car, the combination, with a series of stalls and a passageway, a hay rack or series of racks E hinged at the bottom to the partition, substantially as and for the purpose set forth. 13th. In combination with a series of stalls, a passage way D, and a hay rack E, provided with a swinging front section, and a feed trough F attached to the swinging front section of the rack, substantially as and for the purpose set forth.

No. 34,251. System and Means to be used in the Supply or Distribution of Electricity for Lighting or other Purposes. (*Système et moyens d'alimentation ou de distribution de l'électricité pour l'éclairage et autres fins*)

Henry Edmunds, London, Eng., 5th May. 1890; 5 years.

Claim.—1st. The method of utilizing secondary or storage batteries in installations for electric lighting or other purposes, employing a main or charging circuit and local or working circuits at different stations, said method consisting in arranging the batteries at each station in groups or sets, and transferring each group or set in turn from the working circuit, into the charging circuit for short periods of time, without short circuiting the batteries or breaking the charging or working circuits, so that all but one of the groups or sets are in the working circuit at any instant of time, substantially as described. 2nd. In an installation or system, employing secondary batteries, a charging circuit, and local or discharging circuits at each station, the method of charging and discharging said batteries by arranging them in equal groups or sets, having separate terminals, transferring a group or set to the charging-main for a short period of time, then connecting a resistance in a parallel branch of the charging main, disconnecting the group or set of batteries from the main, and connecting it in a branch of the working circuit in multiple arc with another group or set of batteries, disconnecting the latter from the working circuit, and connecting it in the branch of the charging circuit in multiple arc with said resistance, disconnecting the resistance so that the entire charging current passes through said batteries, and performing the same operation with each group or set of batteries in rotation at short and regular intervals of time, substantially in the manner and for the purposes set forth. 3rd. In a system of electrical distribution, the combination of a closed main charging circuit, a local working circuit, two or more groups of secondary batteries, positive and negative terminal contacts for each set of batteries, switch levers, one for each group of batteries, contact plates on each lever for connecting with all the battery terminals, and means for vibrating said levers so as to transfer each set or group of batteries from one circuit to the other in regular order, substantially as described. 4th. The combination of a closed charging circuit, a working circuit, two or more groups of secondary batteries, a branch circuit, including a resistance approximately equal to that of each set of batteries, terminal contact strips for the several sets of batteries, switch mechanism—such as a series of switch levers—for transferring the several sets of batteries from one circuit to the other, and timing mechanism controlling said switch mechanism, and also controlling contacts in the circuit of said resistance, whereby the latter is included in the main when there is no battery therein, substantially as described. 5th. In a system of electrical distribution, the combination, with the main circuit, the working circuit, and two or more groups of batteries adapted to be included in either circuit, of a series of switches for transferring said sets of batteries from one circuit to another, continuously operating timing mechanism for operating said switches at stated intervals, a resistance and circuit connections, also controlled by said timing mechanism for including said resistance in a branch of the main circuit in parallel with each set or group of batteries, in the act of transferring the same from one circuit to the other, substantially as described. 6th. The combination, with the main circuit, working circuit, and batteries, of switch mechanism for including the batteries at regular intervals in the working circuit, a shaft rotating at a uniform rate and controlling said switch mechanism, a registering device, an electro-magnet in the charging main, and connections between said registering device, and said shaft controlled by said magnet, so that the duration of charge of the normal current is registered, substantially as described. 7th. The combination, with the rotating shaft for operating a circuit changer, and timing mechanism controlling said shaft, registering device, an electro-magnet, and gearing for operating said registering device connected with the armature of said magnet, so as to be thereby thrown into and out of engagement with said shaft, substantially as described. 8th. In a system of electrical distribution, the combination, with the main charging circuit, a local or working circuit, and secondary batteries, of a switch or circuit changer comprising a core, a coil included in the main circuit, and another coil included in a normally open branch of the local circuit, and means for closing said branch circuit when the voltage of the working circuit falls to a certain limit, thereby operating the switch or circuit changer and putting the batteries into charge, substantially as described. 9th. In a system of electrical distribution, the combination, with the secondary batteries, the main circuit, and the working circuit, of a switch or circuit changer comprising a magnet, having a coil in the main circuit, whereby the said circuit is diverted from the batteries, and another coil connected with the local circuit whereby the energy of the first coil can be neutralized or confirmed by a current of the proper direction, substantially as and for the purpose described. 10th. In a system of electrical distribution, the combination, with a main and local circuits and secondary batteries for supplying the latter, of an electro-magnet switch controlling the path of the main circuit to the batteries, a voltage regulator comprising a magnet in the local circuit, or a branch thereof, and contacts carried by the armature of said magnet for opening and closing the circuit of said switch magnet, and putting the batteries to line upon a fall of voltage in the local, substantially as described. 11th. In a system of electrical distribution, the combination, with a main circuit, a local circuit, and secondary batteries for supplying the latter, of a polarized switch controlling the main circuit to the batteries, and comprising a magnet having a coil in the main circuit and another coil in the local, and a voltage regulator whose magnet is in the local or a branch thereof, and whose armature controls the circuit of the last named coil of the polarized switch, substantially as described. 12th. In a system of electrical distribution, the combination, with the main circuit, the local circuit and secondary batteries for supplying the latter, of a switch controlling the main line and having a coil included therein, a local branch including another coil of said switch magnet, and a local control magnet in the local supply circuit adapted upon the passage of a certain current to close said local branch and so operate the polarized switch without disturbing the local supply circuit, and upon the passage of a still greater current to open or regulate said local circuit while the batteries are being replenished, substantially as described. 13th. In a system of electrical distribution, the combination, with the main circuit, the local circuit, and secondary batteries for supplying the latter, of means for providing a path for the main line around the local installation in case of breakage of the main therein, or failure of supply, and for preventing short circuiting or back discharge from the batteries, said means comprising a magnet included in the main line, and whose armature is adapted, upon failure of energy in said magnet, to close a shunt around the local installation, and a switch magnet, having a coil included in a branch of said local circuit, substantially as described. 14th. The combination, with a shaft and motor for driving the same, of the drum on said shaft provided with perforated partitions and partly filled with liquid, an electro-magnet, an armature therefor, and a circuit closer operated by the rotation of said drum to close the circuit of said magnet, substantially as described. 15th. The combination, with a shaft and motor (such as a spring or weight) for driving the same, of a time drum divided into compartments by perforated partitions, a solenoid in an electric circuit, a circuit closer therefor operated periodically by the rotation of said drum, an armature for said magnet, and connections between said armature and motor, whereby the latter is wound up by the motions of the former, substantially as described. 16th. The combination of an electro-magnet, and its armature, a circuit including said magnet, a shaft carrying a regulating time drum, and driven by a suitable motor, a tilting lever carrying contacts for closing said circuit, a rod controlled by a device on said shaft for actuating said lever to close said circuit, thereby causing said magnet to attract its armature, and another rod connected with said armature for actuating said tilting lever to break said circuit when the armature is attracted, substantially as described.

