

No. 38,404. Protector and Cell for Queen Bees.*(Protecteur et cellule pour les reines abeilles.)*

Noah Dibble West, Middleburg, New York, U.S.A., 4th March, 1892; 5 years.

Claim.—1st. The combination, in a queen nursery, of one or more vertically arranged queen-cell protectors, and one or more subjacent queen cages in communication with such protectors, each protector being provided at its upper end with a suitable cover and having at its lower end an orifice through which the queen may issue into the subjacent cage when the cell within the protector is hatched, substantially as hereinbefore specified. 2nd. The combination, in a queen nursery, of a vertically arranged queen-cell protector, and a subjacent queen cage, communicating with each other at the lower end of the protector, and both having bodies of spiral wire, with attaching spurs formed by the upper extremities of the wire of both, and adapted to be thrust into or through a honeycomb to unite and support them, substantially as hereinbefore specified. 3rd. The combination, with a suitable cover, of a queen-cell protector body of spiral wire, having an attaching spur and cover holding close coils at its upper end and a contracted lower end provided with a queen outlet, and a queen cage having a spiral wire body, the upper end of which incloses said lower end of the protector, and has like close cribs to receive the same, or a different cover after the protector is detached, substantially as hereinbefore specified. 4th. A queen-cell protector, composed of a spiral wire body, having an attaching spur at its upper end and a contracted queen outlet at its lower end, and a suitable cover applied to its upper end, substantially as hereinbefore specified. 5th. A queen-cell protector composed of a spiral wire body, having an attaching spur and cover holding close coils at its upper end and a contracted queen outlet at its lower end, and a suitable cover held between said close coils by the elasticity of the wire, substantially as hereinbefore specified. 6th. A queen cage, constructed with a spiral wire body, having an attaching spur at its upper end, substantially as hereinbefore specified. 7th. A queen cage constructed with a spiral wire body, having cover holding close coils at its upper end, substantially as hereinbefore specified. 8th. A queen cage having a spiral wire body provided at its lower end with a cup shaped queen feeder closing said lower end of the body, substantially as hereinbefore specified. 9th. A queen cage body composed of spiral wire, with a tapering lower end which is provided with a feeder in the form of a flanged cup tightly fitted into the extremity of said lower end, substantially as hereinbefore specified. 10th. The combination, with a suitable cover, of queen-cell protector and queen cage bodies of spiral wire of one and the same pattern except as to length, the protector body being closed at top by said cover, and having a tapering lower end provided with a queen outlet, and the longer queen cage body having its upper end filled by said lower end of the protector body, and having its contracted lower end provided with a queen feeder, substantially as hereinbefore specified.

No. 38,405. Varnish Bottle, Etc. (Bouteille à vernis, etc.)

Thomas Graham Watson, Paris, Ontario, Canada, 4th March, 1892; 5 years.

Claim.—1st. The pan A, hinged to the bottle B, substantially as and for the purpose specified. 2nd. The pan A, provided with fingers D, pivoted to the band C, movably connected to the neck of the bottle B, substantially as and for the purpose specified. 3rd. The pan A, provided with fingers D, pivoted to the band C, movably connected to the neck of the bottle B, in combination with the pot E, provided with hook F, to fit between the band C, and neck of the bottle B, substantially as and for the purpose specified.

No. 38,406. Car Coupler. (Attelage de chars.)

Charles Henry Shuttleworth and Frank F. Hoyer, both of Corunna, Michigan, U.S.A., 4th March, 1892; 5 years.

Claim.—1st. In a car coupler, the combination with the draw head having a vertical opening therethrough, and provided on its upper surface with suitable projections, of a link pivoted in said vertical opening, the outer end of said link provided with a cross piece adapted to engage in projections on the adjacent draw head, substantially as described. 2nd. In a car coupler, the combination, with the draw head having a vertical opening therethrough and provided on its upper surface with suitable projections, said projections recessed on their inner sides, of a link pivoted in said vertical opening, the outer end of said link having a T shape, whereby it may engage in the recesses on the inner face of the projections of the adjacent draw head, substantially as described. 3rd. In a car coupler, the combination, with the draw head, provided with a vertical opening therethrough, and a link pivoted in said vertical opening, of a crank arm engaged to the pivot of said link, and devices extending from said crank arm to the outer edges or top of the car, whereby the link may be raised without going between the cars, substantially as described. 4th. The combination, with a car frame and draw head having the opening E and shaft F, of the cross piece G having the block S located in said opening, and against which the end of the draw head bears, all arranged and operating substantially as shown and described. 5th. The combination, with a car frame and draw head having the opening E and shaft F, of the cross piece G

having the block *g* located in said opening, and against which the end of the draw head bears, and the spring H bearing against said block and said draw head for keeping the latter in its advanced position, substantially as described.

