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CONTENTS:

Note.—Throughout this *Gazette* the names in Italics within parentheses are those of Communicators of Inventions.

Complete Specifications.

Patent Office, Perth,
15th May, 1903.

NOTICE is hereby given that the undermentioned Applications for the Grant of Letters Patent, and the complete Specifications annexed thereto, have been *accepted*, and are now open to public inspection at this Office.

Any person or persons intending to oppose such applications must leave particulars, in writing, in duplicate (on Form D), of his or their objections thereto, within two calendar months from the date of this *Gazette*. A fee of Ten shillings (10s.) is payable with such notice.

Application No. 3907.—ENOCH RICHARDSON, of 18 Main Street, Hawthorn, Victoria, Engineer, "*An improved Electrical Amalgamating and Concentrating Apparatus for the extraction of gold, silver, amalgam, and floured mercury from refractory ores, slimes, battery and alluvial tailings, and other waste products, by the combined use of electricity, hydrogen, and mercury.*"—Dated 17th June, 1902.

Claims:—

1. In the herein machine, consisting of the parts A, B, C and D, for the extraction of gold and silver from refractory ores, slimes, battery and alluvial tailings and other waste products, in combination with electricity, hydrogen and mercury, the travelling chain f, with angled plates f^1, running over gun metal sprockets, sections B and C, Figure 1, as before described.

2. In the herein machine, consisting of the parts A, B, C and D for the extraction of gold and silver from refractory ores, slimes, battery and alluvial tailings and other waste products, in combination with electricity, hydrogen and mercury, the insulating glass plates c and e, sections B and C, Figure 1, as before described.

3. In the herein machine, consisting of the parts A, B, C and D, for the extraction of gold and silver from refractory ores, slimes, battery and alluvial tailings and other waste products, in combination with electricity, hydrogen and mercury, the travelling belt b, working on rollers c, c^1 and c^2, with revolving brush e, section D, Figures 3 and 4, as before described.

4. The herein specified machine for the extraction of gold and silver from refractory ores, slimes, battery and alluvial tailings and other waste products, in combination with electricity, hydrogen and mercury, consisting of the parts A, B, C and D combined, as constructed and arranged, substantially as described and illustrated, as and for the purpose set forth as a combination of parts.

Specification, 6s. Drawings on application.

Application No. 3991.—HENRY UPTON ALCOCK, of Nos. 208-212 Russell Street, Melbourne, Victoria, Billiard Table Manufacturer, "*An improved convertible Billiard and Dining Table.*"—Dated 12th August, 1902.

Claims:—

1. In an improved convertible billiard and dining table a single sliding frame as B having four inclined plane or wedge-shape surfaces on it, supported on side rails carried by the legged frame combined with a movable table having cheeks on its underside formed with four inclined paths or surfaces on them and with the rod screwed one way only and the screwed nut substantially as described and shown in Figs. 1, 2, and 3.

2. In an improved convertible billiard and dining table the combination of a sliding frame as B having four upper and four lower inclined plane surfaces, lower rail or inclined path pieces attached to a legged frame and upper rails or inclined path pieces attached to the underside of a movable table with a screw rod C^2 threaded one way only and a screwed nut C substantially as described and as shown in Fig. 4 of the drawings.

3. In an improved convertible billiard and dining table the alternative means of lifting and lowering the table consisting of the combination of toggle levers F transverse bar as F^1 bearing a screwed nut at its centre screwed rod C^2, threaded one way only, and the side rods F^2 all arranged and assembled substantially as described and as shown in Figs. 5 and 6 of the drawings.

4. An improved convertible billiard and dining table consisting of the combination of a legged frame as A provided with rails as A^1 sliding frame as B having four inclined plane or wedge-shaped surfaces *b* on it screw rod C^2 screwed one way only attached to the legged frame and the screwed nut C attached to the sliding frame, with the movable table D^1 having under cheeks D which have inclined paths to fit said sliding frame and the vertical guides E attached to the legged frame and fitting into grooves in the cheeks D, substantially as described and shown in Figs. 1, 2, and 3.

Specification, 5s. Drawings on application.

Application No. 4326.—MATTHEW HENRY READ, of Kalgoorlie, Western Australia, Blacksmith, "*Improved Grubbing Machine.*"—Dated 17th March, 1903.

Claims:—

1. In straining machines—a bar as *a* having serrations as *a1* and provided with sliding boxes *a2* for carrying drop retention pawls as *a3* substantially as and for the purposes herein set forth and as illustrated in the attached drawings.

2. In straining machines—an operative bifurcated lever as *b* connected by rods as *a7* to boxes as *a2* and having trunnions as *c* which are attached by a bridle piece as *d* to the anchor substantially as and for the purposes herein set forth and as illustrated in the attached drawings.

3. A straining or pulling appliance consisting of a serrated bar as *a* having boxes as *a2* and drop pawls as *a3* said boxes being connected by rods as *a7* to the operative lever as *b* to *b7* having trunnions *c* on which are mounted a bridle or hanger piece *d* having guides *c2* and *c3* all in operative combination as herein set forth and for the purposes specified and as illustrated in the attached drawings.

Specification, 4s. 6d. Drawings on application.

Application No. 4374.—GEORGE HARRY HAYES, of 61 Guildford Street, Russell Square, London, Engineer, "*Improvements in Pneumatic Drills and like machines.*"—Dated 8th April, 1903.

Claims:—

1. In a hand portable pneumatic tool of the type set forth, an axially oscillating controlling and reversing valve consisting of a single part arranged across or at right angles to relatively fixed cylinders, a sleeve on the machine handle and means operatively connecting said valve and the sleeve whereby the valve may be moved longitudinally for the purpose of reversing the revolution of the crank shaft and tool.

2. In a portable pneumatic drilling machine comprising at least two sets of fluid pressure cylinders in each set and the cylinders in one set arranged substantially at right angles with the cylinders in the other set, a central transverse fluid pressure passage in the machine body between the sets of parallel cylinders two controlling valve chambers between and at right angles to the parallel set of cylinders and to the fluid pressure passage, a partially rotating cylindrical valve in each valve chamber, means on the crank shaft for oscillating said valves so as to control the admission of fluid pressure to and its exhaust from the cylinders, and means on the machine handle operatively connected to said valves so as to move both valves simultaneously for reversing the working of the machine, substantially as set forth.

3. A hand portable pneumatic drilling machine, having a main casing or body formed in one casting comprising at least four fluid pressure cylinders arranged in pairs, two controlling valve chambers arranged transversely to and between the pairs of cylinders, a central transverse fluid pressure passage connecting directly with the valve chambers and with the pressure inlet in the machine handle; an

oscillating controlling and reversing valve in each chamber for controlling the admission of pressure to and its exhaust from a pair of cylinders, a collar slidably mounted on each valve and held against rotation on the valve, means connecting said collars with eccentrics on the crank shaft, and a T-shaped yoke connecting said valves and itself operatively connected to a sleeve on the machine handle, all substantially as described with reference to the drawings annexed and for the purposes specified.

4. In a portable pneumatic drilling machine, the combination with relatively fixed cylinders of an oscillating controlling and reversing valve consisting of a single hollow part arranged transversely to a pair of cylinders, means connected with the crank shaft for oscillating the valve and means connected with the machine handle for moving the valve longitudinally, a double set of inlet passages on the exterior of the valve and a double set of exhaust ports leading to its interior, said passages and ports having substantially the form and arrangement as illustrated in figures 5, 7, and 11 of the annexed drawings, all operating substantially as and for the purposes set forth.

