the screens E E1 with the slotted distributing board F; 5th. The combination with the screens E in the shoe A, of the grain board having a doori; 6th. In combination, the cockle tubes K and deflectors, with the imperforate bottomed screens J J1 J2 and intermediate chambers; 7th. The combination of the slotted distributing board I1, partition boards *a a*, cockle screens J J1 J2 furnished with imperforated bottoms *l l l*, deflectors and tubes K, bevelled cleat *m* and shoe I.

## No. 11,345. Improvements in Mowing Machines. (*Perfectionnements aux moissonneuses.*)

James E. Thomas, West Bay, Mich., U. S., 9th June, 1880; for 5 years.

*Claim.*—1st. The combination of the springs L L=and the stud D, with the bar A and the knife bar C. 2nd. The combination of the springs L L=with the stud D.

## No. 11,346. Improvements on Middlings Purifiers. (*Perfectionnements aux épurateurs des gruaux.*)

James H. Redfield, Salem, Ind., U. S., 9th June, 1880; for 10 years.

*Claim.*—1st. The tube Q for conducting middlings into the purifying chamber, in combination with a suction fan E applied to elevate the middlings through the tube Q, and also carry them over a sieve and thereby bring them in position for separation by an auxiliary blast of air which is caused by the said fan; 2nd. A middlings purifier provided with a suction fan E, a middlings conducting tube Q and a passage C, for supplying air beneath and up through the sieve, whereby the middlings are elevated to the purifier, and are separated, while moving above the surface of the sieve, by air admitted up through the sieve, one fan causing the suction for both elevating and purifying the middlings; 3rd. The combination of the sieve H, the distributing board I, the suction fan E, the tube Q and passages B C; 4th. The sieve frame F provided with a bottom formed of slats *f1* which are perforated as at *b*, and provided with transverse partitions *f2* which have passages through them as at *b1*, and provided with a double channelled trough G having a cut off slide plate c3, in combination with a sieve H and discharge spouts D D1 D2; 5th. The combination of the endwise removable sieves H and the sieve frame F attached to the casing A by a flexible diaphragm; 6th. The combination of the suction fan E, sieve H, distributing board I, conducting tube Q, air passages B C and valved spouts D D1 D2; 7th. The combination of the sieve frame F, hanger straps *j* having knife edge bearings J, and the inclined ratchet toothed brackets K; 8th. The spring M, in combination with the plate *k*, slotted plates *n*, set screws *n1*, eccentric N and bumper K1 of the sieve frame.

## No. 11,347. Improvements on Hat Felting Apparatus. (*Perfectionnements aux appareils d feutrer les chapeaux.*)

John F. Waring, Boston, Mass., U. S., 9th June, 1880; for 5 years.

*Claim.*—1st. The combination of two parallel rollers arranged to rotate and form between them an open trough or trough-like or hopper-like cavity, which has an ascending surface on one side and a descending surface on the opposite side, and which is adapted to receive within it, and contain a roll of hat bodies, or other articles, and subject the same to a rolling motion, by the friction of said surfaces upon said roll lying loosely between them; 2nd. The combination of three parallel rollers arranged side by side and means of giving rotary motion thereto, whereby the said rollers form two troughs or trough-like or hopper-like cavities, each having an ascending and a descending side; 3rd. The combination of two parallel rollers arranged side by side to form between them a trough or trough-like or hopper-like cavity and driving mechanism, whereby they are driven at unequal velocities; 4th. The stationary guards D D, in combination with parallel rollers, arranged to form one or more troughs or trough-like or hopper-like cavities between them; 5th. The combination of a longer outer and a shorter inner cloth, in which the hats or other articles are rolled; 6th. The combination with two parallel rollers arranged to form between them a trough or trough-like or hopper-like cavity of two hardening or felting cloths of unequal length.

## No. 11,348. Improvements on Metallic Planes. (*Perfectionnements aux rabots métalliques.*)

William Steers and William Long, Sherbrooke, Que., 9th June, 1880; for 5 years.

*Claim.*—1st. The combination of the nut D, screw C, and thumb screw G with the knife B; 2nd. The combination of the revoluble cylinder H and its projecting pin K with the back iron or holder F; 3rd. The combination of the nut D and its projecting eccentric pin E, with the parallel slots M M in the knife B.

## No. 11,349. Improvements on Churns. (*Perfectionnements aux barattes.*)

Alexander Cowley, West Nissouri, Ont., 9th June, 1880; for 5 years.

*Claim.*—The dash B, in combination with a square parallel churn H exactly fitting the dash.

## No. 11,350. Improvements in Door Guards. (*Perfectionnements aux fermetures des portes.*)

Joseph P. Ellacott, Chicago, Ill., U. S., 9th June 1880; for 5 years.

*Claim.*—1st. The combination of the plate B, with the retaining spring *b* and the grooved bar D; 2nd. The combination of the bar D of H=form in section, the flanges continuing round and closing the outer end with the catch C having arms with bosses or returns, to engage the flanged bar D; 3rd. The combination of the plate B, the retaining spring *b* and the flanged bar D, when constructed with the catch C and bosses *d d*.

