

tubes A, the hinge wire C, the circularly bent wire E, the latch F and the locking rod H. 6th. The combination, with the lamp B, of the hinged tubes A, carrying the globe G and having their lower ends a cut off on a bevel to fit short bevelled projecting tubes b of the lamp B. 7th. The combination, with the globe G, hinged wire C and plate M, of the spiral springs X connecting said plate M and wire C. 8th. The combination, with the tubes A, of the swinging globe supporting plate M and the springs X.

No. 16,062. Improvements in Dynamo-Electric Machines. (*Perfectionnements aux machines Electro-Dynamiques.*)

Lord Elphinstone, Musselburgh, Scotland, and Charles W. Vincent, London, Eng., 3rd January, 1883; for 15 years.

Claim.—1st. Electrical connection with the source of the exciting current for the field magnets of a dynamo electric machine, a grouping tablet, or its equivalent, in which the coils of the several field magnets have their terminals, such terminals being so arranged as to permit of their being connected singly with the source of supply, or coupled up in series, or groups for the purpose of adjusting the resistance of the field magnets to suit the work in hand. 2nd. A field or fields composed of separate magnets, or magnets wound with distinct wires, for the purpose of enabling the exciting current to be passed around such magnets, singly or in groups, directly from a common source.

No. 16,063. Improvements on Car-Couplings and Draw-Bars. (*Perfectionnements aux accouplages des chars et aux barres de traction.*)

Elisha S. Cram and William F. Chase, Leconia, N. H. U. S., 3rd January, 1883; for 5 years.

Claim.—1st. The draw-bar woods or timbers H H attached to parallel platform sills, above the same, by notched joints and provided with mortises a a having linings h h in which play the follower blocks or cross-bars I J. 2nd. The combination of the sliding block N provided with the depressed or shouldered pin seat c on its front end and the coupling pin P with its enlarged part a and top stop t. 3rd. The combination of the sliding block N, coupling pin P, spring Q, rock shaft R with its connecting chain c, and the side levers S.

No. 16,064. Improvements on Hollow Augers. (*Perfectionnements aux fore-loirs.*)

Hilaire Paré, Sherbrooke, Que., and Arthur Skinner, New Haven, Conn., U. S., 3rd January, 1883; for 5 years.

Claim.—The multiplying cog-wheels K K with the connecting post M, also the centre arbor D.

No. 16,065. Improvements on Car-Couplings. (*Perfectionnements aux accouplages des chars.*)

Henry Marcheter and Theodore Martin, Wallaceburg, Ont., 3rd January, 1883; for 5 years.

Claim.—The combination of the chambers B C D E with the shuttles G J.

No. 16,066. Improvements in Apparatus for Evaporating or Concentrating Liquids, and Saturating Liquids with Gases. (*Perfectionnements aux appareils pour évaporer ou concentrer les liquides et les saturer de gaz.*)

Frederick B. Nichols and Herbert Thompson, Halifax, N. S., 3rd January, 1883; for 5 years.

Claim.—1st. A vessel, trough, or cell provided with siphon-slips, or thin strips of solid material bent over the edge of said vessel, whereby a continuous flow of liquid out of the vessel may be maintained. 2nd. The combination of a vessel, trough, or cell, provided with siphon-slips, with diffusion strips, or broad strips of thin material arranged to maintain a constant flow of liquid over their surfaces. 3rd. The evaporating apparatus consisting of troughs, vessels, or cells provided with siphon-slips, in combination with diffusion strips and means for applying heat to one or both sides of said diffusion strips. 4th. The evaporating apparatus composed of a series of troughs, or cells A, connected by longitudinal troughs d and provided with siphon slips and diffusion strips. 5th. A gas or vapour absorbing apparatus consisting of a vessel, trough, or cell, siphon slips and diffusion strip or strips, in combination with a gas-tight receptacle or chamber, having a gas pipe for supplying gas or vapor, and inlet and outlet for fluid provided with stop-cocks, or their equivalents. 6th. A granulated surface consisting of an aggregation of distinct grains, in combination with one, or all of the several parts of the apparatus.

No. 16,067. Improvements on Grain Scourers. (*Perfectionnements aux nettoyeurs des grains.*)

Daniel Mann, West Winfield, N. Y., U. S., 3rd January, 1883; for 5 years.

Claim.—1st. The combination, with two revolving disks D provided with the furrows d and a and secured one above the other, and the shaft B, of the stationary brushes E arranged in tangential lines whose obliquity is reserved to the tangential lines of the furrows in the disks D and the radial sweeps F. 2nd. The combination, with the revolving disk D provided with tangentially arranged furrows, of the stationary brushes E arranged in tangential lines having an opposite angularity to the lines of the disk furrows, the said disks and brushes being arranged in relation to each other as specified.

No. 16,068. Improvements in Lunch Boxes. (*Perfectionnements aux boîtes à collation.*)

The E. T. Barnum Wire and Iron Works, (assignees of William H. Gordon,) Detroit, Mich., U. S., 3rd January, 1883; for 5 years.

