

No. 2298. GEORGE H. PIERCE, Richmond, Que., & GEORGE O. DOAK, Coaticooke, Que., (Assignees of Willard Corney & Sidney S. Turner), 29th April, 1873, for 5 years: "Stop Motion for Looms." (*Mouvement des touches des métiers.*)

*Claim.*—1st. In combination with the lay of a loom, the vertical reciprocating rods *E*, *F*, so arranged and operating that as the lay beats up they shall project above the lay and thus prevent the threads, that have already been beaten up from falling back upon the lay and thus interfering with the action of the web detector; 2nd. The combination of the bar *A*, with the ratchet comb *H*, *A*, *A*, the sliding pin *N*, and lever *M*, operating as described.

No. 2299. GEORGE W. McDOWELL & ROBERT J. CAMPBELL, Chicago, Ill., U. S., (Assignees of Robert W. Davis), 29th April, 1873, for 5 years: "Excavating Machine." (*Machine à excavation.*)

*Claim.*—1st. In combination with the dirt-receiver *E*, the revolving series of pivoted elevating buckets *G*, controlled by springs *g*, to admit of the yielding of the buckets; 2nd. The combination with the spring held pivoted buckets *G*, of the eccentrically-hung rising and falling scraper *I*, and the dumping dirt-receiver *F*; 3rd. In the dirt-receiver *F*, fast to the main axle *D*, in combination with the crank or arm *b*, the stops *c*, *c*, and the loose running wheels *C*, *C*; 4th. The knuckle-jointed pin *H*, carried by the bucket frame, in combination with the loose running-wheel *c*, arranged to engage with said pin when the latter is swung upwards to effect the rotation of the buckets; 5th. The combination with the dumping dirt receiver *E*, and independently revolving bucket frame *F*, of the pin *H*, arranged to move inwards for action against a stop *S*, to effect the dumping of the receiver as specified.

No. 2300. GEORGE L. WITSIL, Beverly, N. J., U. S., 29th April, 1873, for 15 years: "A Washing Machine." (*Machine à laver.*)

*Claim.*—The combination and arrangement of the lever *C*, connecting rods *C*, *C*, and rollers *B*, whereby one set of the rollers is caused to remain stationary while the others are in motion and vice versa.

No. 2301. JAMES WEBSTER, Birmingham, Eng., 29th April, 1873, for 5 years: "Process of Refining Metals and apparatus therefor." (*Procédé d'affinage des métaux et appareil pour cet objet.*)

More especially intended for the refining or purifying of iron. The gas used is obtained from the admixture of vegetable carbon with hydrochloric or nitric acid combined with atmospheric air and in some cases with the addition of ordinary coal gas.

*Claim.*—In the apparatus described for the purpose of applying gases or vapor to the refining or purifying of metals.

No. 2302. SOLOMON ROCK and SOLOMON TEETER, Teeterville, Ont., 29th April, 1873, for 5 years: "Boot and Shoe Counter." (*Contre-fort de chaussure.*)

*Claim.*—A toothed metal counter *A* constructed as, and in combination with the heel of boots and shoes as specified.

No. 2303. ROBERT R. BALL, West Meriden, Ct., U. S., 29th April, 1873, for 15 years: "A Stove-Pipe Damper." (*Une clé de tuyau.*)

*Claim.*—1st. In combination with a damper for stove-pipes and similar purposes a tapering washer as seen at *E*; 2nd. The combination of the washer *E*, tapering section *D*, and nut *F*, with the spindle of a damper; 3rd. The non-conducting handle or knob *J*, in combination with a damper as described.

No. 2304. ROBERT MARTIN, Clinton, Ont., 29th April, 1873, for 5 years: "A Straw-Cutter." (*Un hache-paille.*)

Relates to the arrangement of knives on a rotary cylinder, to the construction of the feed rollers and the gear for operating same, the object being to cause the knives to cut in a line diagonal to the plane of the rollers and so to operate the feed rollers that during the cutting of the knives the feed motion shall be suspended.

*Claim.*—1st. The knives *E* arranged diagonally on and affixed to revolving discs *C*, and having their outer cutting edges parallel with the plane of the cut; 2nd. The combination of the ratchet wheels *K*, *K*, spring pawls *Q*, bifurcated arms *L*, *L*, feed arms *M*, shaft *N*, cam groove *P*, with the frame *A*, cylinder discs *C*, and feed roller journals *C*, whereby an intermittent motion is given to the feed rollers *G*; 3rd. The feed rollers *G* constructed of central cylinder *a*, and, annular rings *b*, applied and fitting thereon by *V*, grooves and projections.