## No. 11,351. Improvements on Floating Docks. (*Perfectionnements aux calles sèches.*)

Josiah L. Clark and John Standfield, Westminster, Eng., 9th June, 1880; (Extension of Patent No. 4,840.)

## No. 11,352. Improvements in Car-Couplers. (*Perfectionnements aux attelages des chars.*)

Auguste M. Béchard, Richard D. Morkill, jr., and James R. Woodward, Sherbrooke, Que., 11th June, 1880; for 15 years.

*Claim.*—1st. In a draw-bar *a*, the combination in one and the same pendant piece B, of a link guide and pin holder; 2nd. In a draw-bar *a*, the inclined surface E F, in combination with the link K and link guide B.

## No. 11,353. Improvements in Suspender Clasps. (*Perfectionnements aux agrafes des bretelles.*)

Charles E. Johnson and Alfred H. Grafftey, Indianapolis, Ind., U. S., 11th June, 1880; for 5 years.

*Claim.*—1st. A garment clasp composed of two jaws and pivoted together, one of said jaws having a transverse slot therein which is adapted to receive the free end of the other jaw, and thus lock said jaws in position while they clasp or hold the fabric; 2nd. The combination of the A, having pivot bearing *a a* and transverse slot *a1*, and the jaw B having pivots *b b*.

## No. 11,354. Improvements in Closets, &c. (*Perfectionnements aux latrines, &c.*)

William White, London, Eng., 11th June, 1880; for 5 years.

*Claim.*—1st. The water regulating and waste preventing and in the adaptation of same to the service of lavatories, closets and such like purposes, in which the following points are important points or features, the flap, tipping tray and tipping vessel. Also the construction and arrangement for inlet pipe by means of a notch or indent provided in the basin, and the form and arrangement of the basin generally.

## No. 11,355. Improvements in Potato-Diggers. (*Perfectionnements aux arrache-patates.*)

Robert W. Gates, Bloomingdale, Andrew Dunning and Samuel B. Coupland, Chicago, Ill., U. S., 11th June, 1880; for 5 years,

*Claim.*—1st. The combination of the plough C, having rods D and wings E, with the shoe B, and the adjustable foot F, pivoted at *f* and having the threaded portion *f1* and nut *f2*.

## No. 11,356. Improvements on Cylindrical Valves. (*Perfectionnements aux valves cylindriques.*)

Francis Winters, jr., New York, U. S., 11th June, 1880; for 5 years.

*Claim*—1st. A rotary and longitudinally adjustable valve having duplex ports and passages, in combination with a chest having an inlet for the admission of steam to the exterior of the valve, and having ports *m m1* through which steam may be admitted to the cylinder and exhausted therefrom, through the valve; 2nd. The combination of a cylindrical valve and its casing or chest, with a piston bearing against the side of the valve, and arranged to be exposed to the pressure of steam.

## No. 11,357. Improvements on Faucets or Cocks. (*Perfectionnements aux canules ou robinets.*)

Charles A. Blessing, Philadelphia, Pa., U. S., 11th June, 1880; for 5 years.

*Claim.*—1st. The combination with the casing of a cock or faucet, of an adjustable screw threaded nozzle, fitting and adapted to ride upon the lower end of the screw threaded casing, the nozzle being connected with the valve stem, carrying a valve for operating the same; 2nd. The combination with the valve casing provided with ports for cold and hot water, of the valves mounted on a single valve stem, and the same connected with a vertically adjustable screw-nozzle, secured to the lower end of the screw threaded valve casing, whereby the valves may be gradually and successively opened and closed; 3rd. The combination of a valve casing, provided with two passages, communicating respectively with two valve chambers, and independent disc and tubular valves and valve stems connected with mechanism, whereby said valves may be operated independently of, or in conjunction with, each other to open the lower ports, for the discharge of cold water, to open all of the ports for the discharge of mixed hot and cold water, or to close the lower induction port and open the remaining ports, to discharge hot water alone; 4th. The combination with the two independent valves seated in separate valve chambers, of the screw-nozzles, connected with the lower valve stem, and adapted to ride up and down the lower screw threaded end of the casing, for the purpose of operating the valves.

## No. 11,358. Improvements on Harrows. (*Perfectionnements aux herses.*)

Gilbert McKinlay and John McKinlay, jr. (Assignee of Isaiah H. Reiner), Line Lexington, Pa., U. S., 11th June, 1880; for 5 years.

*Claim.*—1st. The side bars A, the median beams B, hinged together, the guards C and the links D; 2nd. The combination with the inner bars of the harrow frame A B, of the wheels E, whereby the harrow can be conveniently moved from place to place.

## No. 11,359. Liniment for reducing Swellings, Sprains and Bruises, and for the Healing of Wounds and Sores. (*Liniment pour réduire les enflures, entorses et contusions, et guérir les blessures et les plaies.*)

Robert Sample, Truro, and Malcolm McFarlane, Sheet Harbour, N. S., 11th June, 1880; for 5 years.

*Claim.*—1st. A compound of Alum, Blue Stone, Saltpetre, Aloes, Myrrh, Carbolic Acid, Spirit of Turpentine, Sugar of Lead and Alcohol, in the proportions set forth.