, Importers. Improvements in or relating to pneumatic tires.

No. 14409.—10th January, 1902.—FRANK MARISCO, of Invercargill, New Zealand, Dealer. Improvements in gold-dredging appliances.

No. 14413.—9th January, 1902.—MARTIN JOHN LISTER, of Waikari, Canterbury, New Zealand, Farmer. Improvements in or relating to targets.

No. 14415.—8th January, 1902.—GEORGE CHARLES CHALLIS, of High Cliff, near Dunedin, New Zealand, Farmer. Improvements in stump-extractors.

No. 14416.—8th January, 1902.—ROBERT WALES, Engineer, and WILLIAM HENRY FAHEY, Commercial Traveller, both of Dunedin, New Zealand. Improvements in brooms, brushes, and the like.

No. 14417.—8th January, 1902.—ADAM BROWN TODD, of 14, Yarrow Street, Invercargill, New Zealand, Commercial Traveller. Improvements in machines for scattering lime, manure, and seed broadcast.

No. 14420.—6th January, 1902.—JOHN BLAIR MASON, of Dunedin, New Zealand, Civil Engineer. A new and improved combined gravity and automatic grading and concentrating table.

No. 14421.—6th January, 1902.—JOHN BLAIR MASON and CHARLES LEWELLYN WATT, of Dunedin, New Zealand, Consulting Engineers. An improved method of driving dredge machinery.

No. 14423.—8th January, 1902.—ALEXANDER STORRIE, of Invercargill, New Zealand, Implement-maker. An improved agricultural seed sower and hopper.

No. 14424.—9th January, 1902.—JOSEPH JAMES MACKY, of Victoria Arcade, Auckland, New Zealand, Commission Agent. Improvements in kettles or spouted vessels.

No. 14425.—9th January, 1902.—ROBERT WHITSON, of Auckland, New Zealand, Engineer. An improved exhaust condenser for explosive motors and engines.

No. 14432.—13th January, 1902.—ANDREW MCLEOD, of Arch Hill, Auckland, New Zealand, Commission Agent. An improved application for branding cattle-boxes or anything that will burn, or for carving wood, or for doing fret-work, or for ornamental work, or for boring holes.

No. 14433.—14th January, 1902.—ARTHUR CECIL WOLFF, of Christchurch, Canterbury, New Zealand, Railway Porter. Improvements in the construction of packing-cases.

No. 14439.—17th January, 1902.—EDWIN ARTHUR DERBET, of Hawarden, Canterbury, New Zealand, Farmer. An improved fencing-dropper.

No. 14440.—17th January, 1902.—THOMAS JOSEPH BROOME, Dairy Produce Merchant, of 82, Cuba Street, Wellington, New Zealand, and CHARLES WENTWORTH LANGSTONE, of 43, Arrow Street, Wellington aforesaid. A composition for making cloth, &c., waterproof.

No. 14441.—16th January, 1902.—MAURICE PERYER, of Christchurch, New Zealand, Head Porter, Railway-station. An improved composition for cleansing painted surfaces.

No. 14442.—17th January, 1902.—WILLIAM MARRIOTT and EDWARD BENHAM, of Wanganui, New Zealand, Journeymen Tailors. An improved match-striker.

No. 14443.—15th January, 1902.—WILLIAM BORLASE, of Manders's Road, North-east Valley, Dunedin, New Zealand, Cycle Mechanic. An improved wire-strainer.

No. 14444.—15th January, 1902.—ALEXANDER COLIN MURRAY, of Cromwell, New Zealand, Commission Agent. Improved coal-scuttle.

No. 14445.—15th January, 1902.—ALEXANDER COLIN MURRAY, of Cromwell, New Zealand, Commission Agent. Improved can-handle.

No. 14446.—15th January, 1902.—WILLIAM FLEMING KENNEDY, of Saddle Hill, near Dunedin, New Zealand, Farmer. Improvements in wire-strainers.

J. C. LEWIS,

Deputy 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 9th January, 1902, to the 14th January, 1902, inclusive:—

Nil.

J. C. LEWIS,

Deputy Registrar.

## Letters Patent on which Fees have been paid.

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

## SECOND-TERM FEES.

NO. 10283.—C. H. Taylor, air-compressor. 10th January, 1902.

No. 10303.—W. Brierley, railway signalling. 14th January, 1902.

No. 10320.—W. O'Brien, jun., working gold-dredge. 10th January, 1902.