5. In a portable pneumatic drilling machine, the combination with relatively fixed cylinders of an oscillating controlling and reversing valve consisting of a single hollow part arranged transversely to a pair of cylinders, means connected with the crank shaft for oscillating the valve and means connected with the machine handle for moving the valve longitudinally, a double set of inlet ports connecting with the interior of the valve a double set of exhaust passages having substantially the form and arrangement illustrated in figures 6, 12, and 15 of the annexed drawings, all operating substantially as and for the purposes set forth.

6. In a portable pneumatic tool, substantially as above set forth and claimed, an oil-bath gear case comprising an annular section or part (58) detachably connected to the machine body, an annular cover or part or neck 58a detachably connected to the machine body and to the gear case, and fluid pressure exhaust ports in the gear case and cover said ports registering with the controlling valve chambers in the machine body, substantially as described and illustrated in Figures 3 and 16 of the annexed drawings.

Specification, 19s. Drawings on application.

Application No. 4376.—GORDON ROBSON STEWART, of No. 46 Queen Street, Melbourne, Victoria, Solicitor (*A. J. Heffernan*), "*Improved Fire Bars.*"—Dated 15th April, 1903.

Claims:—

1. Deep fire bars or plates each provided at one end with a head fitting against the corresponding heads of the adjacent bars so as to form a completely closed front end substantially as set forth and illustrated.

2. Deep fire bars or plates with inclined sides so arranged as to have a wider clearance at the bottom than at the top substantially as set forth and illustrated.

3. Deep fire bars or plates having the front end closed and the rear end open substantially as set forth and illustrated.

4. Fire bars consisting of plates of a vertical depth of from 6 to 14 inches substantially as and for the purposes specified and as illustrated.

Specification, 2s. 6d. Drawings on application.

Application No. 4378.—HIRAM WHEELER BLAISDELL, of No. 2716, South Grand Avenue, Los Angeles, California, U.S.A., Engineer, "*System of handling material.*"—Dated 15th April, 1903.

Claims:—

1. A system for handling material provided with a hollow shaft, an elevator therein and means carried by said shaft to deliver the material to said elevator.

2. A system for handling material provided with means for progressing the material, a support for said means, a device contiguous to said support for elevating the material so progressed, a cross conveyer receiving the elevated material and a discharge conveyer taking the material from said cross conveyer.

3. A system for handling material provided with means for progressing material, a support therefor, having a discharging hood, a travelling platform surrounding said support and an elevating device discharging the progressed material upon said platform.

4. A system for handling material provided with means for progressing material, a support therefor, an elevating device within said support, a conveyer, a platform to receive the elevated material and a scraper device to discharge the material from the platform upon said conveyer.

5. A system for handling material provided with means for progressing material a support therefor, an elevating device within said support, a travelling platform receiving the elevated material and a cross conveyer receiving the material from said platform.

6. A system for handling material provided with means for progressing material, a support therefor, an elevating device within said support, a travelling platform receiving the elevated material, a cross conveyer receiving the material from said platform and a discharge conveyer taking the material from said conveyer.

7. A system for handling material provided with means for progressing material, a support therefor, an elevating device within said support, a receiving platform, a scraper therefor and a conveyer receiving material scraped from said platform.

8. A system for handling material, provided with means for progressing material, a support therefor, an elevating device within said support, a travelling receiving platform, a stationary scraper therefor and a conveyer receiving material scraped from said platform.

9. A system for handling material provided with a receiving conveyer, a plurality of vats, a main conveyer travelling adjacent thereto, a cross or auxiliary conveyer taking the material from said main conveyer and delivering it to a vat, a second cross conveyer and a discharging conveyer receiving the material from the vat and delivering it to said second cross conveyer for re-treatment.

10. A system for handling material provided with a receiving conveyer, a plurality of vats, a main conveyer travelling adjacent thereto a cross or auxiliary conveyer taking the material from said main conveyer and delivering it to a vat, a second cross conveyer discharging upon said main conveyer and a discharging conveyer constructed to travel in either direction so as to deliver the material at the place of deposit or return the same to said second cross conveyer.

11. A system for handling material provided with a plurality of vats, a main conveyer travelling adjacent thereto, a cross or auxiliary conveyer taking the material from said main conveyer and delivering the same to said vats, a second cross conveyer discharging upon said main conveyer and a discharging conveyer to return to said second cross conveyer the material received from said vat.

12. A system for handling material provided with a main conveyer, a plurality of vats, a mixing apparatus discharging the mixed material upon said main conveyer, an auxiliary conveyer discharging into said vats the material from said main conveyer, a cross conveyer discharging into said apparatus and a discharging conveyer constructed to deliver to said cross conveyer the material received from said vats.

13. A system for handling material provided with a plurality of vats a main conveyer, a travelling structure, partly over the end whereof said conveyer travels, an auxiliary conveyer on said structure receiving the material on said main conveyer and discharging the same into one of said vats and a discharging conveyer transporting the material received from said vats to the place of deposit or back to said main conveyer.

14. A system for handling material provided with a main conveyer, a plurality of vats, a travelling structure above said vats partly over the end whereof said main conveyer passes, an auxiliary conveyer on said structure transporting the material received from said main conveyer and discharging the same into said vats, a second cross conveyer discharging upon said main conveyer and a discharging conveyer to transport the material received from said vats to a place of deposit or return the same to said cross conveyer.

15. A system for handling material provided with a row of vats, a plurality of main conveyers each having a travelling tripper, a travelling structure carrying an auxiliary conveyer receiving the material from said main conveyer and directing the same into a vat and a transfer table to transport said structure to another row of vats.

16. A system for handling material provided with a plurality of main conveyers, a plurality of rows of vats, tracks or ways on each side of each row of vats, a travelling structure upon said tracks, means on said structure to deliver to the vats the material received from said main conveyers, cross tracks and a transfer table thereon to receive said structure and transport the same to another set of tracks.

Specification, £1 2s. 6d. Drawings on application.

Application No. 4379.—WILLIAM DUNHAN SARGENT, of No. 170 Broadway, New York, U.S.A., Manufacturer, "*Method of making Brake Shoes and product thereof.*"—Dated 15th April, 1903.

Claims:—

1. The process of making brake shoes which consists in forming a briquette or insert block of cast metal containing filiments of malleable metal, and afterwards placing said blocks in a sand mold and imbedding the same by casting around them the metal to form the body of the shoe.

2. The process of making brake shoes which consists in providing a metal mold, placing therein a quantity of malleable metal, pouring a quantity of hard cast metal to form a briquette, and thereupon placing a series of said briquettes in a brake shoe mold and covering the same with softer cast metal, substantially as described.

3. The process of making brake shoes which consists in providing a briquette or insert composed of hard cast metal cast around a quantity of malleable metal, placing a series of said briquettes in a mold and casting softer metal therein to imbed the said blocks, substantially as described.

4. The process of making brake shoes which consists in providing an open metal mold of standard form and size, placing therein a quantity of expanded metal and casting thereon a quantity of hard iron to form a briquette, thereupon providing a brake shoe sand mold, placing a series of said briquettes therein, and pouring in soft cast iron to imbed the said briquettes, substantially as described.

