

differential valve 141, 142, and a cock, as 146, substantially as described.

No. 22,393. Overshoe Lift. (*Chausse-Pieds.*)

Sidney Blenkhorn, Canning, N.S., 4th September, 1885; 5 years.

Claim.—An overshoe lift consisting of the two-part handle A, A', having a spring connection at one end and coinciding-curved jaws B, B', at the opposite end to grip the back of the overshoe spring catch C to hold the jaws closed and roller E to travel up the back of the boot when the overshoe is being pulled on, as set forth.

No. 22,394. Nitro-Glycerine Shell.

(*Obus à Nitro Glécérine.*)

Bernard Fannon, Westborough, Mass., U.S., 4th September, 1885; 5 years.

Claim.—1st. In a nitro-glycerine shell, the combination of the following instrumentalities, to wit: a body provided with a detachable breech-plug or base, suitable frangible jaws or vessels for containing the ingredients, of which nitro-glycerine is composed and keeping them properly separated, a plunger for crushing or breaking said jars or vessels and mixing said ingredients, means for firing said plunger after the shell has left the gun and causing it to break said jars or vessels, and a cylindrical case and elastic straps or means for cushioning said jars and enabling the insertion of the jars to be overcome without breaking them prematurely when the shell is fired, substantially as described. 2nd. In a nitro-glycerine shell, substantially as described, the plunger S, provided with chamber K, for containing a charge of powder, and fuse-plug I for closing said chamber, in combination with the breech-plug J, having the chamber K, hole *g*, and fuse-plug T, substantially as set forth. 3rd. In a nitro-glycerine shell, the body H, plug J, jars M, O, plunger S, fuse-plug T, case L and elastic straps *f*, constructed combined and arranged to operate, substantially as described. 4th. In a nitro-glycerine shell, substantially as described, the jars M, O, provided with the cap N, and stopple P, constructed, combined and arranged, substantially as set forth. 5th. In a nitro-glycerine shell, substantially as described, the cylindrical case L provided with braces or cross-bars *x*, in combination with the jars M, O, elastic straps *f*, and wires or straps *c* for attaching said elastic straps to said bars, substantially as described. 6th. In a nitro-glycerine shell, substantially as described, the auxiliary strap Q, in combination with the case L, substantially as and for the purpose set forth. 7th. In a nitro-glycerine shell, substantially as described, the percussion cap *u*, in combination, with the plungers S, jars M, O, case L, straps *f*, plug J, and body H, having the chamber R and hole *g* in its forward end, substantially as described. 8th. In a nitro-glycerine shell, the studs *j* and straps or wires *n*, in combination with the case L, jars M, O, and straps *f*, substantially as and for the purpose set forth. 9th. In a nitro-glycerine shell, the body A, base B, plunger E, disks D, spring C, fuse *c* and cushions *d*, combined and arranged to operate, substantially as and for the purpose specified. 10th. In a nitro-glycerine shell, substantially as described, the hollow disk D, provided with the partitions Dⁱ and openings Dⁱⁱ, in combination, with the cushions *d*, substantially as described. 11th. In a nitro-glycerine shell, substantially as described, the plungers C, provided with the annular groove Eⁱ and prongs Eⁱⁱ, substantially as and for the purpose specified. 12th. In a nitro-glycerine shell, substantially as described, the combination of the disks D, spring C, plunger E, base B, wire H, and body A, having a cap S, chamber *h*, and hole *g* at its forward end, substantially as and for the purpose specified. 13th. In a hollow projectile or shell adapted to be exploded by nitro-glycerine, the combination of the following instrumentalities, to wit: one or more frangible jars, vessels or receptacles adapted to contain the ingredients of which nitro-glycerine is composed and keep them properly separated until said jars are crushed or broken to mix said ingredients, a plunger or suitable device for crushing or breaking said jars, vessels or receptacles, said plunger or device being adapted to be fired or actuated by the explosion of the gun-powder, or other suitable explosive disposed in the shell or some part thereof, a cylindrical case and elastic straps, or other suitable means for cushioning said jars, vessel or receptacles and enable the insertion of the same to be overcome without breaking said jars, vessels or receptacles prematurely when the projectile or shell is fired and a hollow body having a detachable breech-plug or base, said projectile or shell being provided with a chamber for containing the gun-powder, or other explosive, for firing said plunger and with a hole communicating with said chamber through which the gun-powder or explosive may be ignited by means of a fuse percussion cap or other suitable means, substantially as described. 14th. In a hollow projectile or shell, the combination of the following instrumentalities, to wit: one or more frangible jars, vessels or receptacles, adapted to contain the ingredients of which nitro-glycerine is composed and keep the same properly separated until said jars, vessel or receptacles are crushed or broken to mix said ingredients, means for cushioning or keeping said jars, vessels or receptacles out of contact with the breech or base of the shell when it is fired and a hollow body having a detachable breech-plug or base, said projectile or shell being provided with a chamber for containing gun-powder, or other explosive for breaking said jars, vessels or receptacles and igniting the nitro-glycerine and with a hole communicating with said chamber through which said gun-powder or explosive may be ignited by means of a fuse or percussion cap, substantially as set forth. 15th. In a hollow projectile or shell, the combination of the following instrumentalities, to wit: a body, a detachable breech-plug or base for closing said body, a suitable quantity of nitric acid, glycerine and sulphuric acid, frangible jars, suitable vessels or receptacles for containing said acids and glycerine and keep them properly separated until said jars, vessels or receptacles are purposely broken to mix their contents, means for cushioning said jars, vessels or receptacles, a charge of gun-powder, or other explosive disposed in a chamber or other suitable receptacle within the projectile or shell, said chamber or receptacle being connected by a suitable hole or opening with a fuse or percussion cap, substantially as described. 16th. A hollow projectile or shell containing nitric acid, glycerine, and sulphuric acid properly

separated and a charge of gun-powder or other explosive, in combination with means for exploding the gun-powder or other explosive after the projectile or shell leaves the gun mixing said acids and glycerine to form nitro-glycerine and igniting the nitro-glycerine to explode the projectile or shell, substantially as and for the purpose set forth.

