

with the axis of movement of the pivoted lever, a link connecting the lever and the platform frame, a link connecting the segment and tongue frame, and means for hooking the segment to the lever and the segment to the main frame, substantially as and for the purpose specified. 6th. The combination of the main frame, the platform frame pivoted thereto in rear thereof, the driving wheel and its driving gear mounted in the main frame, a counter-shaft mounted in the main frame parallel with the advance of the machine, a gear thereon meshing with the driving gear, a communicating shaft on the platform frame, articulated by a universal joint with the counter-shaft, in line with the pivotal connections of the main and platform frames, substantially as and for the purpose specified. 7th. The combination of the main frame, the driving wheel and its driving gear mounted thereon, a counter-shaft mounted in the main frame parallel with the advance of the machine, a gear on the forward end of the counter-shaft meshing with the driving gear, the platform frame pivoted to the main frame, a bell mounted gear on the rear end of the counter-shaft, a communicating shaft on the platform frame, having a hub with elliptical gear teeth, taking into the bell-mouthed gear in the line of the pivotal connection of the main and platform frames, substantially as and for the purpose specified. 8th. The combination, with the main frame, of the driving wheel and its driving gear mounted thereon, a counter-shaft mounted in the main frame parallel with the advance of the machine, a gear on the forward end of the counter-shaft, meshing with the driving gear, the platform frame pivoted to the main frame, a communicating shaft on the platform frame articulating by a universal joint with the counter-shaft in the main frame, in line with the pivotal connection of the main and platform frame, and a lever for tilting the platform frame, as and for the purpose specified. 9th. The combination with the main frame, of the platform frame pivoted thereto, a driving shaft in the main frame parallel with the advance of the machine, a communicating shaft on the platform frame articulating by a universal joint in line with the pivotal connections of the main and platform frames with the driving shaft, substantially as and for the purpose specified.

### No. 34,623. Process of Separating Ores.

(*Procédé de séparation des minerais.*)

Clinton M. Ball, Troy, N. Y., and Sheldon Norton, Hokendauqua, Penn., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. The process of separating iron or its ore from impurities, consisting in forcing it in a state of division past a succession of two or more magnetic poles of alternating polarity, whereby the particles are forcibly caused to tumble or rotate, end for end. 2nd. The process of separating iron or its ore from impurities, consisting in forcing it in a state of division past a succession of two or more magnetic poles of alternating polarity, while interposing a non-magnetic screen between the ore and the poles. 3rd. The process of separating iron or its ore from impurities, consisting in forcing it in a divided state past a succession of magnetic poles of alternating polarity, while subjecting the material to the action of a current of air. 4th. The process of separating magnetic ore from its accompanying impurities, consisting in causing the movement of the particles of ore through a magnetic field in a given direction by interposing a moving non-magnetic screen between the ore and the magnet producing such field, and at the same time subjecting the body of ore and gangue to the action of a current or currents of air in an opposite direction to that of the ore. 5th. The process of separating magnetic ore from its accompanying impurities, consisting in causing the movement of the particles of ore through a magnetic field while interposing a moving non-magnetic screen between the ore and the magnet producing such field, and at the same time subjecting the ore and gangue to the action of a current of air.

### No. 34,624. Magnetic Ore Separator.

(*Séparateur des minerais magnétiques.*)

Clinton M. Ball, Troy, N. Y., and Sheldon Norton, Hokendauqua, Penn., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. An ore separator, comprising a group of magnets of alternating polarity, in combination with means for forcibly conveying the ore past the said magnets successively without contact therewith. 2nd. An ore separator, comprising, in combination, a group of magnets of alternating polarity, a travelling screen adapted to move across the poles of said magnets, and means for delivering the ore in proximity to the screen. 3rd. An ore separator, comprising, in combination, a group of magnets of alternating polarity, a travelling screen of diamagnetic material adapted to move across the poles of said magnets, and means for delivering the ore in proximity to the poles of said magnets of alternating polarity, a travelling diamagnetic screen adapted to move across the poles of said magnets, means for delivering the ore to the outer side of said screen, and means for forcing a current of air through the space traversed by the ore as it passes the magnet poles. 5th. An ore separator, comprising, in combination, a group of magnets of alternating polarity, a travelling diamagnetic screen adapted to move across the poles of said magnets, and an apron adapted to confine the ore within inductive range of said magnets and deliver it in close proximity to said screen.

### No. 34,625. Milk Aerator and Cooler.

(*Garde-lait à ventilation.*)

Martha L. Webster (assignee of W. Chamberlin), Newboro, Ont., 5th July, 1890; 5 years.

*Claim.*—A milk strainer, aerator and cooler, consisting of the straining section A, the aerator section consisting of the perforated neck D and inclined disk F, having perforations G, and a wall H, and the cooler section, consisting of a receptacle or vessel J, to contain cold water, etc., provided with a cone-shaped top having a neck K connecting with the neck of the aerator, and radial arms M to bear on the edge of the receiving can N, as set forth.