5. A brake shoe comprising a body of soft cast metal having imbedded therein briquettes of harder cast metal, said briquettes containing a quantity of malleable metal.

6. A brake shoe comprising a series of filiments of malleable metal imbedded in blocks of hard cast metal, and said blocks being imbedded in soft cast metal forming the body of the shoe.

7. A soft cast metal brake shoe containing indented blocks of hard cast metal, said blocks themselves containing a framework of malleable metal, and the surfaces of said blocks being annealed as the soft metal is poured around them, substantially as described.

Specification, 8s. Drawings on application.

Application No. 8380.—ALBERT ENNIS HENDERSON, of Toronto, Canada, Gentleman, "*Improvements in Thrust Bearings.*"—Dated 15th April, 1903.

Claims:—

1. In a thrust-bearing the combination of the journal-box, antifriction thrust balls interposed between the end of the journal and journal-box, a peripheral flange for the journal, an annular flange for the journal-box opposed to the peripheral flange, and auxiliary thrust-balls interposed between the annular and peripheral flanges, substantially as specified.

2. In a thrust-bearing the combination of the journal, having in its ends a centrally-located ball-chamber, a journal-box having an end cap fitted with a longitudinal bore registering with the ball-chamber of the journal, contacting thrust-balls contained in the ball-chamber and bore respectively, and an adjusting-screw fitted into the bore to adjust the thrust-balls to each other, substantially as specified.

3. In a thrust-bearing the combination of the journal, having in its end a centrally-located ball-chamber, a journal-box having an end cap fitted with a longitudinal bore registering with the ball-chamber of the journal, contacting thrust balls contained in the ball-chamber and bore respectively, an adjusting screw fitted into the bore to adjust the thrust-balls to each other, and resilient cushions contacting the balls in the ball-chamber and adjusting-screw, substantially as specified.

4. In a thrust-bearing the combination of the journal, having in its end a centrally-located ball-chamber, a journal-box having an end cap fitted with a longitudinal bore registering with the ball-chamber of the journal, contacting thrust-balls contained in the ball-chamber and bore respectively, an adjusting-screw fitted into the bore to adjust the thrust-balls to each other, resilient cushions in the ball-chamber and adjusting screw and contacting the balls, a radial flange for the journal opposed to an annular flange for the journal-box and auxiliary thrust-balls interposed between the annular and radial flanges, substantially as specified.

5. In a thrust-bearing, the combination of a journal having a recess in its outer end, said recess having a greater diameter than depth, a journal plate opposed to the end of the journal provided with a bore in alignment with said recess, an adjustable screw mounted in said bore to provide a recess in the inner end of the plate of lesser depth than the diameter of the bore, and balls mounted in the recesses projecting respectively beyond the outer faces of the journal and the journal-plate, said balls contacting to receive the end thrust.

Specification, 7s. 6d. Drawings on application.

Application No. 4381.—ALBERT ENNIS HENDERSON, of Toronto, Canada, Gentleman, "*Improvements in Ball Bearings.*"—Dated 15th April, 1903.

Claims:—

1. In a ball bearing, the combination of two bearing rings, antifriction thrust means carried by the bearing rings, bearing balls arranged therebetween, and a spacing device for the bearing balls supported by said bearing balls, said spacing device having pairs of rollers engaging the bearing balls one above and one below the line joining the centers of the two adjacent bearing balls.

2. In a ball bearing, the combination of two bearing rings, anti-friction thrust means carried by the bearing rings opposed to the axes of rotation of the bearing balls, bearing balls arranged therebetween and a spacing device for the bearing balls supported by said bearing balls, said spacing device having rollers of different sizes, the larger ones engaging the bearing balls above the line joining the centers of two adjacent bearing balls, and the smaller rollers engaging the bearing balls below said center line.

3. In a ball bearing, the combination of bearing rings, bearing balls arranged therebetween, antifriction thrust means carried by the bearing rings opposed to the axes of rotation of the bearing balls, and anti-friction separating means contacting and supported by the bearing balls, said separating means comprising a pair of open rings, rollers arranged in pairs of different sizes carried by the open rings and adapted to rest in the space between adjacent bearing balls, and means to hold the open rings together.

4. In a ball bearing, the combination of bearing rings, having race-ways, bearing balls arranged therebetween, antifriction thrust means for the bearing mounted in opposed sides of the rings and adapted to revolve with the bearing balls only when contacted therewith, and antifriction separating means supported by the bearing balls.

5. In a ball bearing, the combination of bearing rings having race-ways, bearing balls arranged therebetween, antifriction thrust means for the bearing independently mounted in opposed sides of the rings and adapted to revolve with the bearing balls only when in contact therewith.

6. In a ball bearing, the combination of bearing rings, having race-ways, bearing balls arranged therebetween, and antifriction thrust rings mounted in opposed sides of the bearing rings and adapted to revolve with the bearing balls only when in contact therewith.

7. In a ball bearing, the combination of bearing rings, having race-ways, bearing balls arranged therebetween, and antifriction thrust means for the bearing mounted in the bearing rings opposed to the axes of rotation of the respective bearing balls and adapted to revolve only when in contact with the bearing balls.

8. In a ball bearing, the combination of an axle, a hub shell, a bearing ring contacting and revoluble with the hub shell another bearing ring carried by the axle, bearing balls supported between the bearing rings, antifriction thrust means mounted in opposed sides of the bearing rings and adapted to revolve only when in contact with the bearing balls, and antifriction separating means for the bearing balls and having roller bearings of different sizes one above and the other below the line joining the center of two adjacent bearing balls.

9. In a ball bearing, the combination of bearing rings having each a raceway and further provided with opposed annular recesses, bearing balls mounted between the raceways, and antifriction thrust means arranged in the recesses of the rings.

10. In a ball bearing, the combination of bearing rings provided with opposed bearing surfaces, and opposed recesses, bearing balls mounted between the bearing surfaces and antifriction thrust rings mounted in said recesses.

11. In a ball bearing, the combination of bearing rings, provided with opposed bearing surfaces, bearing balls mounted between the bearing surfaces of the rings and antifriction means independently mounted in opposed sides of the bearing rings adapted to contact the bearing balls at substantially right angles to the lines of contact with the bearing surfaces.

12. In a ball bearing, the combination of bearing rings provided with flanges having opposed bearing surfaces and with opposed annular recesses, bearing balls mounted between the bearing surfaces, and anti-friction means mounted in said recesses opposed to the axes of rotation of the respective bearing balls, and adapted to contact the same.

13. In a ball bearing, the combination of the bearing rings, said bearing rings each being provided with a bearing surface and an annular recess, bearing balls mounted between the bearing surfaces of the rings, flanged rings mounted in said recesses of the bearing rings and free to rotate therein, and antifriction means mounted in the recesses to support said flanged rings.

14. In a ball bearing, the combination of a hub shell, a bearing ring mounted within the hub shell and revoluble therewith, an axle, a bearing ring mounted upon the axle, said bearing rings being provided with opposed faces each with an annular recess, a thrust ring mounted in each of said recesses, bearing balls mounted between the bearing rings and adapted to have their axes of rotation opposed to the said thrust rings to cause the thrust rings when contacted by said bearing balls to rotate with the bearing balls, and antifriction means for the thrust rings mounted in the recesses.