No. 10322.—W. Jandus, arc lamp. 16th January, 1902.

No. 10388.—W. Waterhouse, T. W. Blantern, and W. M. Spriggs, attaching wire fabrics to frames. 15th January, 1902.

No. 12371.—C. H. Taylor, rotary engine. 14th January, 1902.

## THIRD-TERM FEES.

No. 7374.—O. C. Heiden, extracting gold. 14th January, 1902.

No. 7399.—W. Hitch, bucket and strainer. 13th January, 1902.

No. 7466.—F. D. Cummer, mechanical drier. 15th January, 1902.

J. C. LEWIS,

Deputy Registrar.

## Subsequent Proprietors, &amp;c., of Letters Patent registered.

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

NO. 7901. { Ogdens's, Limited, whose registered office is

{ at Boundary Lane, Liverpool, England,

No. 8393. { cigarette-machine. Licensees of the exclusive right to use the invention in the Colony of New Zealand.

[B. Baron.] 9th January, 1902.

No. 10873.—Robert Thorburn Turnbull and Robert Clay Jones, of Dunedin and elsewhere in New Zealand, Electrical Engineers, fire-alarm. Licensees for the Colony of New Zealand for the term of two years and six months from the 30th September, 1901. [C. May.] 9th January, 1902.

No. 11690.—The British Westinghouse Electric and Manufacturing Company, Limited, having its registered office at Norfolk Street, Strand, Westminster, England, regulation of electro-motive force. [N. Rowe.] 14th January, 1902.

No. 12309.—The New Zealand Loan and Mercantile Agency Company, Limited, of Wellington, New Zealand, Commission Agents and Mercantile Brokers, seed-feeder. [C. Bristow.] 14th January, 1902.

No. 12703.—The New Zealand Loan and Mercantile Agency Company, Limited, of Wellington, New Zealand, Commission Agents and Mercantile Brokers, seed-sower. [C. Bristow.] 14th January, 1902.

J. C. LEWIS,

Deputy Registrar.



*Notice of Request to amend Specification.*

Patent Office,  
Wellington, 22nd January, 1902.

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

No. 14037.—24th September, 1901.—Roland Meredith Cooper and Herbert James Cooper, both of Petrie's Bight, Brisbane, Queensland, General Agents, and John Storie, jun., of Enoggera Terrace, Brisbane aforesaid, Builder. An improved automatic window-support.

The nature of the proposed amendments is as follows:—

- (1.) To insert the words "or other shaped" after the word "square," line 7, page 2.
- (2.) To insert the words "round, partly flattened, or other shape" after the word "square," line 19, page 2; and to strike out the words "which would require to be rounded, but the former, as shown in the drawings, is more suitable," and to insert instead the following words—"where it would or may be shaped to suit," lines 20, 21, and 22, page 2.
- (3.) To insert the words "may or may not be used" after the word "wedge," line 26, page 2.
- (4.) To omit the word "round," line 28, page 2; to strike out the words "round part of the," line 30, page 2; and to insert the words "or shaft" after the word "bush," line 31, page 2.
- (5.) To strike out the words "small square," and insert instead the word "outer," line 3, page 3.
- (6.) To insert the words "or other fastening" after the word "set-screw," line 2, page 4.
- (7.) To insert the word "or" instead of the word "and," lines 5, 7, and 10, page 5.

The applicants state, "Our reasons for making this amendment are as follows: (1) We wish to simplify the manufacture; (2) to prevent encroachments."

J. C. LEWIS,  
Deputy Registrar.

*Application for Letters Patent withdrawn.*

**N** O. 13136.—F. Winter and J. Olsen, water-bicycle. (Advertised in Supplement to *New Zealand Gazette*, No. 97, of the 22nd November, 1900.)

No. 13428.—C. Booth, enamelled leather. (Advertised in Supplement to *New Zealand Gazette*, No. 105, of the 12th December, 1901.)

No. 13429.—C. Booth, enamelled leather. (Advertised in Supplement to the *New Zealand Gazette*, No. 68, of the 11th July, 1901.)

J. C. LEWIS,  
Deputy Registrar.

*Applications for Letters Patent abandoned.*

**L** IST of Applications for Letters Patent (with which provisional specifications only have been lodged) abandoned from the 9th January, 1902, to the 22nd January, 1902, inclusive:—

- No. 13472.—T. T. Draper, extracting metalliferous solutions from slimes, &c.
- No. 13481.—P. Martin, armour-plate.
- No. 13484.—R. McGregor, butter-test.
- No. 13485.—H. Grass, horse-driving device.
- No. 13488.—W. Payne, extracting copper from ore.
- No. 13491.—M. H. L. Bennett, motor.

