sheet-metal or other thin material, and slidingly held in a groove made in the said plate, substantially flush with the bottom of the centre panel, as and for the purpose specified. 2nd. A casket lid, having the foot and central panels made in a single piece of sheet-metal, or other thin material, fastened to the plate of the said lid, in combination with a head-panel made of sheet-metal or other thin material, and slidingly held in a groove made in the said plate, substantially flush with the bottom of the centre panel, and of a glass slidingly held in a groove made in the plate parallel with the groove carrying the head panel, substantially as and for the purpose specified. 3rd. A casket lid, having a sliding panel and a sliding glass in different horizontal planes, in combination with a catch having a substantially vertical portion, adapted to engage the end of both said panel and glass for holding the two closed, substantially as and for the purpose specified.

No. 32,268. Electrical Measuring Instrument. (*Instrument de mesurage de l'électricité.*)

The Thomson-Houston International Electric Company, Boston (assignee of Elihu Thomson, Lynn), Mass., U. S., 16th September, 1889; 5 years.

Claim.—1st. The combination, with an electric conductor, carrying an electric current, and a mass of iron adapted to forming a partial magnetic circuit around the same, and movable in the general longitudinal direction of the conductor to positions where it will gradually effect a change in the degree of closure of the magnetic field around the conductor, as and for the purpose described. 2nd. The conductor C, having its mass at the outer or open side of the armature modified or varied, as and for the purpose described. 3rd. The combination, with an electric conductor or a U-shaped armature, or its equivalent, as described, movable in the general longitudinal direction of the conductor, as described, to positions where it may effect a variable closure of the magnetic circuit around the conductor, as set forth. 4th. The combination of a conductor and an armature, which partially embraces and encloses the magnetic circuit around the conductor, or said conductor or armature, one or both being movable with relation to one another in the general direction of the axis of the conductor, as and for the purpose described. 5th. The combination, substantially as described, of an electric conductor and a U-shaped armature partially surrounding the conductor, and mounted, as described, so as to be movable over the conductor in the general direction of the axis of the same. 6th. The combination, with the electric conductor, of a mass of iron partly encircling the same, said conductor and mass of iron being movable with relation to one another, as described, in the general direction of the conductor's longitudinal axis at a slight angle, so that the conductor may be gradually included more and more within the iron, as and for the purpose described. 7th. The combination, as described, of a curved conductor and a pivoted armature partly encircling the same, and having a line of swing, whose curve is eccentric to the curve of the conductor, as and for the purpose described. 8th. The combination, with the two conductors C, of the two armatures partly encircling the same, and mounted on a common support in proper manner to balance one another. 9th. The combination, with the curved conductor C, of the index and connected armature forming an iron mass partially surrounding the conductor, and mounted on a pivot eccentric to the curved conductor, as and for the purpose described. 10th. The conductor C, having its mass near the open side of the armature, or just in advance of the same, reduced or contracted, as and for the purpose described. 11th. The conductor C, having on its outer side a web of varying depth, in combination with the armature whose magnetic circuit is closed across or around said web. 12th. The combination, with an electro responsive device, of the incandescent lamp or lamps placed in circuit therewith, as an artificial resistance and run at a low degree of incandescence, as and for the purpose described.

No. 32,269. Feed Mechanism for Chain Link Machines. (*Mécanisme d'alimentation pour les machines à maillons de chaînes.*)

James D. Storie, Oshawa, Ont., 16th September, 1889; 5 years.