15. In a ball bearing, the combination with a hub shell and an axle, of a bearing ring having an annular recess and a peripheral flange whose inner face is a bearing surface, said bearing ring being mounted in the hub shell and revoluble therewith, another bearing ring revoluble with the axle and provided with a flange having a bearing surface opposed to the first-mentioned bearing surface and also with an annular recess opposed to the annular recess of the first-mentioned bearing ring, bearing balls mounted between the bearing surfaces of the rings, and anti-friction means mounted in the recesses of the bearing rings, and a ring mounted in each recess of the bearing rings and contacting the anti-friction means so that when said rings are contacted by the bearing balls said rings rotate with the balls.

16. In a ball-bearing, the combination of a hub shell and an axle, of one pair of bearing rings in each end of the hub shell and axle, one ring being revoluble with the hub shell and the other with the axle, each of said bearing rings being provided with an annular recess and a bearing surface, bearing balls mounted between the bearing surfaces, anti-friction thrust means for the bearing mounted in the recesses opposed to the axes of rotation of the respective bearing balls, and means mounted upon the axle at both ends to hold the bearing assembled.

17. In a ball bearing, the combination with a hub shell and an axle, of bearing rings carried by the hub shell and axle respectively and provided each with a flange forming a bearing surface and with an annular recess, bearing balls mounted between the bearing surfaces, a ring mounted in each recess of the bearing rings opposed to the axes of rotation of the respective bearing balls, and balls mounted in the recesses and contacted by said rings.

18. In a ball bearing, the combination of a revolving part and a stationary part, bearing balls arranged therebetween and independently mounted thrust means for the bearing opposed to the axes of rotation or the respective bearing balls.

Specification, 10s. Drawings on application.

Application No. 4382.—ALBERT ENNIS HENDERSON, of Toronto, Canada, Gentleman, "*Improvements in Anti-Friction bearings.*"—Dated 15th April, 1903.

Claims:—

1. In a roller bearing, the combination of retaining-rings, bearing-rollers, tie-rods for holding the retaining-rings relatively to the bearing-rollers, and spacers adjustably mounted between the bearing-rollers.

2. In a roller bearing, the combination of retaining-rings, tie-rods, bearing-rollers held relatively to the retaining-rings by the tie-rods, independent means connected to and projecting beyond the inner faces of the retaining-rings to carry spacers for the bearing-rollers, and spacers carried by said means.

3. In a roller bearing, the combination of retaining-rings, tie-rods, bearing-rollers held relatively to the retaining rings by the tie-rods, means connected to and projecting beyond the inner faces of the retaining-rings to carry spacers for the bearing-rollers, and spacers adjustably mounted in said means.

4. In a roller bearing, the combination of retaining-rings, bearing-rollers, tie-rods passing through alternate bearing rollers, and holding the retaining-rings relatively to the bearing-rollers and antifriction spacers between the bearing-rollers.

5. In a roller bearing, the combination of retaining-rings, tie-rods, and bearing-rollers held relatively to the retaining-rings by the tie-rods each tie-rod having a bearing-roller journaled thereon at its ends.

6. In a roller bearing, the combination of retaining rings, tie-rods, bearing-rollers held relatively to the retaining-rings by the tie-rods, each tie-rod having a roller journaled thereon, and spacers for the bearing-rollers carried by the rings.

7. In a roller bearing, the combination of retaining rings, tie-rods and bearing-rollers having enlarged central portions and reduced ends forming bearing surfaces for the rollers, a bearing-roller being mounted on each tie-rod, and spacers for the bearing-rollers carried by the rings.

8. In a roller bearing, the combination of retaining-rings, tie-rods, bearing-rollers having enlarged portions and reduced ends, said bearing-rollers being held relatively to the retaining rings by the tie-rods, and spacers for the bearing-rollers carried independently by the rings.

9. In a roller bearing, the combination of retaining rings, tie-rods, and bearing-rollers having enlarged central portions and reduced ends forming bearing-surfaces for the rollers, a bearing-roller being mounted on each tie-rod, and spacers for the bearing-rollers adjustably carried by the rings.

10. In a roller bearing, the combination of retaining rings, tie-rods, bearing-rollers having enlarged central portions, and reduced ends forming bearings for the rollers, a bearing-roller being mounted on each tie-rod, supports carried by the rings upon their inner faces and spacers carried by the supports to contact adjacent bearing-rollers.

11. In a roller bearing, the combination of retaining rings, tie-rods, bearing-rollers having enlarged central portions and reduced ends, a bearing-roller being mounted on each tie-rod, supports carried by the rings upon their inner faces and spacers adjustably carried by the supports to contact adjacent bearing-rollers.

12. In a roller bearing, the combination of a stationary part, a revoluble part, bearing-rollers having enlarged central portions in contact with the revoluble part and reduced ends in contact with the stationary part, retaining rings for the bearing-rollers and tie-rods for holding the retaining rings relatively to the bearing-rollers each tie-rod carrying a bearing-roller which is journaled thereon at its ends.

13. In a roller bearing, the combination of a revoluble part, a stationary part, retaining rings, bearing-rollers provided with enlarged central portions having shoulders at each end of said central portion and reduced ends extending in opposite directions from the shoulders and tie-rods for holding the retaining rings relatively to the bearing-rollers.

14. In a roller bearing, the combination of a revoluble part, a stationary part, bearing-rollers having enlarged central portions in contact with the revoluble part and reduced ends in contact with the stationary part, means for retaining the bearing-rollers in their relative positions and spacers for said bearing-rollers adjustably carried by said means.

15. In a roller bearing, the combination of a revoluble part, a stationary part, bearing-rollers having enlarged central portions in contact with the revoluble part and reduced ends in contact with the stationary part, retaining rings for holding the bearing-rollers relatively to each other, and spacers for the bearing-rollers carried independently by the rings.

16. In a roller bearing, the combination of a revoluble part, a stationary part, bearing-rollers having enlarged portions in contact with the revoluble part and reduced ends in contact with the stationary part, retaining rings for the bearing-rollers, tie-rods for holding the retaining rings relatively to the bearing-rollers, each tie-rod carrying a bearing-roller, and spaces for the bearing-rollers carried by the rings.

17. In a roller bearing, the combination of a revoluble part, a stationary part, bearing-rollers having enlarged central portions in contact with the revoluble part and reduced ends in contact with the stationary part, retaining rings for the bearing-rollers, tie-rods for holding the retaining rings relatively to the bearing-rollers, each tie-rod carrying a bearing-roller, means carried by and projecting from the inner face of the retaining rings for supporting spacers, and spacers for the bearing-rollers carried by said means.

18. In a roller bearing, the combination of a revoluble part, a stationary part, bearing-rollers having enlarged central portions in contact with the revoluble part and reduced ends in contact with the stationary part, retaining rings for the bearing-rollers, tie-rods for holding the retaining rings relatively to the bearing-rollers, each tie-rod carrying a bearing-roller, means carried by and projecting from the inner face of retaining rings for supporting spacers, and spacers for the bearing-rollers adjustably mounted in said means.

19. In a roller bearing the combination of a revoluble part, a stationary part, bearing-rollers provided with enlarged central portions and reduced ends, the enlarged portions contacting the revoluble part, and the reduced ends contacting the stationary part, and thrust means for the bearing to contact said bearing-rollers.

