No. 8551. Improvements in the Manufacture of Belting. (*Perfectionnements dans la fabricatıon des courroies.*)

Amadee Spadone, Jersey, N.J.. U.S., 20th March, 1878, for 5 years.

Claim.—1st. A belt composed of a rubber coated fabric, folded or constructed with two or more plies, and provided with metallic strips (preferably of tempered steel), arranged longitudinally between the plies, and caused to adhere to the inner rubber coating of the adjacent surfaces; 2nd. A belt composed of a rubber coated fabric, folded or constructed with two or more plies, and provided with metallic strips (preferably of tempered steel) arranged longitudinally between the plies, and covered with a wrapped or braided fabric or rubber cement, or both, and caused to adhere to the inner rubber coating of the adjacent surfaces; 3rd. An endless belt composed of a rubber coated fabric, and provided with a strip of metal (preferably of tempered steel) arranged spirally.

No. 8552. Improvements in Steam Exhausts.

(*Perfectionnements dans les soupapes d'apiration.*)

George S. Brainerd, St. Albans, Vt., U.S., 20th March, 1878, for 5 years.

Claim.—1st. One or more fixed or permanent blast nozzles C C, in combination with one or more separate and independent adjustable nozzles F F; 2nd. The plates B and D, one fixed and the other movable, working or sliding upon each other and each provided with one or more blast nozzles C C and F F, the nozzles F F corresponding with the ports or passages E E in the plate B, said ports being opened or closed entirely or partially by the motion of the plate D, which may be adjusted at pleasure; 3rd. In combination with the fixed and movable plates B and D, and the stud or arm *c*, the set screws *d d* working in the slots *e e* or their equivalents, to retain and limit the motion of the upper plate D.

No. 8553. Improvements on Spring Hinges.

(*Perfectionnements aux pentures à ressort.*)

James Spruce, Waterbury, Ct., U.S., 20th March, 1878, for 5 years.

Claim.—1st. In a hinge composed of two or more leaves, the combination therewith of a spiral spring around the pintle, its two ends bearing upon the respective leaves of the hinge, and a collar projecting from the knuckles of each part into the respective ends of the spring, and between the spring and the pintle; 2nd. In a hinge composed of two or more leaves, the combination therewith of a spiral spring around the pintle, its two ends bearing upon the respective leaves of the hinge, and a collar within the spring at each end, and loose upon the pintle.

No. 8554. Improvements on Sash Fasteners.

(*Perfectionnements aux arrête-croisées.*)

Stephen Rush, Tyrone, Pa., U.S., 20th March, 1878, for 5 years.

Claim —1st. The combination of the casing, the division plate forming two compartments therein, a vibrating lever or bolt mounted in one of the compartments, and a spring for preventing accidental withdrawal of the bolt when shot, mounted in the other compartment; 2nd. The combination of the casing, the vibrating lever mounted therein, either end of which is adapted to constitute a bolt, its shaft, the cam or projection on the shaft, a spring acting on the cam and a handle or key for controlling the vibration of the lever; 3rd. The combination of the casing, its division plate, the shaft rocking in bearings in the casing, the cam mounted thereon, the spring acting on the cam, and a plate carried by the shaft or cam, between which and the division plate the spring is confined to prevent lateral displacement thereof.

No. 8555. Improvements on Harvesters.

(*Perfectionnements aux moissonneuses.*)

John J. Dewey, Lake, Minn., U.S., 20th March, 1878, for 5 years.

Claim.—1st. The combination of the elevating cylinder with the platform of a harvester; 2nd. The inner or upper shell D made of parallel strips, in combination with the elevating cylinder and platform of harvester; 3rd. The concave surface C, in combination with the inner shell formed of strips the elevating cylinder and a harvester platform; 4th. The curved opening or space, through which the grain is elevated, formed by the bands forming the inner shell D and the opposite concave surface C, which are spread apart at the top to form a receptacle H I for the grain; 5th. The combination of the receptacle, the band and opposing concave surface, with the elevating cylinder or its equivalent, and the platform of a harvester: 6th. The binder's tables L L, in combination with the receiver, the bands and opposing surface, the cylinder and the platform of a harvester; 7th. The binder's platform K, in combination with the binder's tables, the receiver, the bands and opposing surface, the cylinder and the platform of a harvester; 8th. The binder's seat J adjustably connected to the frame by means of the perforated arms *h* and screws *f*; 9th. The arrangement of the gearing *b* F *d*, to operate the cylinder and apron or their equivalents; 10th. A cylinder elevator made to extend forward of the line of cut; 11th. A cylinder elevator, or its equivalent, made to revolve in the direction shown *i e*, towards the standing grain at the top and from it at the bottom.

No. 8556. Improvements in Road-Scrapers.

(*Perfectionnements dans les éboueurs de chemins.*)

Houston C. Robb, (Assignee of Isaac Robb and Bennami Selph,) Lynchburg, Ohio, U.S., 20th March, 1878, for 5 years.

Claim.—1st. The concave shovel A having a scraping edge A_1 and pivoted within the frame D, in combination with the semi-circular angle iron runners C C; 2nd. A rotating scraping shovel A provided with notched plates M M and stops N N, in combination with the bar H operated by the levers J J and handle L.

No. 8557. Improvements in the Gear of Buggies. (*Perfectionnements dans les trains des voitures.*)

William H. Morrison, Canning, Ont., 20th March, 1878, for 5 years.

