No. 25,100. Apparatus for Making and Raising Salt Brine from Deep Salt Veins. (*Appareil de Production et de Puisage de l'Eau Salée des Veines Profondes.*)

The Hydraulic Salt Forcing Company, New York, (assignee of John Peters, Haverstraw), N.Y., U.S., 11th October, 1886; 5 years.

Claim.—1st. The combination of the force-pump, with the inflow and outflow pipes arranged within the well, and with reference to a substerraneous deposit of salt, substantially as described. 2nd. A tube or casing C placed in the well and packed at *d*, in combination with an outflow pipe E through which brine may be forced out of the well, substantially as described.

No. 25,101. Carriage Foot Pad. (*Bourrelet Marche-Pied de Voiture.*

The Initial Toe Pad Company, St. Joseph, (assignee of Henry P. Barrows and Lawrence D. Knowles, Three Rivers), Mich., U. S., 11th October, 1886; 5 years.

Claim.—A carriage foot-pad composed of different materials cemented upon each other, the essential materials being buck-ram and suitable exterior layer, provided with a letter, figure, character design, ornamentation or the like, or a combination thereof pressed in the cemented materials and being raised on the exterior surface, substantially as set forth.

No. 25,102. Wheel for Vehicle, Agricultural Machine, etc. (*Roue de Voiture, Instrument d'Agriculture, etc.*)

James R. Parsons, (assignee of John M. Rosebrooks), Hoosick Falls, N.Y., U.S., 11th October, 1886; 5 years.

Claim.—1st. The rim of the wheel made of metal, and provided with two projections running around its interior surface, far enough apart to receive the spokes between them, and the nuts or their equivalents which hold the spokes to the rim with inwardly-flanged edges, substantially as and for the purpose described. 2nd. The hub formed in two pieces, one with a flange cast thereon, with recess formed therein to receive one-half of each of the spokes, and the other, a shell or disk with corresponding recesses to receive the other half of the spokes, in combination with the spokes and their straining nuts on the interior surface of the rim, substantially as and for the purpose described. 3rd. The combination of the skein G and its arms *b*, with the corrugated or recessed hub cast in two parts, with the spokes all resting upon said hub, fastened together by bolts between them, substantially as and for the purpose described. 4th. The combination of the skein G, with the corrugated or recessed hub cast in two parts, the spokes resting upon said hub and the gear-wheel H fastened together, substantially as and for the purpose described. 5th. The spokes fastened to the rim by a straining-nut on the interior surface of the rim, and the lugs on the outside surface of the rim, substantially as and for the purpose described. 6th. The spokes abutting at their lower ends against the exterior surface of the hub furnished with threads and straining-nuts at their upper ends to screw against the interior surface of the rim and their extreme ends held to the exterior surface of the rim by lugs rivetted thereon, substantially as and for the purpose described. 7th. The spokes abutting at their lower ends against the exterior surface of the hub and clamped between the two corrugated flanges C and B of the hub their upper ends furnished with a thread and nut to screw against the interior surface of the rim and their extreme ends held to the exterior surface of the rim either by lugs or rivetted into a countersunk thereon, substantially as and for the purpose described.

No. 25,103. Thrashing Machine. (*Machine à Battre.*)

Luther D. Sawyer, (assignee of Robert Christie), Hamilton, Ont., 11th October, 1886; 5 years.

Claim.—1st. In combination with a thrashing machine, of a hinged cylinder formed in two parts, the front portion made to slide on the rear portion, and adjustably attached thereto, by which means the size of the throat opening to the cylinder may be adjusted, substantially as and for the purpose described. 2nd. In combination, with a thrashing machine, of the cylinder formed in two parts C and C1, the front part C1 formed with projections *b*, *b* and slots *d*, *d*, so as to permit the lower portion to slide on the upper or rear one, and be adjustable fastened thereto by thumb-screws *e*, *e*, substantially as and for the purpose described. 3rd. In combination, with the pitman D, of a thrashing machine, of the crank-shaft pitman boxes, constructed with the axle box *g*, plates *h*, *h*, the upper and lower fastening plates *i* provided with screw ends washer plates *j* and nuts *k*, *k*, all arranged substantially as and for the purpose specified. 4th. In combination, with a thrashing machine, of the drive-wheel F, constructed with outwardly-slanting spokes or arms *m*, so as to allow the crank-shaft box G carrying the shaft E to be placed in the centre of of the wheel, substantially as and for the purpose specified. 5th The arched crank-shaft box G attached to the bracket H of the threshing machine, and made to project outwards to the centre of the drive-wheel F, to prevent springing and shaking of the shaft and admit of a straight pitman, substantially as specified. 6th The combination of the wheel F constructed as shown, the arched crank-shaft box G, crank-shaft E and pitman D, substantially as specified. 7th. In a thrashing machine, the combination of the axle-lever *n1*, lever *n*, lifting arms *n11*, *n11*, and sieve J, for raising the outer end of the same, substantially as specified. 8th. In a thrashing machine, the combination of the axle-lever *r*, lever *o*, lifting arms *m1*, *m1* and sieve J, for elevating the inner end of the same, substantially as specified. 9th. In a thrashing machine, the combination of the axle lever *q*, lever *r*, lifting arms *o1*, *o1* and sieve K1, for raising the outer end of the same, substantially as specified. 10th. In a threshing machine, the combination of the axle-lever *t*, rod *s*, lifting arms *u*, *u*, and sieve K1, for raising the rear end of the latter, substantially as specified.