20. In a roller bearing, the combination of retaining rings, bearing-rollers, tie-rods for holding the retaining-rings relatively to the bearing-rollers, each tie-rod carrying a bearing-roller, bearing-rollers mounted on the tie-rods, each of which is provided with a central bore having an enlargement at its ends, and washers mounted upon the inner face of the bearing rings surrounding the tie-rods entering the enlarged portion of the bores of the bearing-rollers to form journals therefor.

21. In a roller bearing, the combination of bearing-rollers having different diametered portions, retaining rings for the bearing-rollers, tie-rods for holding the retaining rings relatively to the bearing-rollers, antifrictional-spacers adapted to contact adjacent bearing-rollers upon their reduced portions, and supporting means for the spacers.

22. In a roller bearing, the combination of bearing-rollers having different diametered portions, retaining rings for the bearing-rollers, tie-rods for holding the retaining rings relatively to the bearing-rollers, and antifrictional spacers adjustably mounted to contact adjacent bearing-rollers upon their reduced portions.

23. A roller bearing, the combination of the bearing-rollers, retaining rings for the bearing-rings, tie-rods for holding the retaining rings relatively to the bearing-rollers, spacers for the bearing-rollers, and means for carrying said spacers independently of the tie-rods.

24. In a roller bearing, the combination of bearing-rollers, retaining rings, tie-rods for holding the retaining rings relatively to the bearing-rollers, spaces for the bearing-rollers, supports for the spacers carried by the retaining rings, each of which is provided with a bearing for one end of the spacer, and an adjustable bearing, for the opposite end of the spacer carried by the support.

Specification, 13s. 6d. Drawings on application.

Application No. 4383.—JAMES HENRY REID, of 538 Summer Avenue, Newark, New Jersey, U.S.A., Electrical Engineer, "*Improved method of Generating Electricity.*"—Dated 16th April, 1903.

Claims:—

1. Producing electrical energy by forcing fuel gas into the pores of a porous electrode in contact with a body of electrolyte which is kept fluid by heat, the electrolyte being in contact with a second electrode.
2. Forcing a fuel gas through a porous carbon wall into a liquid electrolyte, heating said electrolyte, supplying oxygen to the electrolyte, and collecting the electricity developed by a conductor connected to the carbon wall, and by a conductor in contact with the electrolyte.
3. Mechanism for maintaining a porous electrode in contact with a body of electrolyte kept fluid by heat, for collecting electrical energy developed, and for forcing a fuel gas into the pores of the electrode.
4. Mechanism for forcing a fuel gas into the pores of a porous electrode, and for maintaining a heated electrolyte at the other face of said porous electrode, mechanism for supplying oxygen to said electrolyte, and collectors for the developed electrical energy.
5. Mechanism for forcing a fuel gas into the pores of a porous body in proximity to an electrical conductor, and for maintaining a heated electrolyte in contact with said porous body and with an electrical conductor.

Specification, 11s. Drawings on application.

Application No. 4384.—JOSEPH AINSWORTH, of Bolivia, New South Wales, Selector, "*Improvements in Wheels for road vehicles.*"—Dated 16th April, 1903.

Claims:—

1. The combination in vehicle wheels with a spoke having a tenon and the felloe having a mortice to take said tenon of a ring clip around said spoke and side gripping said felloe substantially as herein described and explained.
2. A ring clip for strengthening the spoke and felloe joint of vehicle wheels consisting of a ring a curved body or outer face and clip sides substantially as herein described and explained.

Specification, 2s. Drawings on application.

Application No. 4385.—EDWARD HOLL MILLER, of 81 Chandmore Road, Clapton Common, County of London, England, "*A process for the elimination of Sulphur from Sulphide Ores.*"—Dated 16th April, 1903.

Claims:—

1. The hereinbefore described process for the elimination of sulphur from sulphide ores consisting in mixing powdered ore with powdered carbon or carbonaceous material and with sodium sulphide or other suitable sulphide, exposing the mixture to a low heat in a restricted current of air for a short time, exposing the still heated product freely to air to cause rapid oxidation to ensue, and mixing the resultant product with a nitrate such as Chili saltpetre, and heating the mixture.
2. The process of completing the elimination of sulphur from sulphide ores consisting in heating the ore from which most of the sulphur has been eliminated, with Chili saltpetre or other suitable nitrate, as hereinbefore described

Specification, 6s.

Application No. 4404.—ALBERT THOMAS PRICE, of Claremont, Western Australia, Painter, "*An improved Rabbit Snare for the purpose of snaring and retaining rabbits in a pen.*"—Dated 2nd May, 1903.

Claims:—

1. In an improved rabbit snare, a plate attached to two posts, placed about 6 inches apart, and forming the apex of an angle in the trap yard, a plate having a hole, through which rabbits may gain admission, such hole to be placed about 9 inches from the bottom edge of the plate, and the ground on the outside of the snare graded up to the bottom of this hole, to afford the rabbits easy access to the opening.
2. In an improved rabbit snare, a plate attached to two posts in an angle of a snare, and having a hole in it to admit rabbits, and on the inside of the snare, immediately under the opening in the plate, a number of needle spikes, projecting from the surface of the plate, as specified herein, and illustrated in the accompanying drawings.
3. In an improved rabbit snare, a plate having an opening to admit rabbits, and a number of needle spikes attached to two posts in the angle of a snare, and attached to this plate, by means of hinges, a second plate, lying horizontally in front of the vertical plate, and having a number of needle spikes fitted and holes bored between the spikes, to allow sand and dust to pass through the plate, instead of accumulating thereon, as specified herein, and illustrated in the accompanying drawings.
4. In a rabbit snare a pair of plates, one vertical and one horizontal hinged together, and having an opening to admit rabbits, and needle spikes to prevent their exit from the snare, and under the horizontal plate a hole or small excavation on the ground to receive the dust and sand, which passes through the perforations in the horizontal plate, and having stumps or cleats under the plate, to which it may be fastened down, as specified and illustrated in the accompanying drawings.
5. In a rabbit snare the general and combined arrangement of posts, forming an angle in a snare: a plate attached to the posts, having an opening to admit rabbits, the ground on the outside graded up to the opening, and a number of needle spikes on the space below the opening: a horizontal plate hinged to the former, and having needle spikes and perforations, as above stated: a hole in the ground to receive the dust and the like, which passes through the plate, as specified, and illustrated on the accompanying drawing.

Specification, 6s. Drawings on application.

Application No. 4407. — PETER BURD JAGGER, of 5 Wannington Gardens, Maida Vale, London, England, Merchant, "*Improvements in non-refillable bottles and like vessels.*"—Dated 5th May, 1903.