### No. 34,626. Eccentric. (*Excentrique.*)

Emma L. Branch (administratrix of the estate of Jesse M. Branch), Laurence, and Freeman Arnold, Gaylord, Mich., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. In an eccentric, the combination, with a sleeve adapted to be secured to a shaft, and having flattened sides and longitudinal slots, of sliding inclines fitting in the slots of the sleeve and an apertured disk fitting on the sleeve and inclines, substantially as described. 2nd. In an eccentric, the combination, with a sleeve adapted to be secured to a shaft, and having flattened sides and longitudinal slots, of a recessed and apertured disk fitting on the sleeve, and sliding inclines fitting in the slots of the sleeve and recesses of the disk, substantially as described. 3rd. In an eccentric, the combination of a sleeve adapted to be secured to a shaft, and having flattened sides and longitudinal slots in opposite sides at right angles to the flattened sides, collars fitting loosely on the sleeve, inclines secured to the collars and fitting in the slots of the sleeve, and a disk provided with an elongated opening, and recesses in the top and bottom of the said opening, substantially as shown and described.

### No. 34,627. Harvester. (*Moissonneuse.*)

The Milwaukee Harvester Company (assignee of Henry F. Crandall), Milwaukee, Wis., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. The combination, in a harvester, of a bull-wheel, its axle, and the pinions and sheave carried by the axle, with racks fixed to the harvester frame and receiving the pinions, a lifting shaft carried by the harvester frame, a fixed and loose sleeve carried by the shaft, a spring uniting the two sleeves, and a flexible connection having one end secured to the sheave and the other to the loose sleeve, substantially as described. 2nd. The combination, with the lifting shaft and its fixed and loose sleeves and uniting spring, of a flexible connection, having one end secured to the loose sleeve and the other end secured to an arm of the lifting mechanism for the outer end of the grain platform, substantially as described. 3rd. The combination, in a harvester, of a bull-wheel, its axle and pinions, a sheave carried by the axle, racks fixed to the harvester frame and receiving the pinions, a lifting shaft carried by the harvester frame, a fixed and loose sleeve carried by the shaft, a spring uniting the two sleeves, ordinary lifting mechanism on the axle of the grain-wheel, and flexible connections leading from the loose sleeve, one having an end secured to the sheave on the axle and the other having an end secured to the lifting mechanism of the grain wheel, as set forth. 4th. In a harvester, the combination, with the harvester frame and its supporting wheels, of raising and lowering mechanism connected with, and arranged to raise and lower both ends of said frame simultaneously, and a yielding or elastic connection in said mechanism, by which sudden shocks to the machine are prevented, substantially as described. 5th. In a harvester, the combination with the harvester frame and its supporting wheels, having adjustable connections therewith so as to permit the raising and lowering of said frame, of raising and lowering mechanism carried by said harvester frame and connected with both ends of the frame and its supporting wheels so as to raise and lower both ends of the platform simultaneously, and a yielding or elastic connection interposed at some suitable point in said raising and lowering mechanism, so as to prevent sudden shocks to the frame and its attachments at both ends, substantially as described.

### No. 34,628. Harvester. (*Moissonneuse.*)

The Milwaukee Harvester Company (assignee of John W. Latimer), Milwaukee, Wis., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. In a harvester, the combination of the bull-wheel, its axle and pinions, the racks suspended from the harvester frame in which the pinions engage, two sleeves loosely carried by a suitably supported shaft, each of said sleeves having a pair of arms, the arms of each pair extending in opposite directions from each other, and an arm of each sleeve overhanging an arm of the other sleeve, a spring interposed between the opposing arms of the two sleeves, gearing for revolving one of the sleeves, and means, substantially as described, for connecting the other sleeve with the bull-wheel axle, whereby the latter will be supported by the sleeves and be revolved or prevented from revolving by them. 2nd. In a harvester, the combination of the axle and its pinions, the racks suspended from the harvester frame, a sprocket-wheel keyed to the axle, a shaft mounted in standards projecting up from the harvester frame, a pair of sleeves loose on said shaft, each having a pair of arms projecting out from it in opposite directions, with an arm of each sleeve overhanging the arm of its neighbor, a spring interposed between the opposing arms of the two sleeves, an operating shaft, and gearing connecting the operating shaft with one sleeve, and a sprocket gear connecting, by means of a sprocket chain, the other sleeve with the sprocket-wheel or the bull-wheel axle, substantially as described.

### No. 34,629. Harvester. (*Moissonneuse.*)

The Milwaukee Harvester Company (assignee of John W. Latimer), Milwaukee, Wis., U.S., 5th July, 1890; 5 years.

*Claim.*—1st. The combination, in a harvester, of the main wheel and its axle and sheave, a keeper hinged to the harvester frame, a spring confined in the keeper, and a follower confining the spring therein, a sheave carried by the follower, and a lifting shaft and cable, the latter extending from the lifting shaft under the sheave of the follower and connected at its lower end to the periphery of the sheave on the main-wheel axle. 2nd. In a harvester, the combination, with the frame and its supporting wheels, having adjustable connections therewith, of a lifting shaft mounted on the harvester frame, springs confined in keepers attached to said frame, and sheaves journaled in followers bearing against said springs, and cables passing under said sheaves and connecting said lifting shaft with the elevating mechanism, at opposite ends of the machine.