No. 25,104. Incubator. (*Incubateur.*)

George L. Gray, Chicago, Ill., U.S., 12th October, 1886; 5 years.

Claim.—1st. An incubator having two shells one within the other, with a water-space between and an offset or extension connected therewith, in combination with a lamp provided with a smoke-escape pipe passing through the water-space, and an air supply pipe having its outer end terminating within the offset or extension of the main casing just above the liquid therein, substantially as and for the purpose set forth. 2nd. In an incubator, the main body formed of an inner and an outer shell having the space between them filled with water and oil, extending into an open topped offset of the outer casing, and provided with an air outlet running through the water-space, and an air supply terminating in the offset of the case just over the oil seal, in combination with the lamp placed beneath the outer pipe, and formed with a depression containing water into which the end of said pipe extends, substantially as and for the purpose set forth. 3rd. The combination, with a water-tank or receptacle, of a lamp or heating device, provided with an air supply terminating just above the surface of the water, whereby the supply of air to the flame and the heat imparted to the water is regulated by the expansion and contraction of the water, substantially as shown and described. 4th. In an incubator, a lamp or equivalent heating device, provided with an air supply pipe, which is closed automatically at a given temperature, and a smoke-escape pipe, in combination with a pipe connecting the supply with the escape, substantially as and for the purpose set forth. 5th. The combination, in an incubator, of a hatching chamber, provided with a series of egg-trays having an air-space on the side, and a series of openings over each tray for the escape of air into a flue in rear of the chamber, with a heating device around which air is passed to a chamber or reservoir communicating with the lower part of the hatching chamber, whereby the heated air is passed evenly over each tray at the same temperature, substantially as shown and described. 6th. A hatching chamber having hollow walls filled with water, and provided with a series of egg-trays having a space for the passage of air on one side, and the walls on the opposite side formed with a series of air-escape holes over each tray into a flue behind, and an air chamber beneath the hatching chamber and connected therewith by a series of pipes passing through the water-space in the walls, in combination with a heating device around which the air must pass to the air chamber, provided with a smoke-escape and heating pipe and an air supply pipe automatically closed as the heat becomes too great, substantially as and for the purpose set forth.

No. 25,105. Sewin Machine. (*Machine à Coudre.*)

Samuel Brodeur, Montreal, Que., 12th October, 1886; 5 years

Claim.—In a sewing machine, the combination of the needle-carrier, having a sliding plate and projection holding the needles, a lever pivoted to main carrier and actuating sliding plate, and a dog mounted on rocking shaft receiving motion from main shaft through intermediate mechanism, and throwing said lever in either direction, all as herein set forth and for the purpose described.

No. 25,106. Telephone Transmitter. (*Transmetteur de Téléphone.*)

Henry S. Thornberry, New York, N. Y., U. S, 12th October, 1886; 5 years.

Claim.—1st. The combination, in a telephone transmitter, of a flexible diaphragm, a mass of fine-divided conducting material in a loose and free state in contact with the diaphragm, and a rigid back plate having a pendant projecting into said conducting material, substantially as described. 2nd. In a telephone-transmitter, the combination of a horizontal diaphragm forming one electrode, and a mass of finely-divided conducting material resting thereon, and confined by an insulated cell of conducting material, the interior surface of which is extended by one or more projections forming the complementary electrode. 3rd. In a telephone tranmitter, using a granular substance as the current varying medium, the combination of a horizontal flexible diaphragm forming the primary electrode, a mass of finely-divided conducting particles resting thereon, and a rigidly fixed complementary electrode immersed in the said conducting particles, substantially as and for the purpose described. 4th. In a telephone transmitter, using a granular substance as the current varying medium, the combination of a flexible horizontal diaphragm, and a rigidly fixed complementary electrode, the mean plane surface of which lies in the horizontal, substantially as and for the purpose described. 5th. In a telephone-transmitter, using a granular substance as the current-varying medium, the combination of a flexible vibratory horizontal diaphragm, and a complementary electrode, the face of which is hemispherical, substantially as and for the purpose described. 6th. In a telephone-transmitter, using a granular substance, as the current-varying medium, a complementary electrode having one or more lateral V-shaped grooves (3 and 4) cut around its circumference, substantially as and for the purpose described. 7th. In a telephone transmitter, using a granular substance, as the current-varying medium, a rigidly fixed complementary electrode immersed in, and maintaining permanent contact by reason of gravity with said granular material, substantially as and for the purposes set forth 8th In a telephone-transmitter, using a granular substance, as the current-varying medium chamber 5, and an annular casing of metal 9, in metallic contact with and a part of the complementry electrode, substantially as and for the purpose set forth. 9th. In a telephone-transmitter, using a granular substance, as the current-varying medium, a complementry electrode 1, with recesses 19, 19, for the purpose described, and screw post 2 forming the terminal to said electrode, all substantially as and for the purpose set forth. 10th. In a telephone-transmitter, an annular chamber of insulating material, recessed as shown to receive the complementary electrode threaded externally, and with screws 20, 20, all for the purpose set forth substantially as described. 11th. In a telephone-transmitter, a cup with a central opening 21, and annular recess 11 on its inner face, and threaded to screw on to the face of chamber 5,