Claims:—

1. The improved bottle or vessel for containing liquid, and the means for preventing the same when once emptied from being re-filled in fraud of the original packer, substantially as herein described and shewn.
2. The improved non-refillable bottle or vessel *a*, for containing liquid, a seating *b*, formed in the neck or shoulder of the said vessel, with a ball valve *c*, adapted to fit on to the said seating *b*, and surmounted by a coned stopper *f*, having a concave base resting upon the ball stopper *c*, a frame or cage surmounting the said coned stopper *f*, the base ring *h*, of which rests upon an annular ridge *d*, formed in the neck of the vessel *a*, the said base ring being formed integrally or otherwise with two or more uprights *kk*, connected to a crown ring *l*, and a central table or partition *m*, the said crown ring being adapted for expansion radially to fit into an annular groove *e*, formed in the neck of the vessel *a*, the said frame or cage, when in position, being surmounted by a cork or stopper *p*, substantially as and for the purposes herein set forth and shewn by the appended drawings.
3. The improved non-refillable bottle or vessel *a*, for containing liquids, a seating *b*, formed in the neck or shoulder of said vessel, a ball valve *c*, adapted to fit on to the said seating *b*, and surmounted by a coned stopper *f*, having a concave base resting upon the ball stopper *c*, a frame or cage surmounting the said stopper *f*, the base ring *h*, whereof rests upon an annular ridge *d*, formed in the neck of the vessel *a*, the said base ring being formed integrally or otherwise with uprights *kk*, connected to a crown ring *l*, and a central table or partition *m*, the said crown ring being adapted for expansion radially to fit into an annular groove *t*, formed in the neck of the vessel *a*, the said frame or cage, when in position, being surmounted by a cork or stopper *p*, substantially as and for the purposes herein described and shewn by the appended drawings, more particularly by Figs. 10 and 11.
4. In a non-refillable bottle or like vessel *a*, having any form of valve or stopper for closing the neck of said vessel, the combination therewith of a metallic cage or frame, the upper end or crown ring of which is adapted for expansion radially to fit into an annular groove formed in the neck of said vessel, substantially as herein described and shewn.
5. In a non-refillable prepared bottle or vessel such as *a*, the combination therewith of a ball valve *c*, coned stopper *f*, and metallic frame such as *h*, *k*, *l*, *m*, substantially as herein set forth and shewn.

Specification, 17s. 6d. Drawings on application.

Application No. 4409.—RICHARD WHONTON HUBBARD, of Ashtabula, Ohio, U.S.A., Hardware Merchant, "*Improvements in Hinges.*"—Dated 5th May, 1903.

Claims:—

1. As a new article of manufacture, a hinge section or member, formed of sheet-metal, and comprising a slotted outer part, an inner part, and an intermediate part interposed between the outer and inner parts, and having one or more fins extending through the slot or slots of the outer part.
2. As a new article of manufacture, a hinge section or member comprising an outer, hollow part of sheet-metal, and an inner part of sheet metal, held in the hollow, outer part flush with the inner side thereof.
3. As a new article of manufacture, a hinge section or member comprising an outer, hollow part, formed of sheet-metal, and having a barrel or barrels at one end, and an inner sheet-metal part held in the outer part, flush with the inner side thereof, and having a lip at one end engaging the barrel or barrels of said outer part.
4. As a new article of manufacture, a hinge section or member comprising an outer, hollow part provided with a barrel or barrels, and also with longitudinal slots, an inner part held in the outer part flush with the inner side thereof, and a part interposed between the outer part and the inner part, and having fins extending through the slots in the former
5. As a new article of manufacture, a hinge section or member comprising an outer, hollow part of sheet-metal, having a barrel at one end, a forward portion of concavo-convex form in cross-section, and a shoulder in rear of said forward portion, and also having slots in said forward portion, an inner part of sheet-metal arranged in the hollow outer part flush with the inner side thereof, and having the angular and rounded forward end, and also having a lip at its rear end engaging the barrel, and a sheet-metal part disposed between the outer and inner parts, and having fins extending through the slots in the outer part.

Specification, 5s. 6d. Drawings on application.

Application No. 4412.—EDWIN NORTON, of 116 Riverside Drive, New York, U.S.A., Manufacturer, "*Bottle Caps.*"—Dated 7th May, 1903.

Claims:—

1. The combination with a bottle, jar or vessel, having a cap holder shoulder at its mouth or end, of a cork or sealing disk, a cork holder disk B having a flange b and a short segmental depending crimping flange b^1, and a clamp disk D having a depending segmental crimping flange d supplementing the crimping flange on the cork holder disk, and provided with an integral raised portion forming a socket or groove for insertion of a nail or other simple instrument between the cork holder disk and clamp disk for wedging or prying off the clamp disk and opening the bottle, jar or vessel, the entrance to said groove or socket coinciding with the notch or divided portion of said crimping flange on the clamp disk, and the segmental crimping flange on the clamp disk having rounded or inclined ends, substantially as specified.
2. The combination with a vessel having a cap holder shoulder at its mouth or open end, of a cork or sealing disk, a cork holder disk and a clamp disk having a segmental or divided crimping flange and an integral raised portion extending across the same to receive a nail or other instrument between the cork holder disk and clamp disk, substantially as specified.
3. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing disk and a clamp disk, having a segmental or divided crimping flange and a raised portion forming a groove or socket for insertion of a nail or other instrument, subtantially as specified.
4. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing disk and a clamp disk, having a segmental or divided crimping flange and a raised portion forming a groove or socket for insertion of a nail or instrument, the entrance to said groove or socket being adjacent to the notch or division in the crimping flange of the clamp disk, substantially as specified.
5. The combination with a vessel having an external shoulder at its mouth, of a cork or sealing disk a clamp disk, having a segmental or divided crimping flange and a raised portion forming a groove or socket for insertion of a nail or instrument, the entrance to said groove or socket being adjacent to the notch or division in the crimping flange of the clamp disk, and the crimping flange on the clamp disk at the notch or division therein having inclined or rounded ends, substantially as specified.
6. In a closure for bottles, jars or vessels, a clamp disk having a segmental crimping flange and an integral raised portion extending across the same forming a groove or socket for reception of an opening instrument under said clamp disk, substantially as specified.
7. In a closure for bottles, jars or vessels, a clamp disk having a segmental crimping flange and an integral raised portion extending across the same forming a groove or socket for reception of an opening instrument under said clamp disk, the entrance to said groove or socket being adjacent to the notch or division in said crimping flange, substantially as specified.

8. In a closure for bottles, jars or vessels, a cork holder disk and a clamp disk having a segmental crimping flange, and an opening for insertion of an instrument between the clamp disk and cork holder disk, substantially as specified.

9. In a closure for bottles, jars or vessels, the combination with a cork holder disk, of a clamp disk having a crimping flange, and an opening for insertion of an instrument between the said disks, substantially as specified.

10. In a closure for bottles, jars or vessels, a cork holder disk having a short segmental crimping flange, and a clamp disk having a segmental crimping flange and provided with an opening for insertion of an instrument between said disks, substantially as specified.

11. In a closure for bottles, jars or vessels, a cork holder disk having a segmental crimping flange at less than half its circumference, and a clamp disk fitting on top of said cork holder disk having a crimping flange at more than half its circumference supplementing said segmental crimping flange on the cork holder disk, substantially as specified.

12. In a closure for bottles, jars or vessels, a pair of sheet metal disks provided with segmental crimping flanges, the crimping flange on the inner disk extending for less and on the outer disk for more than half the circumference, the outer disk having an opening for insertion of an instrument between the disks, substantially as specified.

13. In a closure for bottles, jars or vessels, a pair of sheet metal disks, the upper or outer one being provided with a crimping flange extending for more than half its circumference and with a central, raised portion across it for engaging an instrument for prying the clamp disk off, substantially as specified.

14. In a closure for bottles, jars or vessels, a clamp disk having a crimping flange, extending for more than half its circumference, and a socket across its top to receive an instrument for prying it off, substantially as specified.

Specification, 12s. 6d. Drawings on application.

R. G. FERGUSON,
Registrar of Patents.

Renewal Fees paid on Patents registered from 2nd to 9th May, 1903.

Fees payable before the end of the seventh year in respect of the seven following years:—

No. 1313.—E. Wohlwill.