Claim.—1st. A cheese or lunch safe formed of a semi-cylindrical shell of wire cloth, or netting, plain semi-circular uprights, a door concentric with the cylinder, or nearly so, and pivoted by end blocks at, or near the axis of the cylinder. 2nd. A cheese or lunch safe formed of a semi-cylindrical shell of wire cloth or netting, plain semi-circular uprights, a door of wire cloth or netting, fastened to end blocks, which latter are pivoted at or near the axis of the cylinder, a revolving table within, and with a platform across the top.

No. 16,069. Improvements in Grain Binders. (*Perfectionnements aux lieuses à grain.*)

William Deering, Chicago, Ill., (assignee of John F. Appleby, Minneapolis, Minn.,) U. S., 3rd January, 1883; for 15 years.

Claim.—1st. The combination, with the cord receptacle and an adjustable tension device composed of the stationary part, or cheek 3, and a yielding part 4, of an eye-guide for giving direction to the draft of the cord designed to pass through said tension device, such that the draft of the cord will, in event of the presence of a knot or bunch thereon, operate to instantly pull the part 4 away from its mate. 2nd. The combination, with the means for exerting uniform tension on the cord, as it is drawn from the source of supply of the auxiliary tension device, or mechanism, to create an increased tension, at certain times, and regulated in its lines of action automatically by the binder mechanism. 3rd. In a self-binder, the automatic auxiliary tension mechanism to alternately create a tension on the cord and a slack therein, made in the process of applying the tension.

No. 16,070. Improvements on Drilling Machines. (*Perfectionnements aux machines à forer.*)

Andrew Jardine, Hespeler, Ont., 3rd January, 1883; (Extension of Patent No. 8306.)

No. 16,071. Improvements on Mowing Machines. (*Perfectionnements aux faucheuses.*)

Charles B. Frost, Francis T. Frost and Alexander Wood, (assignees of James Smith and Edward Patterson,) Smith's Falls, Ont., 3rd January, 1883; for 5 years.

Claim.—1st. The connection bar 8, formed in two sections and connected together by a joint 24 having axial motion longitudinally of the bar. 2nd. The connecting bar 8 formed in two sections, one section hinged to the frame of the machine, to lift from a horizontal towards a vertical position, and the other section connected thereto by a sleeve joint 24, whereby the section can be rocked to tilt the finger bar. 3rd. The connecting bar 8, constructed in two sections, one section having a rocking joint connection with the other section, and a hinged connection 16 with brace 13. 4th. The combination, with the draft tongue, of the rack frame 18, lever 17 fulcrumed thereto, link 20, post 19 and a sectional connecting bar 8, for tilting the finger bar. 5th. The shoe 9 provided with a wheel 22 journalled axially in line with the back of the finger bar on its inner end, in combination with a sectional connecting bar 8 attached to the shoe and having a rocking motion.

No. 16,072. Improvements in Telephones.

(*Perfectionnements dans les téléphones.*)

The European Electric Company, (assignee of Charles A. Hussey,) New York, U. S., 4th January, 1883; for 5 years.

Claim.—1st. The process of transmitting and reproducing speech, consisting in establishing and maintaining a pressure of air, gas or other fluid in excess of the atmospheric pressure, in a constantly closed tube or conduit, in imparting to said air, gas or fluid, impulses from sound waves and in utilizing said impulses for reproducing sound waves at a distant place. 2nd. The combination of a tube, means for establishing and maintaining a pressure of air or other gas or fluid in excess of atmospheric pressure in the tube, and a diaphragm capable of a vibratory motion for transmitting impulses imparted to it through the tube to a receiver for reproducing the same. 3rd. The combination, with a tube of electric conducting material, of a diaphragm capable of a vibratory motion for transmitting the impulses from sound waves through the same, and an electric telegraphic apparatus connected with the tube and utilizing it as a line conductor. 4th. The combination of a tube for the transmission of impulses from sound waves, diaphragms for transmitting the impulses from sound waves through the same, and concentrators attached to the diaphragms, for concentrating the effect of the sound waves on the centre of the diaphragms. 5th. The combination of a tube for the transmission of impulses for sound waves, means for establishing and maintaining a pressure of air, gas or fluid in excess of atmospheric pressure in the same, diaphragms for transmitting the impulses imparted to them, and a gauge for indicating the pressure in the tube.

No. 16,073. Improvements in the Preparation of Whitewash. (*Perfectionnements dans la préparation du lait de chaux.*)

Charles C. Hughes, Avondale, Penn., U. S., 5th January, 1883; for 5 years.

Claim.—1st. The method of making whitewash free from grit, said method consisting in mixing the lime with water, as usual, and then passing the liquid product through a grinding mill. 2nd. The method of making a whitewash free from grit and impurities, said method consisting in slacking the lime with water, as usual, then straining the slacked lime and finally passing it through a grinding mill. 3rd. The method of making whitewash and preparing the same for market, said mode consisting in mixing the lime with water, as usual, passing the