No. 3218. FRANCOIS GENIN, EDMOND BEAUVAIS, JOSEPH E. ROBIDOUX, JOHN A. PERKINS & RAYMOND PREFONTAINE, Montreal, Que., 18th March, 1874, for 5 years: "Improvements on Paper Machinery and Chemical Compounds used in treating substances to be converted into paper stock." (Perfectionnements aux appareils et compositions chimiques employés dans le traitement des substances à convertir en pâte à papier.)

Claim—1st. The trough *c*, and the roller *d*, in combination with the spout *f*, by an inclining grating *g*; 2nd The trough *c*, and crushing roller *d*, in combination with the rollers *h*; 3rd. The combination of the trough *c*, and crushing roller *d*, with rollers *h*, and grinding disc *p*, 4th. The combination of the pipe *s*, with cylinder *l* and spout *t*, arranged so that the centrifugal force created by the disc *p*, will cause the material to ascend to the trough *t*, 5th. A novel combination of straw with lime water and soda; 6th. The pulp manufactured as described in combination with chloride of lime and sulphuric acid as described.

No. 3219. DAVID ARMAN, Montreal, Que., 18th March, 1874, for 5 years: "Improvements on Machinery for manufacturing Peat." (Perfectionnements aux appareils à fabriquer la tourbe.)

Claim.—1st. The combination of the conveyer *d*, stick catcher *e*, and drum *n*, constructed, arranged and operating as described; 2nd. The combination of the net *p*, constructed, arranged and operating as described, with the travelling pressing surfaces *f*, constructed as described; 3rd The novel combination of the bars *q*, carriages *s*, scissors *b*, and net *p*, all working together as described; 4th The net work *p*, arranged as described to form a bag closing at one end and opening at the other, as the net work advances.

No. 3220. WILLIAM PETCH, Brantford, Ont., 18th March, 1874, for 5 years: "Machine for Bolting and Purifying Flour and Middlings." (Machine à bluter et purifier la farine et les gruaux.)

Claim.—1st. Forming the reel of separate and distinct frames or sieves and connecting them as described; 2nd The heads D, and E, fastened to shaft B, with stays C, also rods I, and springs K, to work in ratchet F.

No. 3221. JAMES C. WILSON, Montreal, Que., 18th March, 1874, for 5 years: "Improvements on Paper Bag Cutters." (Perfectionnements aux découpoirs pour les sacs de papier.)

Claim.—1st. The cutter J, having two chisel edges cutting angularly and adjustable by a frame D; 2nd. The combination of the cutters J, adjustable frames D D, and bar A, as set forth.

No. 3222. RÉMI PARADIS, St. Hyacinthe, Que., 18th March, 1874, for 5 years: "Improvements on Shoe Sole Burnishers." (Perfectionnements aux brunissoirs de cordonnerie.)

Réclame.—1o. La douille à couteaux N, avec ses couteaux P; 2o La combinaison de la targette E, avec la pédale G, l'équerre I la fourche J; 3o Dans la combinaison de la douille à couteaux N, avec les autres parties de la machine.

No. 3223. NICOLAUS A. OTTO, Deutz, Germ., 18th March, 1874, for 15 years: "Improvements on Caloric Engines." (Perfectionnements aux machines caloriques.)

Claim—1st. A caloric engine wherein atmospheric pressure is rendered available for producing motive power by drawing heated gases or gaseous products of combustions of high temperature but only at atmospheric pressure quickly into the engine cylinder and then cooling the fluid therein whereby the pressure on one side of the piston is reduced below that of the atmosphere, thus producing a corresponding excess of atmospheric pressure on the other side of the piston; 2nd In caloric engines operating as described in the first claim, admitting the heated gases to the cylinder during only a portion of the forward stroke and dilating them by the further motion of the piston whereby an increased gain of motive power is obtained; 3rd. In caloric engines, the jacketted cylinder *a*, open to the atmosphere at one end with slide *g*, for cutting off the supply of heated gases, and valves *s*, for discharging the cooled gases operating in combination with the piston *k*, connected to the crank shaft *c*, with fly wheel *f*, in such a manner that the piston performs its outward stroke quicker than its return stroke.

No. 3224. URSULA L. WEBSTER, (wife of Daniel B. Webster,) New Haven, Ct., U. S., 18th March, 1874, for 5 years; "Improvements on Adjustable Patterns for Cutting Garments." (Perfectionnements aux patrons articulés pour le taillage des hardes.)