Fees payable before the end of the fourth year in respect of the three following years:—

No. 2373.—F. Fouché.

Applications abandoned.

MAY 2ND—9TH.

Application No. 3926.—THOMAS FENNESSY, of 104 Ross Street, Port Melbourne, Victoria, "*Machine or appliance for rolling swampy, mallee, and other lands, and usable for other purposes.*"—Dated 4th July, 1902.

Application No. 3938.—JOHN THOMAS METTERS and CHARLES HENRY METTERS, both of 356 Post Office Place, Little Bourke Street, Melbourne, Victoria, Range Manufacturers, "*Improvements in Open Household Fire Grates.*"—Dated 8th July, 1902.

Application No. 3939.—JAMES THOMAS WOODS, of No. 454 Collins Street, Melbourne, Victoria, Saw Miller, "*Appliance to be used in coupling railway trucks.*"—Dated 8th July, 1902.

R. G. FERGUSON,
Registrar of Patents.

Applications for Patents.

MAY 2ND—9TH.

[Where Provisional Specification accompanies Application an asterisk is affixed.]

No.	Date.	Name.	Address.	Title.
*4406	5th May, 1903	Green, M. R.	Kensington Park, S.A.	A safety lock or fastening device for windows.
4407	5th May, 1903	Jagger, P. B.	London, England...	Improvements in non-refillable bottles and like vessels.
4408	5th May, 1903	Calder, W. H. (assignee of W. H. Pearson)	Melbourne, Vic. ...	Improvements in shot-making machines.
4409	5th May, 1903	Hubbard, R. W.	Ashtabula, U.S.A.	Improvements in hinges.
4410	5th May, 1903	Newberry, F. J., and Walker, A.	Geelong, Victoria	An improved combination cast metal combustion chamber and fire box for washing and other coppers.
*4411	7th May, 1903	Hogg, C. H.	Boulder, W.A. ...	Improved combination chair convertible for rocking, swinging, reclining, and other similar purposes.
4412	7th May, 1903	Norton, E.	New York, U.S.A.	Bottle caps.

Provisional Specifications Accepted.

Patent Office, Perth, 15th May, 1903.

APPLICATIONS for Letters Patent, accompanied by Provisional Specifications, which have been accepted from the 2nd to 9th May, 1903:—

Application No. 4388.—UNITED SHOE MACHINERY COMPANY, of Paterson, New Jersey, U.S.A. (assignee of L. A. Casgnain), "*Improvements in or relating to Nurling or Analogous Machines.*"—Dated 18th April, 1903.

Application No. 4390.—GEORGE SMITH MORRISON, of White Hills Road, Bendigo, Victoria, Tramway Manager, "*Improvements in Steam Engines.*"—Dated 21st April, 1903.

Application No. 4391.—PAUL HALLOT, of 79 Rue de Fontenay, Vincennes (Seine), France, Engineer, "*Improvements in Railway Brakes.*"—Dated 21st April, 1903.

Application No. 4394.—ARTHUR ST. PATRICK CREED MCCORMICK, of Shaw Street, Coolgardie, Western Australia, "*A Vermin-proof Fowl Perch.*"—Dated 23rd April, 1903.

Application No. 4398.—GEORGE EDWIN RICHARDSON, of Port Road, Thebarton, South Australia, Engineer, "*A Double Coupling and Compensating Device for Railway Vehicles.*"—Dated 28th April, 1903.

Application No. 4399.—RICHARD FRANCIS GORMAN, of Warmatta, New South Wales, Australia, Farmer and Grazier, "*Improved Wire Straining Apparatus.*"—Dated 28th April, 1903.

R. G. FERGUSON, Registrar of Patents.

Index of Applicants for Patents.

MAY 2ND—9TH.

Name.	Title.	No.	Date.
Calder, W. H. (assignee of W. H. Pearson)	Improvements in shot-making machines	4408	5th May, 1903
Green, M. R.	A safety lock or fastening device for windows	4406	5th May, 1903
Hogg, C. H.	Improved combination chair, convertible for rocking, swinging, reclining, and other similar purposes	4411	7th May, 1903
Hubbard, R. W....	Improvements in hinges	4409	5th May, 1903
Jagger, P. B.	Improvements in non-refillable bottles and like vessels	4407	5th May, 1903
Newberry, F. J., and Walker, A. ...	An improved combination cast metal combustion chamber and fire-box for washing and other coppers	4410	5th May, 1903
Norton, E.	Bottle caps	4412	7th May, 1903
Pearson, W. H.	*Vide* Calder, W. H.	4408	5th May, 1903
Walker, A., and Newberry, F. J. ...	*Vide* Newberry, F. J. and Walker, A.	4410	5th May, 1903

Index of Subjects of Patents Applications.

MAY 2ND—9TH.

Title.	Name.	No.	Date.
Bottles	Jagger, P. B.	4407	5th May, 1903
Bottle Caps	Norton, E.	4412	7th May, 1903
Caps (bottle)	*Vide* Bottle Caps	4412	7th May, 1903
Chairs	Hogg, C. H.	4411	7th May, 1903
Combustion Chamber	*Vide* Copper (washing)	4410	5th May, 1903
Copper (washing)	Newberry, F. J., and Walker, A.	4410	5th May, 1903
Fire Box	*Vide* Copper (washing)	4410	5th May, 1903
Hinges	Hubbard, R. W.	4409	5th May, 1903
Locking Device	*Vide* Windows	4406	5th May, 1903
Non-refillable Bottles	*Vide* Bottles	4407	5th May, 1903
Shot-making Machines	Calder, W. H.	4408	5th May, 1903
Windows	Green, M. R.	4406	5th May, 1903

Index of Patentees.

MAY 2ND—9TH.

Name.	Title.	No.	Date.	*Gazette.* Date.	No.	Page.
Cummins, T. D., and Nuttall, W. T.	An improved dropper or standard for wire fences	4269	10th Feb., 1903	6th March, 1903	10	603
Fletcher, J.	Improvements in apparatus for drawing off or dispensing aerated and other liquids	4281	12th Feb., 1903	6th March, 1903	10	604
Hien, P.	Improvements in friction springs ...	4276	10th Feb., 1903	6th March, 1903	10	603
Jacobson, S. H.	Improvements in ventilators	4274	10th Feb., 1903	6th March, 1903	10	603
Nuttall, W. T., and Cummins, T. D.	*Vide* Cummins, T. D., and Nuttall, W. T.	4269	10th Feb., 1903	6th March, 1903	10	603
Rigby, J. S.	Improvements in the manufacture of bricks and artificial stone	4277	10th Feb., 1903	6th March, 1903	10	603
Woltereck, H. C.	Process for producing ammonia by synthesis	4270	10th Feb., 1903	6th March, 1903	10	603

Index of Subjects of Patents Granted.

MAY 2ND—9TH.

