

photographic sensitive paper, constructed with the body of the paper A inclosed between the sensitive films B of gelatine silver emulsion, substantially as described. 4th. In a photographic paper, two separate sensitive films of gelatine silver emulsion supported and carried upon a single sheet of paper, as herein shown and described.

### No. 22,281. Metallic Last for Boots and Shoes. (*Forme Métallique pour Chaussures.*)

Edward S. Kingston, Little Falls, and George A. Reynolds, Utica, N.Y., U.S., 22nd August, 1885; 5 years.

*Claim.*—1st. A last formed of two sections, hinged together just behind the toe, substantially as shown and described. 2nd. A last consisting of a bottom section, formed with a toe, and an upper section hinged to the bottom section just behind the toe, substantially as shown and described. 3rd. A hollow last formed of a bottom and an upper section connected at or near the toe and having open sides, substantially as shown and described. 4th. A hollow last formed of a bottom and an upper section hinged at or near the toe, and having open sides with suitable devices for holding the upper section in its raised position, substantially as shown and described. 5th. A last for boots and shoes, consisting of a bottom shell or section, a top or "fore-part" section hinged to said bottom section in rear of the toe thereof, and terminating at a point in advance of the heel part of said bottom section, and suitable means for holding the top section in a raised position so as to form an open space between the two sections, said fastening device when released allowing the last to collapse for permitting its removal from the boot or shoe, substantially as herein set forth. 6th. A boot or shoe last consisting of a bottom section having a toe and heel portion, and a top or "forepart" section extending from the toe portion of said bottom section to a point at or near the shank portion thereof, and raised above the sides of said bottom section, so as to leave an open space between the two sections, substantially as herein set forth. 7th. A hollow last formed of a bottom section A, having heel *c*, toe *b*, and side rims *c, c*, and an upper section B, hinged to the bottom at the toe, with suitable devices for holding the upper section in a raised position, substantially as described. 8th. In a hollow last, the combination of the bottom section A, with the spring *h*, substantially as and for the purpose set forth. 9th. A hollow last formed of the bottom section A, and adjustable section B, in combination with the spring *h*, substantially as shown and described. 10th. A hollow last formed of the section B, having flange *e*, and section A, having post *f*, hinged at or near the toe, with a locking device *g*, substantially as shown and described. 11th. The upper section B, formed with the flange *e*, and combined with the main body A, of the last, formed with the posts *d, f*, substantially as and for the purpose set forth. 12th. In a metallic last, a hollow bottom section having tapering sides and heel, substantially as and for the purpose set forth.

### No. 22,282. Chemical Fire Extinguisher.

(*Extincteur d'Incendie Chimique*)

George A. Lindgren, Morgan H. Weir, Franklin R. Carson, Charles S. McClung and Ellsworth E. Weir, Laporte, Ind., U.S., 22nd August, 1885; 5 years.

*Claim.*—1st. A fire extinguisher, consisting of the usual strong vessel or receiver, having controllable outlet and containing a charge of ammonium gas therein under pressure, substantially as described. 2nd. A fire extinguisher, consisting of the usual strong vessel or receiver, having controllable outlet and containing a charge of ammonium gas in liquified or anti-freezing solution therein, said gas serving as the impelling motor to deliver the charge on to the fire, substantially as described.

### No. 22,283. Sad Iron. (*Fer à Repasser.*)

James R. Berner, Sharbot Lake, and Daniel E. Rose, Tamworth, Ont., 22nd August, 1885; 5 years.

*Claim.*—1st. The shell A, having longitudinal slots E, F, in the sides, as set forth. 2nd. The shell A, provided with a door D at one side and having a lamp within, hung by its ends to gravitate, as set forth. 3rd. In combination with the shell A, a lamp hung pivotally therein and packed with an absorbent material. 4th. In combination with the shell A, the drop handle C, having guides L at the terminations to precede the point of the iron, for following creases, etc.

### No. 22,284. Sulky Plough. (*Charrue à Siège.*)

Isaac B. McLean, Lucan, Ont., 24th August, 1885; 5 years.

*Claim.*—1st. In a sulky plough the attachment for raising and lowering consisting of ratchet A, bar C, lever F, G, chain or rod I, arm K, short bar L, dog M, rod N and spring R, combined and operating substantially as shown and specified. 2nd. A sulky plough having the mould-board and land-side placed in front of the wheels, to insure the furrow-wheel following accurately in the furrow, substantially as specified.

### No. 22,285. Screw Cutting Tool-Holder.

(*Porte Outil à Fileter les Vis.*)

Edward F. Noyes, Hamilton, Ont., 24th August, 1885; 5 years.

*Claim.*—1st. In a tool-holder for cutting outside screw-threads secured to the tool-post of a lathe, the combination of the shanks or bar A, with the movable tool-box C, pivoted to said shank or bar, and holding the tool D, for cutting outside screw-threads, substantially as described. 2nd. In a tool-holder for cutting inside screw-threads secured to the tool-post of a lathe, the combination of the shank or bar A, with the movable tool-box J, pivoted to said shank or bar, and holding tool *e*, for cutting in side screw-threads substantially as described. 3rd. In a tool-holder for cutting screw-threads, the combination of the movable tool-box J, shank A, bushing *d*, screw N and tool *e*, substantially as and for the purposes specified. 4th. In a tool-holder for cutting screw-threads, the combina-

tion of the collar O, set screw P, tool-box J, shank A and tool *e*, substantially as specified. 5th. In a tool-holder, for cutting inside and outside screw-threads, the combination of the movable tool-boxes J, C, pivoted at each end of the bar A respectively, and the cutting tools D, *e*, an arranged and constructed substantially as and for the purposes specified. 6th. In a tool-holder, the set screw R, in combination with the tool-box J, and shank or bar A, to alter the tool-holder to all ordinary lathe tool-holder, as specified. 7th. In a tool-holder, the pin Q, in combination with the tool-box C, and shank or bar A, to render it a fixed tool-holder, substantially as specified.