No. 2305. WILLIAM W. KITCHEN, Grimsby, Ont., 29th April, for 5 years: "A Farm Fence." (*Une clôture.*)

*Claim.*—1st. The rail trestles composed of posts *A*, *A*, base pieces *B*, *B*, and diagonal stays *C*, *C*, arranged and combined to receive the rails *E*, *E*; 2nd. The pins *F* inserted in the rails *E* and blocks *G* in combination with the rail trestles, constructed as specified; 3rd. The anchoring chains *H* applied, as set forth in combination with the rail trestles constructed as specified.

No. 2306. EDOUARD MERCIER, Springfield, Mass., U. S., 29th April, 1873, for 5 years: "Self-Operating Railway Switch." (*Aiguille automate de chemin de fer.*)

*Claim.*—In combination with the switch *D*, the frame *H* combined eccentric and crank *F*, eccentric *V*, shaft *X*, with handle *m*, and connecting rods *H*, *W*. The parts being all constructed and arranged as set forth.

No. 2307. ABRAHAM SPENCER, Grampian Hills, Pa., U. S., 29th April, 1873, for 5 years: "A Ditching Machine." (*Une machine à fossoyer.*)

Consists in the arrangement of the mechanism whereby the ditcher is revolved and moved forward, and in the construction and arrangement of a spring scraper for removing the dirt from the diggers.

*Claim.*—1st. The arrangement of a double miter wheel *D*, with sweep *E*, the miter wheel *G* for operating the diggers and the miter pinion *b*, for propelling the machine, through the means of the shaft *d*, worm *c*, and the cog-wheel *H*; 2nd. The combination of the scraper *m*, spring *n*, and cams *i*, *i*, on the digger-head *T*, all constructed and arranged to operate as set forth.

No. 2308. HENRY D. DANN, Oshkosh, Wis., U. S., and JOHN H. SWARTWOORT, Toronto, Ont., 1st May, 1873, for 5 years: "A Saw Mill Dog." (*Clameau de scierie.*)

*Claim.*—1st. The boxes *B*, *B*, provided with interlocking knives *D*, *D*, and operating in the manner set forth; 2nd. The combination of the box or case *A*, bars *B*, *B*, with interlocking knives *D*, *D*, inclined slots *b*, *b*, pins, *A*, *A*, connecting bars *C*, *C*, cross-head *D*, and lever *E*; all constructed and arranged as set forth.

No. 2309. HIRAM J. LIVERGOOD, Brantford, Ont., 5th May, 1873, for 5 years: "Machine for Sharpening and Cleaning Knives." (*Machine à affiler et nettoyer les couteaux.*)

*Claim.*—1st. In the manner in which frame *A* is constructed as shown in drawings figure 2, in combination with the rotary knife-cleaner; 2nd. The combination of internal gearing *B* and *D*; 3rd. The wheels *F*, *F*, running in a perpendicular position on a horizontal shaft, slipped loose on a square shaft and a square hole is left in the wheels *F*, *F*, so that they may be easily removed for the purpose of renewing the cloth or chamois; 4th. The manner in which the wheels *F*, *F*, are constructed concave, or hollow so that they may be stuffed for the purpose set forth; 5th. The wire hoops *H*, *H*, which hold the chamois or cloth on the wheels *F*, *F*; 6th. The steel spring *J*, shown in drawings figure 1 for the purpose of giving tension pressure to the wheel *F*; 7th. The grindstone or emery wheel *F* in combination with a knife-cleaner.

No. 2310. FREDERICK PROUDFOOT, Toronto, Ont., 5th May, 1873, for 5 years: "A Smoke Pipe." (*Une cheminée.*)

*Claim.*—1st. A stamped corrugated smoke pipe of sheet metal, terracotta or other suitable material composed of sections *A*, *A*, formed by dies or stamps telescoping together, whose inner and outer surfaces are corrugated longitudinally; 2nd. Combination with such corrugated smoke pipe, a core pipe *C* or air-chamber internally placed as set forth; 3rd. In combination with such corrugated smoke pipe a core pipe *C*, provided with tubes *I*, funnel-shaped cap and dampers *J*; 4th. The combination with a stove or open fire-place or grate of the stamped corrugated smoke pipe provided with an inner core *C*, applied to the throat of a chimney or grate, and arranged to pass upwards through the floors or partition walls as set forth.

No. 2311. JAMES C. RANDLETT, PATRICK KEL-LEHER and FREDERICK H. COOMBS, Bangor, Me., U. S., 5th May, 1873, for 15 years: "Method of Manufacturing Mocassins." (*Manière de fabriquer les mocassins.*)

*Claim.*—1st. In making a mocassin boot with a bottom and tip cut as shown so as to enable them to be joined together and to the other parts of the boot by machinery as in figs. 1 and 3, 2nd. In cutting a leg for a mocassin boot in two pieces *A* and *B*, figs. 4 and 5, bringing the seams together at each side of the leg and shaped so as to allow them to be joined together and to the other parts