Title.	Name.	No.	Date.	*Gazette.* Date.	No.	Page.
Aerated Liquids (apparatus for drawing off)	Fletcher, J.	4281	12th Feb., 1903	6th Mar., 1903	10	604
Ammonia (production by Synthesis)	Woltereck, H. C.	4270	10th Feb., 1903	6th Mar., 1903	10	603
Bricks (manufacture of) ...	Rigby, J. S.	4277	10th Feb., 1903	6th Mar., 1903	10	603
Draw Bars (apparatus for absorbing shock)	*Vide* Springs (friction) ...	4276	10th Feb., 1903	6th Mar., 1903	10	603
Droppers	*Vide* Wire fencing	4269	10th Feb., 1903	6th Mar., 1903	10	603
Springs (friction)	Hien, P.	4276	10th Feb., 1903	6th Mar., 1903	10	603
Standards	*Vide* Wire fencing	4269	10th Feb., 1903	6th Mar., 1903	10	603
Stone (artificial)	*Vide* Bricks (manufacture of)	4277	10th Feb., 1903	6th Mar., 1903	10	603
Ventilators	Jacobson, S. H.	4274	10th Feb., 1903	6th Mar., 1903	10	603
Wire fencing	Cummins, T. D., and Nuttall, W. T.	4269	10th Feb., 1903	6th Mar., 1903	10	603

Trade Marks.

Patent Office, Trade Marks Branch,
Perth, 15th May, 1903.

IT is hereby notified that I have received the undermentioned Applications for the Registration of Trade Marks.

Any person or persons intending to oppose such applications must leave particulars in writing, in duplicate (on Form F), of his or their objections thereto, within two calendar months from the date of this *Gazette*.

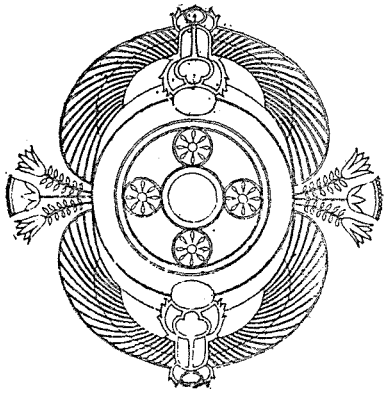
A fee of £1 is payable with such notice.

In the case of an Application in which have been inserted a statement and disclaimer (or a disclaimer only), a copy of the same is printed in *italics* in connection with the advertisement.

R. G. FERGUSON,
Registrar of Designs and Trade Marks.

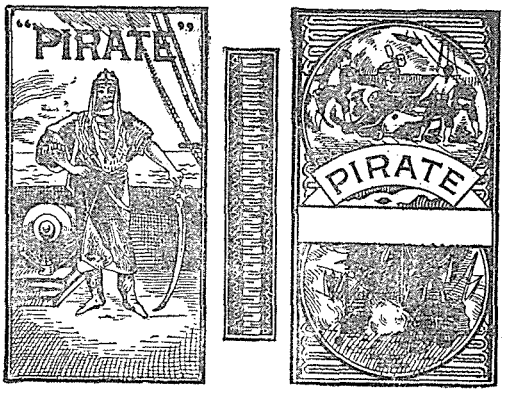
Application No. 2795, dated 23rd April, 1903.—THE SINGER MANUFACTURING COMPANY, of 42 and 43 St. Paul's Churchyard, in the City of London; also of the European Works, Kilbowie, Glasgow, Scotland, and of Elizabethport, New Jersey, United States of America, trading as Sewing Machine Manufacturers and Dealers, to register in Class 6, in respect of Sewing Machines and appurtenances, a Trade Mark, of which the following is a representation:—

Application No. 2796, dated 23rd April, 1903.—The SINGER MANUFACTURING COMPANY, of 42 and 43 St. Paul's Churchyard, in the City of London; also of the European Works, Kilbowie, Glasgow, Scotland; and of Elizabethport, New Jersey, United States of America, trading as Sewing Machine Manufacturers and Dealers, to register in Class 6, in respect of Sewing Machines and Appurtenances, a Trade Mark, of which the following is a representation:—



Application No. 2803, dated 4th May, 1903.—ARTHUR JAMES STEWART CUZENS, trading as "Cuzens," of Perth, in the State of Western Australia, Tea Merchant, to register in Class 42, in respect of Tea, a Trade Mark, of which the following is a representation:—

Application No. 2804, dated 5th May, 1903.—W. D. and H. O. WILLS (Australia), Limited, of Bedminister, Bristol, England, Tobacco Manufacturer, to register in Class 45, in respect of Tobacco, whether manufactured or unmanufactured (including cigars and cigarettes), and Cognate Substances and Goods, a Trade Mark, of which the following is a representation:—



The above Trade Mark consists of or contains the following essential particulars:—

1. *The special and distinctive word or name "Pirate," having no reference to the character or quality of the goods and not being a geographical name.*
2. *The device or representation of an armed man or Pirate.*
3. *The device or representation of an armed man beside a cannon upon the deck of a ship.*
4. *The device or pictures of (a) gunners firing a cannon from the deck of a battle-ship, and (b) battle-ships canonading.*
5. *The distinctive label or ticket, and applicant disclaims any right to the exclusive use of the added matter.*

Application No. 2806, dated 7th May, 1903.—OVO, LIMITED, of London, England, to register in Class 42, in respect of a preparation of Eggs in a dry granulated state, a Trade Mark, of which the following is a representation:—

TRADE MARK.

Application No. 2807, dated 8th May, 1903.—LOUIS DEMEL, of Fremantle, in the State of Western Australia, Merchant, to register in Class 42, in respect of Substances used as food or as ingredients in food, a Trade Mark, of which the following is a representation :—

VIVONIA.

Renewal Fee paid on Trade Mark registered.

MAY 2ND—9TH.

No. 246.—Colgate & Co.

List of Trade Mark Applications Abandoned.

Applications Nos. 2461, 2462, 24 3, and 2464, dated 24th April, 1902, I. and R. MORLEY, of 18 Wood Street, London, England, Warehousemen. Application No. 2461, to register in Class 38, in respect of Hosiery Application No. 2462, to register in Class 38 in respect of Hosiery. Application 2463, to register in Class 38 in respect of Gloves, and Application No. 2464, to register in Class 38, in respect of Gloves.

List of Trade Marks abandoned through non-payment of Renewal Fees.

APRIL 25TH—MAY 9TH, 1903.

No. 217.—The Phonophore Syndicate, Limited.

List of Trade Mark Applications withdrawn.

MAY 2ND—9TH.

Application No. 2777, dated 31st March, 1903, THE CEYLON TRADING CO., Nash Street, Perth, in the State of Western Australia, to register in Class 42 in respect of Tea.

Alphabetical List of Registrants of Trade Marks.

MAY 2ND—9TH.

Name.	Goods.	Class.	No.	Date.	*Gazette.*		
					No.	Date.	Page.
Booth's Distillery, Limited	Fermented liquors and spirits ...	43	2730	17th Feb., 1903	9	27th Feb., 1903	539
Cameron Brothers and Company	Tobacco, whether manufactured or unmanufactured	45	2722	19th April, 1903	9	27th Feb., 1903	538

List of Goods for which Trade Marks have been registered.

MAY 2ND—9TH.

Goods.	Name.	No.	Date.	Class.	*Gazette.*		
					No.	Date.	Page.
Liquors (fermented)...	Booth's Distillery, Limited	2730	17th Feb., 1903	43	9	27th Feb., 1903	539
Spirits	*Vide* Liquors (fermented)	2730	17th Feb., 1903	43	9	27th Feb., 1903	539
Tobacco (manufactured or unmanufactured)	Cameron Brothers and Company ...	2722	19th Apr., 1903	45	9	27th Feb., 1903	538

By Authority : WM. ALFRED WATSON, Government Printer, Perth.