### No. 22,286. Apparatus for Generating Electricity, in part Applicable to other purposes. (*Appareil pour Produire l'Électricité, et partie applicable à d'autres fins.*)

The Honorable Charles A. Parson, Gateshead-on-Tyne, Eng., 24th August, 1885; 5 years.

*Claim.*—1st. An electric generator having its shaft or axis supported in bearings constructed to allow of slight lateral play resisted by frictional and elastic pressure, substantially in the manner hereinabove described. 2nd. In an electric generator for feeding lubricants to the bearings thereof, a screw or centrifugal pump mounted on the axis of the generator, and acting in conjunction with a fan (also mounted on the same axis) for raising the lubricant to the pump, substantially as described. 3rd. The construction and arrangement, for carrying away heat generated in the armature of the electric generator, of the hollow axis affording a passage for lubricating or other liquid, the screw pump which forces the said liquid through the axis, and the fan which raises the liquid to the pump, substantially as described. 4th. A combined machine comprising an electric generator, a rotary motor on same axis with blades that rotate in a cylinder or case also furnished with blades, and means for lubricating and cooling the bearings, so that the machines is able to be run at a high speed, substantially as described. 5th. A combined machine comprising an electric generator, and a motor having a hollow cylinder or hollow cylinders furnished with projecting rings of blades, and within it, or them, a rotary cylinder or rotary cylinders with projecting rings of blades upon which motive fluid is caused to act as it travels in directions parallel, or approximately parallel, to the axis of the rotary cylinder, the rotary ports of the generator and the motor being mounted upon a common axis formed in one or more parts, substantially as described. 6th. A combined machine comprising an electric generator, a motor having a hollow cylinder or hollow cylinders, furnished with projecting rings of blades, and within it, or them, a rotary cylinder or rotary cylinders with projecting rings of blades, a common axis on which the armature and rotary cylinder or cylinders are mounted, and bearing having a slight lateral play or elasticity combined with frictional resistance to play in such a manner as to enable the rotary portion or portions to rotate on its or their center of gravity or principal axis instead of on its or their geometrical center or axis (if the centre of gravity and geometrical centre be nearly coincident) and to cause the vibration to which the same may be subjected to be damped or modified, substantially as described. 7th. A combined machine comprising an electric generator, a motor having a hollow cylinder or hollow cylinders furnished with projecting rings of blades, and within it, or them, a rotary cylinder or rotary cylinders with projecting rings of blades, a common axis on which the armature and the rotary cylinders or cylinders are mounted, and elastic bearings, each comprising a bush and friction rings or washers pressed tightly together by a spring or springs, in such manner that the bush is capable of slight lateral movement resisted and controlled by the friction rings or washers, as described and illustrated. 8th. A combined machine comprising an electric generator, a motor having a hollow cylinder or cylinders furnished with projecting rings of blades, and within it, or them, a rotary cylinder or rotary cylinders with projecting rings of blades, a common axis on which the armature and the rotary cylinder or cylinders are mounted, and a centrifugal or screw pump mounted directly on the motor shaft, for forcing lubricant or cooling fluid to the parts of the motor and the generator requiring to be lubricated or cooled, substantially as described. 9th. A combined machine comprising an electric generator, a motor having a hollow cylinder or cylinders, furnished with projecting rings of blades, and within it, or them, a rotary cylinder or cylinders with projecting rings of blades, a common axis on which the armature and the rotary cylinder or cylinders are mounted, a centrifugal or screw pump to circulate lubricant or cooling fluid to the motor and the generator and a suction fan to raise the level of such lubricant or cooling fluid in the return or suction pipe or chamber, and enable the circulating pump to start and keep in action, substantially as described. 10th. In a motor of the kind described, a piston and valve for increasing (in case of accident) the exhausting effect of the fan that is in connection with the diaphragm or piston of the regulator, substantially as described. 11th. The combination, with an electric generator and a motor, of an apparatus regulating the speed of the motor in such a way that the generator produces a constant current or a constant electro-motive force, and comprising a needle-bar or armature subject to, and actuated by the influence of the field magnets, a valve cock or shield connected to the said needle-bar or armature, and serving to vary the size of an air inlet, a diaphragm connected to the throttle or regulating valve of the motor, a fan to exhaust air from one side of the diaphragm, and an inlet to admit air thereto, the whole substantially as described and for the purpose specified. 12th. The combination, with an electric generator and a motor, of an apparatus regulating the speed of the motor and comprising a needle-bar or armature subject to, and actuated by the influence of the field magnets, a valve, cock or shield connected to the said needle-bar or armature, and serving to vary the size of an air inlet, a diaphragm connected to the throttle or regulating valve of the motor, a fan to exhaust air from one side of the diaphragm, an inlet to admit air thereto, and a valve and piston to increase the exhaustive effect of the fan upon the diaphragm in case of accident, substantially as described and for the purpose specified. 13th. In an electric generator, an armature of the drum or Siemens' type having a core formed of