J. C. LEWIS,  
Deputy Registrar.

*Applications for Letters Patent lapsed.*

**L** IST of Applications for Letters Patent (with which complete specifications have been lodged) lapsed from the 9th January, 1902, to the 22nd January, 1902, inclusive:—

Nil.  
J. C. LEWIS,  
Deputy Registrar.

B

*Letters Patent void.*

**L** IST of Letters Patent void through non-payment of fees from the 9th January, 1902, to the 22nd January, 1902, inclusive:—

*THROUGH NON-PAYMENT OF SECOND-TERM FEES.*

- No. 9988.—E. H. K. Crawford, cooling-chamber and filter.
- No. 9990.—J. Taylor, tobacco-pipe.
- No. 10007.—J. M. Ewen, window-light (F. C. Soper).
- No. 10009.—J. M. Ewen, basement-lights (F. C. Soper).
- No. 10011.—J. M. Ewen, glazing glass sections together (W. H. Winslow and H. F. Belcher).
- No. 10012.—J. M. Ewen, mounting vault-lights (W. H. Winslow).
- No. 10013.—J. M. Ewen, framing window-lights (W. H. Winslow).
- No. 10015.—J. M. Ewen, mounting prism lights (W. H. Winslow).
- No. 10019.—J. M. Ewen, window-prism.
- No. 10029.—E. Sprey, supplying air to mines, &c.
- No. 10030.—J. J. Hazard, preserving organic matters.
- No. 10031.—C. Newman, tire.
- No. 10034.—A. Gross, tire-pump.
- No. 10035.—J. F. Furley and E. Forsyth, bicycle-support.
- No. 10036.—D. Morgan, cycle-wheel.
- No. 10039.—J. G. Nash, sheep-shearing machine.
- No. 10040.—R. Worland, milk-can.
- No. 10043.—W. C. Campbell, baking-tin.
- No. 10045.—A. Russell, drain-plough plug.
- No. 10053.—B. Crawford, chimney-pot.
- No. 10068.—C. T. Kiernan, easy-chair.

*THROUGH NON-PAYMENT OF THIRD-TERM FEES.*

- No. 7211.—G. B. H. Austin, velocipede.
- No. 7219.—T. Bullington, discharging silt from punts, &c.
- No. 7221.—J. Dalziel, bearing.
- No. 7222.—D. A. Brown, ore-furnace.
- No. 7224.—W. Troutbeck, rock-drill.

J. C. LEWIS,  
Deputy Registrar.

*Applications for Registration of Trade Marks.*

Patent Office,  
Wellington, 22nd January, 1902.

**A** PPLICATIONS 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: 3334.  
Date: 22nd March, 1901.

TRADE MARK.



NAME.

HERBERT MORRIS and BENJAMIN THOMAS (trading as "Morris, Thomas, and Ellis"), of Lench Street, Birmingham, England, Cycle-manufacturers.

No. of class: 22.  
Description of goods: Cycles.

No. of application : 3645.  
Date : 22nd March, 1901.

## TRADE MARK.

(The mark as in preceding notice, No. 3334.)

## NAME.

HERBERT MORRIS and BENJAMIN THOMAS (trading as "Morris, Thomas, and Ellis"), of Lench Street, Birmingham, England, Cycle-manufacturers.

No. of class : 13.

Description of goods : Component parts of cycles.

No. of application : 3571.  
Date : 26th October, 1901.

## TRADE MARK.

The word

SUN.

## NAME.

WALTER WILFRID JHONSON (trading as "Walter W. Jhonson Manufacturing Company") Manufacturing Chemists, of 82, King Street, Sydney, New South Wales.

No. of class : 3.

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

No. of application : 3643.  
Date : 10th January, 1902.

## TRADE MARK.



The essential particulars of this trade mark are the device in conjunction with the letters "KO-OP"; and any right to the exclusive use of the words "Trade Mark" is disclaimed.

## NAME.

THE PATEA CO-OPERATIVE POULTRY COMPANY, LIMITED, of Patea, New Zealand.

No. of class : 42.

Description of goods : Poultry and eggs.

No. of application : 3644.  
Date : 14th January, 1902.