No. 38,407. Process of Producing Ozone Water and Ozone Oil. (Appareil pour la production de l'eau et de l'huile d'ozone.)

Dr. Bernhard Graf and Fritz Piekenbrock, assignees of Carl Friedrich Wilhelm Stelzer, all of Berlin, Prussia, 4th March, 1892; 5 years.

Claim.—My improved process for producing ozone water and ozone oil, which will retain all its properties for a considerable length of time, by adding a small quantity of hydrochloric acid or hydrochloric acid with a chloride or chloride compound, substantially as and for the purpose specified.

No. 38,408. Ammonia Engine. (Machine à ammoniaque.)

Joseph Henderson Campbell, New York, U. S. A., 5th March, 1892; 5 years.

Claim.—1st. In ammonia engines, the method herein described of absorbing the exhaust ammonia vapor, which consists in bringing said vapor in contact with partially spent aqua ammonia (a solution) drawn from the boiler, and then subjecting such solution in presence of unabsorbed vapor to successive absorptions simultaneous with coolings taking place within a series of lateral tubes in a horizontal absorber, aiding each such absorption by removing the access of sensible heat generated thereby, substantially as and for the purpose described. 2nd. In ammonia engines, the method herein described of aiding absorption of the exhaust vapor, which consists in interposing between the inlet of a horizontal absorber, drained by gravity, and the feed pump, a body of absorbing liquid, through which any free gas must pass before reaching the feed pump, substantially as set forth. 3rd. In ammonia engines, the method herein described of absorbing exhaust ammonia vapor from the engine, which consists in bringing such vapor in contact with a continuous stream of cooled, partially spent ammonia solution from the boiler, then subjecting such solution and unabsorbed vapor to successive absorptions and coolings after each absorption, in a horizontal absorber, to remove the access of sensible heat produced thereby, draining the solution from such absorber by gravity, into a partially filled closed vessel or well, entering the same below the surface of ammonia solution contained therein, substantially as and for the purpose described. 4th. In ammonia engines, the method herein described of absorbing vapor of ammonia, which consists in passing the same together with cooled and partially spent ammonia solution from the boiler into the upper part of a horizontal absorber, draining therefrom, by gravity, such solution and absorbed gas and free gas adhering to such solution, through lateral tubes and vertical chambers, substantially as described. 5th. The method herein described of operating an aqua ammonia engine, which consists in propelling the engine with vapor of ammonia expelled from aqua ammonia in a boiler by heat, bringing the exhaust vapor in contact with cooled, partially spent ammonia solution from the boiler, subjecting such solution together with unabsorbed exhaust vapor to successive absorptions, simultaneous with coolings, taking place within a series of lateral tubes in a horizontal absorber, alternating with the evolutions of heat generated by absorption in vertical chambers, and returning the liquid, which has absorbed the exhaust ammonia vapor to the boiler, substantially as described. 6th. The method herein described of operating an aqua ammonia engine, consisting in expelling ammonia vapor by heat from aqua ammonia in a boiler, propelling the engine with such vapor, passing the exhaust ammonia vapor together with cooled partially spent ammonia solution, withdrawn from the boiler into the upper part of a horizontal absorber, provided with lateral tubes, so as to drain the liquid therefrom by gravity into a secondary absorber, provided with cooling surfaces, entering it below the surface of a body of ammonia solution contained therein, and returning the contents of such secondary absorber to the boiler, substantially as set forth. 7th. The method herein described of operating an aqua ammonia engine, consisting in expelling ammonia vapor by heat from aqua ammonia in a boiler, propelling the engine with ammonia vapor, passing the exhaust vapor together with partially spent ammonia solution from the boiler into the upper part of a horizontal absorber, provided with lateral tubes and vertical chambers so as to drain the liquid therefrom by gravity into a secondary absorber provided with cooling surfaces, entering it below the surface of a body of ammonia solution contained therein, then passing such liquid into a well from which it is returned to the boiler, substantially as set forth. 8th. In ammonia engines, the method herein described of increasing the efficiency of the engine, which consists in removing the exhaust from the cylinder by bringing the same in contact with absorbing liquid, and forcing the two combined into a closed well, by means of a suction and force pump, situate and operating between an absorbing apparatus and the well, substantially as described. 9th. The method herein described of operating a vapor pump or secondary engine in combination with an aqua ammonia engine, the same consisting in driving such pump or secondary engine directly by vapor of aqua ammonia and absorbing the exhaust vapor of said pump or secondary engine by the absorbing liquid which serves also to absorb the exhaust of the principal