Claim.—1st. The combination, with the hopper A and elevator B, having fingers or hooks thereupon, of the well or chamber A^1 having a slotted front through which said fingers project, for the purpose described. 2nd. The combination, with the hopper A and elevator B having fingers or hooks thereupon, of the well or chamber A^1 adjustable horizontally and having a slotted front, substantially as and for the purpose specified. 3rd. The combination, with the frame and an elevator having hooks or fingers for carrying drive chain links, of a brush adapted to adjust the links upon said hooks, substantially as and for the purpose specified. 4th. The combination, with the elevator having hooks or fingers for carrying drive-chain links, of a comb arranged at the upper end of said elevator, and adapted to remove such links from said hooks or fingers, substantially as and for the purpose set forth. 5th. The combination with the elevator B, having fingers or hooks b, b, of the comb b^5, chute b^6, and a trough or receptacle for the links, substantially as set forth. 6th. In a drive-chain link feeding machine, the combination, with a feeding chute, of the trough C constructed with adjustable bevelled blocks c, c, and adjustable sloping inner walls c^2, c^2, substantially as and for the purpose described. 7th. In a drive-chain link feeding machine, the combination, with a way along which the links travel, of means for raking or pushing said links forward towards the point of delivery. 8th. In a drive-chain link feeding machine, the combination, with a guiding way or track along which the links travel, of a reciprocating bar carrying pivoted raking or pushing bars, or teeth, adapted to engage with the links, for the purpose specified. 9th. The combination, with the trough C, of the reciprocating rakers C^1, substantially as and for the purpose specified. 10th. The combination, with the rails D^1, D^2, of the reciprocating rakers E, substantially as and for the purpose specified. 11th. In a drive-chain link feeding machine, the combination, with a rail adapted to be embraced or straddled by the hook portions of the links, and with means for causing said links to move upon said rail, of means for lubricating the rail, whereby the interior of the locking knuckles or hooks may also be lubricated, substantially in the manner set forth. 12th. In a drive-chain link feeding machine, the combination with the track or way along which the links travel, of a device for scraping and cleaning the insides of the hooks, substantially described. 13th. The combination, with the track upon which the links travel, of the comb W, for the purpose set forth. 14th. The combination, with a rail for conveying the links, of the hollow raker-bar E^1, hollow perforated pivots e and hollow rakers E, whereby a lubricant is conveyed from the raker-bar to the rail, substantially as and for the purpose described. 15th. In a drive-chain link feeding machine, the combination, with a rail for conveying the links and raker for moving same thereon, of the friction plate d^5, for the purpose described. 16th. In a drive-chain link feeding machine, the combination, with a guide-way, in which the links travel with their heads uppermost, of two rails diverging from said guide-way, and adapted to catch the links, whose hooks are turned towards them, substantially as and for the purpose specified. 17th. In a drive-chain link feeding machine, the combination, with a guide-way, in which the links travel with their heads uppermost, of two rails diverging from said guide-way, and adapted to catch the links whose hooks are turned towards them, and right and left twisted spouts arranged to turn two series of links and deliver them through a single spout, with their hooks turned all in the same direction, substantially as and for the purpose specified 18th. In a drive-chain link feeding machine, the combination, with a delivery spout or conductor, of an overflow device whereby surplus links will be thrown out and only a regulated quantity delivered at the end of the spout, substantially as and for the purpose specified. 19th. The combination, with the double twist spouts D^5, D^6, of the single spout G having the overflow opening g^1, for the purpose specified. 20th. In a spout or chute for delivering links having a device for stopping its outlet end, the overflow opening g^1, for the purpose described. 21st. In combination with the spout G having an overflow opening, the hopper G^1, and return spout g^2, for the purpose described. 22nd. In combination with a guide-way for drive-chain links, the shield d for throwing out misplaced links, arranged substantially as described. 23rd. The combination, with the guide-way D, and shield d, of the hopper d^1, and return spout d^2, for the purpose described. 24th. The combination, with the rails for delivering and spouts for receiving the links, of the strikers K, K^1, and means for operating same, substantially as and for the purpose described. 25th. The combination, with the strikers K, K^1, operated as described, the pivoted lever K^2, and driving shaft L of the cam l, substantially as and for the purpose set forth. 26th. In a drive-chain link feeding machine, the combination, with the rakers, and means for driving same, of a spring adapted to compensate for the movement of said rakers, when the latter are held stationary from any accidental cause, substantially in the manner described. 27th. The combination, with the raker-bar E^1, and rakers connected thereto, and with the rod N, and means for working same, of the coiled spring n, substantially as and for the purpose specified. 28th. The combination, with the driving shaft L having a crank wheel or disc thereon, rod P, lever O having a pawl shaft b^4 having a ratchet thereon, elevator B, and shaft b^3, all combined substantially as and for the purpose described. 29th. The combination of the raker-bar C^2 carrying rakers and having the fork q^1, of the pivoted bridle q, rod Q, and lever O, operated as described, all substantially as and for the purpose described. 30th. The combination, with the rails D^1, D^2, of the knife edges d^3, d^4, for the purpose set forth. 31st. The oilpan F, in combination with the rails D^1, D^2, rakers E, and hollow raker-bar E^1, as described.

No. 32,270. Hoof Trimmer. (*Paroir de maréchal.*)

Giles Bowler, Dundalk, Ont., 16th September, 1889; 5 years.

Claim.—A hoof-trimmer composed of the legs A, B, connected together like an ordinary pair of tongs, the end of the leg A being sharpened while the end of the leg B has a flange b formed on it, substantially as shown and described.

No. 32,271. Gas Burner. (*Bec à gaz.*)

Alfred P. Jacob, Patterson, N.J., U.S., 16th September, 1889; 5 years.

Claim.—1st. The combination of a main gas burner, with an auxiliary burner opening therefrom, a short inverted cup-shaped valve loosely held entirely within said main burner, and free to move vertically therein, and passages to the main and auxiliary burners controlled by said valve, so that when the one is opened the other is closed. 2nd. The combination of a main gas burner, with an auxiliary burner opening therefrom, a cylindrical chest held in said main burner, and provided with passages leading respectively to the main and auxiliary burners, and a sliding valve loosely supported in said cylindrical chest normally open to the passage leading to the main burner. 3rd. The combination of a main gas burner, with an auxiliary burner opening therefrom, a removable cylindrical chest held in said main burner and provided with passages leading respectively to the main auxiliary burners, and a sliding valve loosely supported in said cylindrical chest, normally open to the passage leading to the auxiliary burner and closed to that leading to the main burner. 4th. A gas burner, consisting of a main burner, in combination with an auxiliary burner opening therefrom, and a valve operated by the pressure of the gas, consisting of a vertically-movable inverted cup, and a cylindrical piece within which said cup is supported, and upon the sides of which it is guided, located within the main burner, and provided with openings respectively to said main and auxiliary burners, said openings to the main burner being normally closed, and the opening to the auxiliary burner being normally open. 5th. A gas burner consisting of a main burner, in combination with an auxiliary burner opening therefrom, and a valve operated by the pressure of the gas, consisting of a vertically movable inverted cup, and a cylin-