## TRADE MARK.

The word

ARGENTOPHOR.

## NAME.

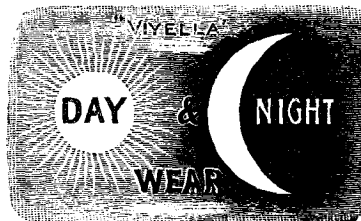
IGNATIUS SINGER, of Petone, Wellington, New Zealand, Analytical Chemist.

No. of class : 1.

Description of goods : A solution for silvering metal goods.

No. of application : 3646.  
Date : 14th January, 1902.

## TRADE MARK.



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

## NAME.

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

No. of class : 34.

Description of goods : Cloths and stuffs of wool, worsted, or hair.

No. of application : 3647.  
Date : 14th January, 1902.

## TRADE MARK.



The essential particulars of this trade mark are the representation of a unicorn rampant held by a chain and surmounting a wreath of leaves, and the word "Unicorn"; and any right to the exclusive use of the added matter is disclaimed.

NAME.

ALFRED TYREE AND COMPANY, of Lichfield Street, Christchurch, New Zealand, Importers.

No. of class: 18.

Description of goods: Incandescent mantles.

No. of application: 3648.

Date: 14th January, 1902.

TRADE MARK.

**THE EAGLE**



Registered Trade Mark.

**Incandescent Mantle**

The essential particulars of this trade mark are the representation of an eagle alighting upon a rock, holding in its beak an incandescent gas-lamp, the whole surmounting a wreath of leaves, and the word "Eagle"; and any right to the exclusive use of the added matter is disclaimed.

NAME.

ALFRED TYREE AND COMPANY, of Lichfield Street, Christchurch, New Zealand, Importers.

No. of class: 18.

Description of goods: Incandescent mantles.

No. of application: 3650.

Date: 16th January, 1902.

TRADE MARK.

The word

**GLENLOTH**

NAME.

JAMES AINSLIE, trading as "James Ainslie and Co.," 201, Leith Walk, Leith, Scotland, Distiller and Blender of Whisky.

No. of class: 43.

Description of goods: Fermented liquors and spirits.

No. of application: 3654.

Date: 20th January, 1902.

TRADE MARK.



NAME.

THE ORURU-FAIRBURN CO-OPERATIVE DAIRY FACTORY COMPANY, LIMITED, of Peria, Mangonui, New Zealand.

No. of class: 42.

Description of goods: Butter, cheese, bacon, and dairy products generally.

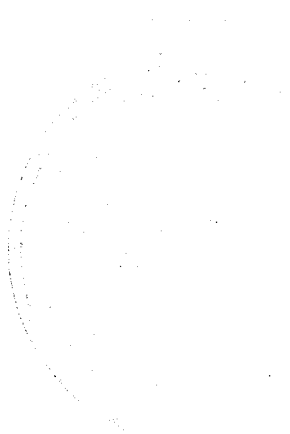
J. C. LEWIS,  
Deputy Registrar.

Trade Marks registered.

LIST of Trade Marks registered from the 9th January, 1902, to the 21st January, 1902, inclusive:—  
 No. 2764; 3508.—W. T. Murray and Co., Limited; Class 42. (*Gazette* No. 91, of the 17th October, 1901.)  
 No. 2765; 3541.—The West Kent Portland Cement Company, Limited; Class 17. (*Gazette* No. 95, of the 31st October, 1901.)  
 No. 2766; 3553.—Richards and Co.; Class 42. (*Gazette* No. 95, of the 31st October, 1901.)  
 No. 2767; 3559.—W. D. and H. O. Wills (Australia), Limited; Class 45. (*Gazette* No. 95, of the 31st October, 1901.)  
 No. 2768; 3564.—The Australian Manufacturing and Importing Company; Class 49. (*Gazette* No. 95, of the 31st October, 1901.)  
 No. 2769; 3174.—W. and G. Turnbull; Class 3. (*Gazette* No. 88, of the 3rd October, 1901.)  
 No. 2770; 3562.—J. Speight and Co., Limited; Class 43. (*Gazette* No. 95, of the 31st October, 1901.)  
 No. 2771; 3570.—R. Miller; Class 37. (*Gazette* No. 95, of the 31st October, 1901.)

J. C. LEWIS,  
Deputy Registrar.

By Authority: JOHN MACKAY, Government Printer, Wellington.



THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO