with feet I; 3rd. The arrangement of the perforated pipe G, within the vat D, opposite to the outlets E, F, in combination with the funnel K; 4th. The combination of the frame A, having legs B, vat D, and pan C.

No. 5207. ALBERT H. WATKINS, Wellesley, Norfolk, Mass., U. S., 25th September, 1875, for 5 years: "Vapour Burner." (Bec à gaz.)

Claim. — 1st. The combination and arrangement of the straddling tubes D, D, for supplementary jets with the tube, through which naphtha passes to the burner tube; 2nd. The combination of the shield H, burner tube B, with the gas chamber F, provided with the straddling tubes D, D.

No. 5208. HENRY C. MOODY, Oswego, N. Y., U. S., 28th September, 1875, for 5 years: "Improvements on Children's Carriages." (Perfectionnements aux voitures d'enfants.)

Claim.—The curtains B, B, subdivided vertically, the top secured to the front bow of the carriage, the outer edge running on wires or cords C, attached to the sides whereby the curtain can be raised or drawn laterally and secured by ribbons D, E.

No. 5209. DANIEL GURNSEY, Watertown, N. Y., U. S., 28th September, 1875, for 10 years: "Improvements on Milk Coolers." (Perfectionnements aux rafraichissoirs à lait.)

Claim.—1st. In milk coolers, the water tank or vat, provided with a bottom tube or tubes connecting the entrance chamber of the water with any lateral issuing channel at the central part or parts of the vat for distributing the cool water simultaneously over separate sections of the same; 2nd. The end channel *f*, of the vat provided with aperture *g*1, for conveying water of section as plied from the central issuing channels to exit aperture.

No. 4210. VERPLANCK COLVIN, Albany, N. Y., U. S., 28th September, 1875, for 5 years: "Portable Boats." (Bateaux portatifs.)

Claim.—The blocks A, A, B, B, and prow pieces C,C in combination with a removable and collapsible skin or cover, provided with thongs or their equivalents by which it may be attached to the frame.

No. 5211. ALVARO G. RYKERT, Attica, N. Y., U. S., 28th September, 1875, for 5 years: "Carriage Painter's Jack." (Chèvre de peintre de voitures.)

Claim.—The platform C, constructed in one piece with the pivot pin *c*, the arms *f*, *f*, provided with lugs or teeth *e*, *e*, and arms *f*1, *f*1, having a slot *g*, adjustable jaw *h* and eccentric lever *i*, all in combination with the socketed sector-wheel B, upright A, spring catch *a*, *b*, and set screw *d*.

No. 5212. GEORGE H. JONES, Rose, N. Y., U. S., 28th September, 1875, for 5 years: "Improvements in Turbine Water Wheels." (Perfectionnements aux turbines hydrauliques.)

Claim.—1st. The water-wheel provided with the buckets having increased depth downward from the concave face of the same; 2nd. The water-wheel bucket provided with a raised dividing edge, 3rd The combination with a suitable gate of the seat extended in such a manner as will allow the different sized compartments or chambers to be used separately or both simultaneously by the use of a single gate. 4th. The combination with a water-wheel of a syphon draft to be arranged above the same and connected thereto in a manner that will admit of adjustment; 5th. The sliding gate provided with adjustable bearings and other devices by which a portion of the friction of the gate upon its bearing surfaces is converted from sliding into rolling friction.

No. 5213. JOSEPH W. REED (Assignee of M. Van B. Osborn), Kalamazoo, Mich., U. S., 28th September, 1875, for 5 years: "Improvements on Lubricators." (Perfectionnements aux graisseurs.)

Claim.—1st. The combination with the pipe H, I, globe J, and hollow plug K, having supply and discharge orifices of the air openings P, Q; 2nd. The combination with the case A, of the concentric lining C, and intermediate non-heat conducting substance; 3rd. The combination of the pipe K, extending up in the reservoir with the vent P, of the plug K, 4th. The combination of valve T, with plug K, and passage I; 5th. The combination of waste pipe U, with the valve T, and plug K. 6th. The combination of one or more interchangeable plugs V, of different sizes with the hollow plug K.

No. 5214. SAMUEL WILLIAMS and GEORGE S. BRYANT, Boston, Mass., U. S., 28th September, 1875, for 5 years: "Mitring Machine." (Machine à onglet.)

Claim.—1st The combination of the lever E, and double edged knife F, with the table or bed A, the post B, and the two abutments C, C'; 2nd. The combination of the lever E, and double edged knife F with the table or bed A, the post B, the two abutments C, C', and the guides D, D'.

No. 5215. CHARLES L. HOLLAND, Ipswich, Mass., U. S., 28th September, 1875, for 5 years: "Lock-nut." (Noix de sûreté.)

Claim.—In combination with a serrated surface *e*, of the bolt *d*, elastic washer *g*, and serrated nut *f*, or their equivalents.

No. 5216. ROSWELL H. ST. JOHN, Springfield, Mass., U. S., 28th September, 1875, for 5 years: "Sewing Machine." (Machine à coudre.)

Claim.—1st. A take up operated independently of the needle bar; 2nd. The loose cam collar E, with recess *u*, the stop screw *v*, and the gravitating slide J, in combination with the take up arm T; 3rd. The combination of the horizontally divided cross head G, the horizontally divided crank wrist slide *x*, and the adjusting screw *w*, for taking up the wear of the parts; 4th The ball headed screw Q applied to the feed and shuttle driver R, for coupling said driver to the transmitting lever J, and regulating the throw of the shuttle; 5th. The raw hide strip or strips *a*, to reduce friction, wear and noise within the shuttle race; 6th. A shuttle race constructed with dust grooves or depressions; 7th. A shuttle sewing machine adapted to sew in one and the same direction while the shaft is rotated in either direction.

No. 5217. JAMES S. BOGLE, Springfield, Mass., U. S., 28th September, 1875, for 5 years: "Seeding Machine." (Machine à semer.)

Claim.—1st. In combination with a series of flanged distributing wheels, a series of gauges attached directly and rigidly to a rock shaft whereby said gauges are simultaneously operated between the inner periphery of said flanges and the driving shaft for the purpose of gauging the size of the measuring channel; 2nd The rock shaft F, in rear of the distributing wheel 3rd The adjustable gauge I, pivoted in rear of the driving shaft its forward end operating behind a stationary flange on the casing plate; 4th. The gauge E, provided with slotted or open ends whereby it may be attached to or removed from the rock shaft F at will without removing the shaft or displacing any of the remaining gauges; 5th. The enlarged run or reservoir on the seed cup conforming at its lower end to the movement of the gauge E, whereby the heel *e*3, of said gauge under its various adjustments is kept flush with the curved edge of said enlarged seed run, thus preventing the grain from crowding in the measuring channel; 6th. The gauge formed as described whereby the form of measuring channel between said gauge and the inner periphery of the flange of the distributor wheel will remain the same under the various adjustments of the said gauge, 7th. The distributor casing provided with the opening in the flange *e*1, to permit the displacement of dirt or other obstructing material that may accumulate on top of the gauge; 8th. The distributor casing provided with the open shaft bearing C3, for the rock shaft E, permitting the removal or adjustment of the distributors without displacing said shaft; 9th. The spring G4, in combination with the governing arm G, and pinion I; 10th. The indicator plate K, and spring J, in combination with the shaft I, pinion I' governing arm G, and spring G4, for adjusting the gauges, 11th. The pendent slotted bracket H, provided with a bearing for the rock shaft I, in combination with the arm G.

No. 5218. HERRENSTEIN COURTEILLE, New York, U. S., 28th September, 1875, for 5 years: "Improvements on the Manufacture of Blasting Powder." (Perfectionnements dans la fabrication de la poudre à mine.)

Claim.—1st. The combination with peat, charcoal and hard coal, of sulphates of metal, 2nd. The combination with nitrate of soda or saltpetre sulphur and charcoal, of peat, hard coal, sulphates of metal, and oils or fats; 3rd. The process of manufacturing powder by compounding under treatment of direct and externally applied steam of metallic sulphates, peat, charcoal and oils or fats with saltpetre and sulphur, in the manner and in the proportions set forth, whereby the product is made complete while under treatment in mass.

No. 5219. HORACE S. WOLF, South Bend, Ind., U. S., 2nd October, 1875, for 5 years: "Process of Cleansing Gas Retorts." (Procédé de nettoyage des cornues à gaz.)

Claim.—The process of cleansing gas retorts by the use of potatoes.

No. 5220. LAURENS E. DE WARU, Philadelphia, Pa., U. S., 2nd October, 1875, for 5 years: "Improve-