

the hopper, whereby the mould, as it is shifted, shears with the lower part of the hopper; 3rd. The hopper B, plunger C, separable mould E and shifting flask D combined.

### No. 10,086. Improvements on Cheese Hoops.

(*Perfectionnements aux moules à fromage.*)

Rodney S. Whitman, David H. Burrell and Walter W. Whitman (Assignees of George L. Freeman), Little Falls, N. Y., U. S., 7th June, 1879, for 5 years.

**Claim.**—1st. The open expanding bandager, provided with hooks *c* or their equivalents, in combination with the hoop A; 2nd. The hoop A having a tapering lower body, with a part extending upward from the point *a* reversed in taper, smooth on the inside, and a bearing ring *b*; 3rd. The perforated follower D provided with an edge groove filled with packing; 4th. In the hoop A, the interchangeable devices C *e* D *g*; 5th. The hoop A, provided with bearing rings *b* and bottom B, in combination with the expanding and wedge section bandager.

### No. 10,087. Improvements on Portable Elevators.

(*Perfectionnements aux élévateurs mobiles.*)

Alvin W. Lamphere, New-York, U. S., 7th June, 1879, for 5 years.

**Claim.**—1st. An elevator, provided with and driven by engines K permanently attached to the sides of its casing; 2nd. The combination of the rods E and the guides F G, or either of them, with the endless belt C and the casing A of the elevator; 3rd. An elevator formed of the casing A, provided with the guides F G and the bails M, the rollers B, the endless carrier C provided with the rods E, the cranks or crank wheels H, the connecting rods I, the piston rods J and the steam cylinders K with each other, to adapt the elevator to be conveniently handled.

### No. 10,088. Improvements in Electric Lamps.

(*Perfectionnements aux lampes électriques.*)

William E. Sawyer, New York, and Albon Man, Brooklyn, N. Y., U. S., 10th June, 1879, for 15 years.

**Claim.**—1st. An electric lamp connected and charged in whole or in part, and supplied with suitable conductors and currents of electricity, and with burners of carbon or its equivalent, created, prepared and applied in whole or in part; 2nd. The method of preparing and creating the illuminating part of an electric lamp, consisting of electrically heating the same, while it is surrounded by a carbon gas or liquid; 3rd. The method of preparing the illuminating part of an electric lamp, consisting in, first, obtaining a solid deposit of carbon by electric action, and subsequently when the globe containing it is charged with a carbon preservative atmosphere, before the flow of such preservative atmosphere through the lamp has ceased, and before the lamp is finally sealed, heating the illuminating part by means of the electric current in order to expel impurities and occluded gases; 4th. The method of charging an electric lamp with a carbon preservative gas by intermittently passing a purified atmosphere, or an atmosphere undergoing purification, into the globe thereof, and thereby successfully diluting and purifying the contents thereof, until finally all, or nearly all, the oxygen is removed therefrom; 5th. The combination with the globe of an electric lamp containing nitrogen gas, of a cap G filled with melted beeswax or other liquid, which upon cooling hermetically seals the lamp; 6th. In an electric lamp, two tubular conductors *a*, each provided with a stop-cock; 7th. In the method of sealing a tubular conductor *a*, consisting of enclosing it with a cap *c*, filled with melted beeswax or other liquid, which upon cooling hermetically seals the joint; 8th. The cap G provided with an insulated contact J, for the purpose of establishing the electrical connection of the lamp with the terminals of the conductors leading from the generator, when the lamp is set in a suitable holder; 9th. In an electric lamp, a fluted internal conductor *x*; 10th. The internal conductors of an electric lamp, arranged fluting and insulated at their heads by slips of mica or other insulating material; 11th. The internal conductors of an electric lamp so bound together as to insure solidity of construction; 12th. The combination of the diaphragm P, the standard J, sliding bar L, spring W, and stirrup V; 13th. The combination with the carbon piece M, of the hammer K and anvil L, each provided with platinum or iridium contact points N O; 14th. The method of charging the globe of an electric lamp with nitrogen, consisting of, first, exhausting the gaseous contents of the globe and then allowing the nitrogen to flow therein; 15th. The method of charging the globe of an electric lamp with nitrogen, consisting of first replacing the original gasses or contents of the globe with hydrogen, and then replacing the hydrogen with nitrogen gas; 16th. The method of charging the globe of an electric lamp with a carbon preservative atmosphere, consisting of heating the same so as to drive out occluded gases, while the flow of the carbon preservative atmosphere through the globe continues; 17th. Two or more diaphragm disks P; 18th. An electric distributing system in which the current from a single generator, transmitted intermittently through two or more circuits, is rendered continuous in such circuits by induction apparatus energized by such intermittently transmitted current; 19th. The combination with an electric lamp lighting switch of an apparatus which operates to prevent the completion of the lamp circuit, when there is no current to energize the lamp; 20th. The combination with an electric lamp lighting switch, with an apparatus energized by the current which actuates the lamp, and that operates to prevent the opening of the lamp circuit to the flow of the current when there is no supply; 21st. The combination, with an electric lamp lighting switch, of an apparatus energized by the current, which actuates the lamp, and that operates when there is an interruption in the flow of the current, to close the circuit of the lamp against a sudden recurrence of such flow; 22nd. The combination with an electric lamp of a switching apparatus which, after an interruption of the flow of the current, operates to introduce a resistance into the circuit of such switching apparatus and the lamp, before the lamp can be lighted; 23rd. The combination with an electric lamp of a switching apparatus which, after an interruption of the flow of the current, operates to cut the lamp out of the circuit of such switching apparatus before it can be lighted; 24th. The combination with an electric lamp and a lamp lighting switch, of two electrical circuits connected therewith; the switch operating to reduce the resistance of one circuit and increase the resistance of the other, in such manner that at each reduction in the resistance of one circuit there will be an increase in the resistance of the other; 25th. The combination with an electric lamp and a lamp lighting switch, of electrical circuits, so arranged that as