No. 34,252. Cuff Holder. (*Agrafe-poignet.*)

Andrew H. Eldridge and John Vaeth, Syracuse, N.Y., U.S., 5th May, 1890; 5 years.

Claim.—1st. In a cuff holder, in combination, an elongated metallic plate provided with a cuff-engaging hook at its forward end, a fastening pin at its opposite end, intermediate side pieces having a transverse pivot pin connected thereto, and on which is pivoted a spring actuated upper plate, constructed with a finger projection at its rear end, a cuff impinging projection at its forward end, and an intermediate securing pin rising from the plate body, substantially as described. 2nd. A cuff holder, consisting of an elongated lower plate, comprising a body portion provided with a vertical engaging hook at its forward end, a transversely mounted safety fastening pin at its opposite rear end, intermediate side pieces having a pivot pin transversely inserted through them, and a central longitudinal corrugation in the plate body, an elongated upper plate pivotally secured by perforated side ears upon the pivot pin and lying above the lower plate longitudinally therewith, and comprising a body portion terminating with a finger projection at its rear end, downward side projections at its forward end adjacent to the vertical engaging hook of the lower plate, an intermediate horizontal securing pin rising from the upper plate body longitudinally therewith, and its pointed end extending forwardly, a central longitudinal corrugation in the plate body, and a coil spring upon the pivot pin adapted to bear against the upper and lower plates, all combined and operated together, substantially as described and for the purposes specified.

No. 34,253. Spring Tooth for Harrows. (*Dent élastique de herse.*)

The Gale Sulky Harrow Manufacturing Company, Detroit, (assignee of Philip F. Wells, Milford,) Mich., U.S., 5th May, 1890; 5 years.

Claim.—A spring tooth, consisting of the body A, point B, having flanges b, b^1, and bolt C for securing the point to the body, substantially as described.

No. 34,254. Seat. (*Banc.*)

Samuel H. Tupper, Truro, N.S., (assignee of George M. Thompson, Somerville, Mass., U.S.,) 5th May, 1890; 5 years.

Claim.—1st. The combination of the standard or support B, pivotally connected to sole plate A and lug C projecting down from seat, and swinging stay E, pivoted to B, and having pin working in curved slot C^1 in C, all as and for the purposes described. 2nd. In a turn over stool, the combination of the following elements:—a plate secured to the floor, and having a ridge upon it, a bar or support forked at both ends and pivoted at bottom to said ridge, the seat, a lug projecting downward from such seat and with curved slot formed in same, a swinging stay pivoted to such support, and having pin sliding in such slot, a rod connected at its lower end with main support, and toggles pivoted to upper end of same, and to support and stay, all as herein set forth, and for the purposes set forth.

No. 34,255. Car Door Lock and Seal. (*Serrure scellée de porte de char.*)

Charles J. Smith, St. Croix, and Evan Q. Thomas, Eau Claire, Wis., U.S., 5th May, 1890; 5 years.

Claim.—1st. The combination in a combined lock and seal for car doors, of the housing adapted to receive the sealing strip, a pivoted