Claim.—1st. The rule *a*, in combination with the sliding rule *c*, main rule *d*, and shoulder and neck rule *f*; 2nd. The rules *a* and *c*, in combination with the rule *m* and *l*; 3rd The rules *a* and *c* in combination with the arm rule *n*, *r n*, *q*, with rule *p*; 4th. The rule *t*, in combination with the rules *m*, th. The rule *r* in combination with the rules *a* and *c*; 6th. The rules *a*, and *c*, in combination with dart *i*; 7th The adjustable pattern formed by rules *f*, *a*, *t*, *p* and *n*; 8th. The adjustable pattern formed by rules *f*, a_1, *t* *p*, *n*, and *q*; 9th The combination of the rules a_1, c_1, e_1, d_1, and i_1; 10th. The combination of the rules a_1, c_1, e_1, g_1, and i_1, 11th. The combination of the rules a_1, c_1, e_1, f_1, g_1, f_2, and g_2, 12th The adjustable pattern formed by the rules a_1, b_1, d_1, e_1, g_1, and i_1, 13th. The adjustable pattern formed by the rules a_3, b_3, f_3, d_3, e_1, g_1, f_1, and i_1, 14th. The pattern consisting of adjustable rules a_3, b_3, f_3, d_3.

No. 3225. JAMES H. BEARDSLEY, Brooklyn, N.Y., U.S., 19th March, 1874, for 5 years: "Apparatus for Protecting the Eyes and Respiratory Organs of persons exposed to extreme Heat, Smoke, &c." (Appareil pour protéger les yeux et les organes respiratoires des personnes exposées à une chaleur intense, la fumée, etc.)

Claim.—1st The duplex shell provided with transparent eye pieces, and constructed with edges capable of fitting snugly about the eyes of the wearer to prevent the passage of noxious matters thereto, in combination with the projecting and air filtering curtain, arranged to cover the lower portion of the face; 2nd The combination of the spring with the duplex shell; 3rd. The shell constructed with the grooved sockets for the reception of the eye pieces; 4th. The combination of the sponge or porous pad with the curtain attached to the duplex shell; 5th. The combination of the lenses or magnifying glasses with the duplex shell furnished with the depending curtain, the said lenses or glasses constituting the eye pieces of the shell; 6th. The combination of the coloured eye pieces with the duplex shell furnished with the depending curtain.

No. 3226. FRANKLIN DODGE, Whiteside, Ill., U.S., 20th March, 1874, for 5 years: "Manufacture of Peat." (Fabrication de la tourbe.)

Claim—1st The process of treatment described, the said process consisting in grinding and kneading the peat into a paste in the peculiar manner described, next mixing the ground peat with water until the peat is taken up and held in solution, then pumping the mixture away to drying ground, allowing the peat to settle and condense, drawing off the water and permitting the peat to harden as described; and finally storing the peat in curing cribs to undergo the sweating operation; 2nd. The revolving cutters F, in combination with the bars F_1; 3rd. The revolving grinders D, in combination with the graduated perforated diaphragms E, E_1, E_2, E_3; 4th. The bevel gearing C, or their equivalent placed within the chamber in which the water is admitted to the ground peat, 5th. The hopper A, in combination with the series of grinding chambers A_1; 6th. The combination of the hopper A, the series of chambers A_1, the revolving shaft B, the revolving knives F, bars F_1, the revolving grinders D, the perforated diaphragms E, E_1, E_2 E_3, bevel gearing C, C, the feed water pipe H, reservoir I, pump J, and discharge pipe J_1, 7th. Curing the condensed peat taken from the drying ground by placing it in the peculiarly constructed cribs K.

No. 3227. JOHN LUTHVEN, Lévis, Que., 23rd March, 1874, for 5 years: "Gas Machine." (Machine à gaz.)

Claim.—1st. The arrangement of the air tank A, and combined oil and vapour tank B, connected by the pipe C, in combination with a pump or bellows K, for injecting air as set forth; 2nd. The perforated bottom M, and the arrangement of the pipe C, discharging air centrally thereunder downward in the tank B, for evaporating the oil as set forth.

No. 3228. WILLIAM SHARP, Portland, Me., U.S., 27th March, 1874, for 15 years: "Improvements in Preparing and Preserving Fish." (Perfectionnements dans la conservation du poisson.)

Claim.—1st. The process of preparing and preserving fish as an article of food, by smoking and subsequently canning and boiling them in the cans as described, 2nd. The improved article of manufacture obtained, by first smoking the fish and subsequently canning and boiling them in the cans as set forth.