the resistance in the circuit of the lamps is lessened, and consequently more current caused to flow through the lamp, the resistance of an extraneous channel or channels is increased, each reduction in the resistance of the lamp circuit being accompanied by such increase in the resistance of the extraneous channel or channels, that the resistance of the main or branch circuit, which contains the circuit of the lamp and the extraneous channel or channels, is maintained at a constant quantity or nearly so; 26th. In an electric distributing system, the combination with a switch, of the electro magnet F operating to change the circuit from a branch to a main; 27th. The combination with an electric lamp and a shunt or derived circuit around the lamp, of a switch, which operates to light the lamp by increasing the resistance of the shunt or derived circuit; 28th. The combination with one or more electric lamps, of a meter or register, showing the consumption or expenditure of current in operating the same; 29th. The combination with one or more electric lamps of a meter or register, showing the time during which the said lamp or lamps are operated; 30th. A meter or register of the consumption or expenditure of current in the operation of one or more electric lamps, consisting of a dial or dials actuated by the current; 31st. A meter or register of the consumption or expenditure of current, in the operation of one or more electric lamps, apparatus actuated by the current to indicate the time during which the operation of the same continues; 32nd. A meter or register of the consumption or expenditure of current, in the operation of one or more electric lamps, mechanism set in motion by the current upon the lighting of a lamp, and stopped upon the extinguishment of the same or all the lamps; 33rd. In a meter or register of the consumption or expenditure of current, in the operation of one or more electric lamps, the combination of the two pieces O C; 34th. In a meter or register of the consumption or expenditure of current, in the operation of one or more electric lamps, the combination with primary apparatus for setting a clock-work in motion, of secondary apparatus actuated by any one or more lamps to actuate the primary apparatus; 35th. In a meter or register of the consumption or expenditure of current in the operation of one or more electric lamps, the combination with such lamp or lamps of apparatus energized by the current operating such lamp or lamps.

### No. 10,089. Process of Making Paper Pulp.

(*Procédé de fabrication de la pâte à papier.*)

John M. Allen, Marion, Mass., U. S., 13th June, 1879 (Extension of Patent No. 3569), for 5 years.

### No. 10,090. Rotary Pump. (*Pompe rotatoire.*)

Charles C. Barnes, Sackville, N. B., 13th June, 1879, (Extension of Patent No. 3559), for 5 years.

### No. 10,091. Improvements on Capstans and Windlasses. (*Perfectionnements aux cabestans aux guindeaux.*)

David N. B. Coffin, Jr., Newton, Mass., U. S., 13th June, 1879 (Extension of Patent No. 3707), for 5 years

### No. 10,092. Improvements on Screws for Imparting Motion to Machinery. (*Perfectionnements aux vis pour communiquer le mouvement aux machines.*)

David N. B. Coffin, Jr., Newton, Mass., U. S., 13th June, 1879 (Extension of Patent No. 3650), for 5 years.

### No. 10,093. Improvements in Saw-Mill Dogs. (*Perfectionnements aux clameaux des scieries.*)

Henry E. Susand, William A. Susand, Berlin, Ont., and James H. Baker, Bay City (Assignees of Thomas Craney, Bay City), Mich., U. S., 13th June, 1879 (Extension of Patent No. 4781), for 5 years.

### No. 10,094. Machine for Grinding Car Wheels. (*Machine à remanier les roues des wagons.*)

James H. Gowan, Carson, Nevada, U. S., 13th June, 1879, for 5 years.

**Claim.**—1st. The rotating, abrading wheels, or wheel provided with means for operating the same, in combination with mechanism for centering and rotating the chilled car wheels and axles, when firmly united together for the purpose of rendering the peripheries of said wheels accurately concentric with the axle bearings; 2nd. The ways E, bolted to the bed plate A, and provided with the T-shaped grooves *c*, and central guide groove *c*, in the top of the ways E between the T-grooves, in combination with the tail stock F, having tongue *d* and T headed securing bolts *d*; 3rd. The plate H, bolted to the bed plate A, provided with a plurality of transverse T-shaped grooves *g* placed at equal distances from each other, for the purpose of giving a variable adjustment to suit axles of different lengths, in combination with the abrading wheel carriers and their supporting and adjusting mechanism; 4th. The bed plate A and supplementary bed A<sub>1</sub>, in combination with the head stock B, mandrel C, spur C<sub>1</sub>, standard B<sub>1</sub>, shaft D, pinion D<sub>1</sub> and pulley D<sub>2</sub>; 5th. The abrading wheel S, mounted upon the shaft R, in combination with the bifurcated tool holder P, and its supporting and operating devices; 6th. In combination with the bed-plate A, the grooved H and base I, provided with screw studs or bolts *b*, in combination with the downward extension I<sub>1</sub> of the transverse plate J, said extension I having in its enlarged flange segmental openings K, for the purpose of giving a limited horizontally rotating movement to the tool carrier.

### No. 10,095. Improvements in Hoop Machines. (*Perfectionnements aux machines à cercles.*)

Rodney S. Whitman, David H. Burrell and Walter W. Whitman (Assignees of David H. Burrell and James Naylor, Jr.), Little Falls, N. Y., U. S., 13th June, 1879, for 5 years.

**Claim.**—1st. The emery or sand wheels for dressing the hoop while passing through machine; 2nd. The crimping shoes to twist or contort the hoop, in combination with a feeding device, for the purpose of giving to a hoop sufficient flare to fit a bliged or tapered barrel or package;