No. 22,395. Dumping Waggon.

(*Wagon à Bascule.*)

Thomas S. Stewart, Saltsburg, Penn., U.S., 4th September, 1885; 5 years.

Claim.—1st. In a dumping waggon or cart, the combination with the waggon body, the body rails, the shafts fixed by their inner ends to the axle, and having the said inner ends bevelled downward and backward, and any proper device to lock the body rails on the shafts of two hinges having their front leaves secured to the upper surface of the shafts, their joints lying immediately above the upper front edges of the bevels, and the rear leaves loosely connected by their rear ends to the body rails, and having the same length as the bevels, substantially as specified. 2nd. In a dumping waggon or cart, the combination of the body A provided with the body rails D, the axle F and shafts E of the clevises B, B', connected by the rod *h*, the hinge joints G and the hooks or staples *g*², substantially as specified. 3rd. In a dumping waggon, an end gate having side straps forming part of said gate to the lower ends of which straps the end board is pivoted and to the upper edge of which straps the board is connected by automatic catches, substantially as specified. 4th. In a dumping waggon, an end gate composed of vertical end straps, carrying head blocks on the upper end and hinged at their lower ends to the vertical straps to which the end board is fixed, and suitable devices to automatically engage the head blocks to the end board, substantially as specified. 5th. In a dumping waggon, the combination with the body A, shafts E, side bars H and actuating rods K, of the end gate I hinged to the upper ends of the standards and composed of the standards *h*, hinges G, head pieces M, and any suitable devices to connect and disconnect said head pieces and end board at will, substantially as specified. 6th. In an end gate for a dumping waggon, the combination of the straps L, head pieces M, latches *m*, with hinges G, straps O and board I and notches Q adapted to receive and hold the points of the latches, substantially as specified. 7th. In a dumping waggon, the combination of the waggon body A, body rails D, shafts E, provided with the bevels *e* and clevises B turning on the rod *h* with the hinge joints G, each composed of the front leaf *g*¹ fixed to one of the shafts and the rear leaf *g*² fixed by the staple *g*² to the body rail, substantially as specified. 8th. In a dumping waggon, the combination of the waggon body A and hinge joints G, composed of the leaves *g* and *g*¹, with the end gate I, actuating bars K, side bars H and standards *h*, substantially as specified.

No. 22,396. Scissors and Shears. (*Ciseaux.*)

George T. Atkins (Assignee of Robert Q. Monday), Dallas, Tex., U.S., 4th September, 1885; 5 years.

Claim.—1st. The combination with a suitable frame, of cutting discs or wheels, and a wheel adapted to operate the same, said last-mentioned wheel being operated by the forward movement of the frame, as set forth. 2nd. The combination with a suitable frame, of cutting discs or wheels arranged therein, one of said discs being rigidly connected with a cog wheel, and a gear wheel for operating said cutting discs, as set forth. 3rd. The combination with a suitable frame, of cutting discs arranged to revolve therein, rubber discs arranged adjacent to said cutting discs, and a gear wheel for operating said cutting discs, as set forth. 4th. The combination with a suitable frame having seats or recesses, of a wheel C, a portion of which bears upon the table or other object when the device is operated, and cutters operated by said gear wheel, as set forth. 5th. The combination of the cutting discs mounted upon suitable shafts, of a spring or plate adapted to be tightened upon one of the said shafts whereby the friction is increased, as set forth. 6th. The combination with a suitable frame of cutting discs mounted upon shafts having bearing in said frame, rubber discs mounted upon said shafts, said cutting discs being grooved, as shown, and a wheel for operating the cutting discs, as set forth. 7th. The combination with the frame, having an upwardly extending post, of a handle having an opening at its end, said handle being seated upon said post, and a screw engaging an opening in the end of the post to hold the handle in place and secure the same at any desired adjustment, as set forth.

No. 22,397. Suspension Wheel for Cars and Bicycles. (*Roue de Suspension pour Wagons et Vélocipèdes.*)

Henry C. Gallup Austin J. Hanks and, both of Wilmington, O., U.S., September 4th, 1885; 5 years.

Claim.—1st. The combination of the tubular hub, having at opposite ends the right and left screw threads, in combination with the double disks at each end, one of said disks having at suitable intervals projecting lugs to hold the spokes or suspension wires, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the double disks on opposite ends of the screw-threaded hub, one or both of said disks having pins or lugs, with the spokes or suspension wires, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the hub, having at the ends the right and left screw-threads, the double disks at each end screwed thereon, having projecting lugs, the continuous wire provided with suitable eyes at intervals, and with the tubular rim slotted to receive the suspension wires and the cross-pins, substantially as and for the purpose hereinbefore set forth.

No. 22,398. Bottle Stopper.

(*Bouchons de Bouteilles.*)

Edwin L. Loyd and Charles Joly, both of Philadelphia, Pa., U.S., 4th September, 1885; 5 years.