The Canadian Patent Office RECORD

Vol. XVI.—No. 11. NOVEMBER, 1888. Price in Canada $2.50 per An. United States - $2.50 "

INVENTIONS PATENTED.

NOTE—Patents are granted for 15 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 30,075. Steam Engine. (*Machine à vapeur.*)

William F. Dake, Grand Haven, Mich., U.S., 2nd November, 1888; 5 years.

Claim.—1st. In a double-acting square-piston engine, the combination of an outer shell adapted to inclose two pistons, a piston adapted to have a reciprocating motion within the shell, and an inner piston having a reciprocating motion within the outer piston, said piston moving at right angles to the motion of the outer piston, and said pistons serving as valves, substantially as described. 2nd. In a double-acting reciprocating engine of the class described, the steam passages K and K_1, and the pistons having steam ports *a* and *b*, *c* and *d*, steam passages S and S_1, and ports R and R_1, in combination with the surrounding case, substantially as described. 3rd. The inner piston having the valve-faces described, and ports R, R_1 and S, S_1, in combination with the outer piston, and surrounding case, substantially as described. 4th. In a steam engine of the class described, an inner piston in combination with an outer piston, said inner piston having two steam-chambers separated from each other, and also having ports through which the steam is conducted into the chamber, in which the outer piston moves, substantially as described.

No. 30,076. Carriage Shaft. (*Limonière de voiture.*)

Alfred Brown, Pittsburgh, Ont., 2nd November, 1888; 5 years.

Claim.—1st. The combination of tubular iron carriage shafts A, tubular cross-bar D, in combination with couplings C, C, substantially as set forth. 2nd. The combination of tubular iron carriage shafts provided with sockets B, B, to support the portion of the shafts constructed of wood N, substantially as shown and for the purpose explained.

No. 30,077. Extension Carriage Top Bar and Lever Seat Rail. (*Branches de soufflet de voiture.*)

Edward J. Robson, Mitchell, Ont., 2nd November, 1888; 5 years.

Claim.—1st. The combination of the extension bars F, F, F, F, and the revolving wheel H, H, H, H, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the extension bars F, F, F, F, and the revolving wheel H, H, H, H, of the rail A B C D E, substantially as and for the purpose hereinbefore set forth.

No. 30,078. Gas Lamp. (*Lampe à gaz.*)

Thomas C. J. Thomas, Finsbury Park, Eng., 2nd November, 1888; 5 years.

Claim.—1st. In a gas lamp, an air heating chamber with pipes, or annular divisions, some, or all of which, are made contracted, or of gradually decreasing diameter, at the ends thereof adjacent to the burner, substantially in the manner hereinabove described. 2nd. In a gas lamp, an air heating chamber with pipes, or annular divisions, in combination with a plate or partition, such as described, formed with a series of perforations through which air can descend into the annular spaces between said pipes, or annular divisions, and within the innermost of the inner of these, and the burner, substantially as hereinabove described for the purpose specified. 3rd. In a gas lamp, an air-heating chamber with pipes, or annular divisions, in combination with a perforated partition constructed in parts like flanges to enter the tops of said pipes, or annular divisions, when the parts are put together for use, substantially as hereinabove described for the purpose specified. 4th. In a gas lamp, an air-heating chamber with pipes, or annular divisions, made contracted, or of decreasing diameter at one end, in combination with a perforated partition, constructed in parts like flanges to enter the tops of said pipes, or annular divisions, when the parts are put together for use, substantially as described for the purpose specified. 5th. In a gas lamp, an air-heating chamber with pipes, or annular divisions, made contracted, or of decreasing diameter at one end, in combination with a perforated partition constructed in parts like flanges to enter the tops of said pipes, or annular divisions, a central gas supply pipe with burner, and a flange to same forming part of said perforated partition and arranged to enter the larger end of the innermost pipe, or annular division, when the parts are put together for use, substantially as hereinabove described for the purpose specified. 6th. In a gas lamp, an air-heating chamber with pipes, or annular divisions, some, or all of which, are contracted at their lower ends, in combination with a gas supply pipe and a burner, or tube, closed at its lower end, formed with lateral openings for the issue of gas, and provided with a surrounding curtain guide or deflector, said burner and its surrounding curtain guide or deflector, (or one of them) being of a form resembling a trumpet mouth, that is to say, gradually increasing in diameter towards the end of the burner, or the annular orifice at which the gas escapes from between the burner, or tube, and said curtain guide, or deflector, substantially as described for the purpose specified. 7th. In a gas lamp, an air-heating chamber with pipes, or annular divisions, some, or all of which, are made contracted, or of gradually decreasing diameter at the ends thereof adjacent to the burner, in combination with a gas supply pipe, and a burner, or tube, closed at its lower end, formed with lateral openings for the issue of gas, and provided with a surrounding curtain guide, or deflector, substantially as described for the purpose specified. 8th. In a gas lamp, the combination, with an air-heating chamber provided with pipes, or annular divisions, of means for regulating the quantity of air passing to different annular spaces of the said air-heating chamber, substantially as hereinabove described. 9th. The combination of parts constituting a compound burner and comprising air-heating chamber 2, and a burner proper 35, constructed and arranged as shown and described, with, or without, some partitions 31*a*, not contracted at the lower ends. 10th. The improved gas lamp, constructed, arranged and operating substantially as hereinabove described, consisting of supply pipe 1, casting 1*a* and burner proper 35, carried by such pipe, air-heating chamber 2, casting 3, guard plates 4*a*, pipe 6, cover 7, bowl 10, frame 11, casing 14, reflector 18, chimney 22, cover 23, and its support. 11th. The improved means for regulating the supply of air to the annular spaces within the air-heating chamber, consisting of pipe 44 with tubular extensions 45, in combination with pipe 6, casting 3, supply pipe 1, casting 1*a* and air-heating chamber 2, as shown and described. 12th. The modified construction of air-heating chamber, consisting of the outer wall of cylindrical form throughout its entire length, and the outer of the intermediate tubes, or annular divisions, contracted at its inner side, and of bell-mouth form at its outer side, as shown and described. 13th The combination, of supply pipe 1, casting 1*a*, burner proper 35, curtain 40, casting 3, pipes 44 and 6, perforated plate 28, and annular divisions 31, the outer of which latter is of cylindrical form throughout its entire length, the outer of the intermediate ones contracted at its inner side, and of bell-mouth formed at its outer side, and the inner one contracted at its inner side, as shown and described. 14th. In a gas lamp, the combination, of an air-heating chamber with nozzles, pipes or annular divisions, and with an Argand burner, the arrangement and operation being substantially such as above described.

No. 30,079. Anti-Siphoning Trap.

(*Trappe contre-siphon.*)

Frank H. Paradice, Denver, Col., U.S., 2nd November, 1888; 5 years.

Claim.—1st. The combination, with a trap and its inlet and discharge pipes, of a chamber interposed between the trap and the discharge pipe, and having an upturned end or flange at its union with the discharge pipe, substantially as set forth. 2nd. The combination of the inlet pipe 1, the trap 3, discharge pipe 10, the chamber 4 interposed between the trap and the discharge pipe, and longitudinally and transversely enlarged, and having the upturned end or flange 7, substantially as set forth.

No. 30,080. Core Drill. (*Drille creux.*)

John F. Gourley, Thomas G. Viney and John F. Hertzler, Lawrence, Ks., U.S., 2nd November, 1888; 5 years.

Claim.—1st. The combination, in a core drill, of the tube A, hav-