Claim.—1st. A malleable cast iron head block A, in combination with a single or double reach B made of even tube or pipe, and provided with malleable cast iron mountings, the whole arranged to form a running gear of a buggy or similar vehicle; 2nd. A malleable cast iron head block A, recessed to receive the nut G used to secure the king bolt H.

No. 8558. Improvements on Pumps.

(*Perfectionnements aux pompes.*)

Garrett W. Low and David K. Dean, Erie, Pa., U. S., 20th March, 1878, for 5 years.

Claim.—1st. The oscillating arm S_1, in combination with the lever h_1 having a movable fulcrum C_1; 2nd. The combination of the lever h_1, the oscillating arms S_1 and g_1 and the piston rod *d*; 3rd. The segments *a a a a* having the interior flanges *f f*, and so constructed and arranged that a part of each segment projects beyond a part of its adjacent segments, to form water tight joints; 4th. The segments *a a a a*, in combination with the elastic ring C, disc *e*, valve *x* and pump stock a_1 and ring *i*; 5th. The pins S S S S, in combination with segments *a a a a*, disc *e*, elastic ring C and pump stock a_1; 6th. The rod *d* and the socket *g*, in combination with the bolt e_1, disc *e* and nut *h*.

No. 8559. Improvements on the Treatment of Ores. (*Perfectionnements dans le traitement des minérais.*)

Farnham M. Lyte. London, Eng., 20th March, 1878, for 5 years.

Claim.—1st. The treatment of mixed ores containing lead, silver and zinc, so as to effect the separation of the lead and silver, and also recover the zinc in the metallic state; 2nd. The production of precipitated lead in the form of bricks, and the conversion into bricks of the crude oxide of zinc, excess of lime being prevented; 3rd. The modification of the improved process, where employed for treating silver ores.

No. 8560. Improvements on Treating Ores.

(*Perfectionnements dans le traitement des minérais.*)

Farnham M. Lyte, London, Eng., 20th March, 1878, for 5 years.

Claim.—1st. The improved method of treating ores and metallic residues, by the process of sulphatation; 2nd. The treatment of the sulphated material with hot brine, or other chloride solutions, by preference acidulated; 3rd. The recovery of lead and silver from these solutions, by precipitation with zinc; 4th. The recovery of zinc, as rough oxide, under the special conditions of hot precipitation, previous elimination of sulphuric acid, and precautions to avoid the presence of any lime or calcium slats.

No. 8561. Improvements in Roller Skates.

(*Perfectionnements aux patins à roulettes.*)

Alfred J Peerless, Toronto, Ont., 20th March, 1878, for 5 years.

Claim.—1st. A two roller skate, one roller of which is mounted in adjustable bearings, and the other roller mounted in fixed bearings; 2nd. The combination of a flat faced roller, mounted in an adjustable frame with a convex faced roller revolving on fixed bearings; 3rd. The roller frame E provided with concave bearing face E_1 and half-round bearings *e e*, in combination with the brackets F and G and the pin H; 4th. The foot board A of a roller skate mounted on two rollers, one of which is self-adjusting to the angle of the foot board, and the other rotating in fixed bearings, but provided with a rounded face, to correspond with the lateral motion of the adjustable roller; 5th. The foot plate J with side flanges and lower projection J_1, in combination with the foot board A provided with a series of holes to receive said projection.

No. 8562. Improvement in Cook Stoves.

(*Perfectionnement dans les poëles de cuisine.*)

William J. Copp, Hamilton, Ont., 20th March, 1878, for 5 years.

Claim —In combination with a cook stove of any kind, of a reversible or duplex shelf D attached thereto in front, as shown by bars C or brackets C_1, or to sides or rear of stove.

No. 8563. Improvement on Horse Shoes.

(*Perfectionnement des fers à cheval.*)

Harry B. Cornish and Charles P. Hunt, River-Falls, Wis., U.S., 20th March, 1878, for 15 years.

Claim.—The combination of the calks having arc-shaped dove-tail tapering tongues, with the arc-shaped dove-tail tapering grooves in the horse-shoes.

No. 8564. Improvements on Grain Separators.

(*Perfectionnements aux séparateurs des grains.*)

Thadeus C. Histed, Frank Seaton and James M. Champion, Salina, Ks., U.S., 20th March, 1878, for 5 years.

Claim.—1st. A drum for inclosing the fan of a fanning mill, composed of boards *c* arranged to overlap each other; 2nd. The combination of the screw conveyor, and rotating riddle; 3rd. The brushes *i* placed in the conveyor through *f*; 4th. The curved deflector d_1 for directing the fan blast to the rotating riddle F; 5th. The combination of the perforated screen C_1 and the vibrating shaft G; 6th. The screen H composed of the three parallel sieves O O_1 O_2 having between them air passages; 7th. The vibrating shaft *t* and pins K_1, in combination with the shoe I for giving it percussive movement; 8th. The screens *r u v*, boxes L M and chute K in combination, for separating grain into different grades; 9th. The screen *w* and valve N for conducting the grain passed by the screen *v* to chute K; 10th. The hopper D having the removable side piece *e*.

No. 8565. Combination Bath and Wash Tub.

(*Baignoire-cuvette.*)

John H. Jones, Sarnia, Ont., 20th March, 1878, for 5 years.

Claim.—The combination or arrangement of the metallic top or upper portion A with the wooden wash tub B and the flexible support C.