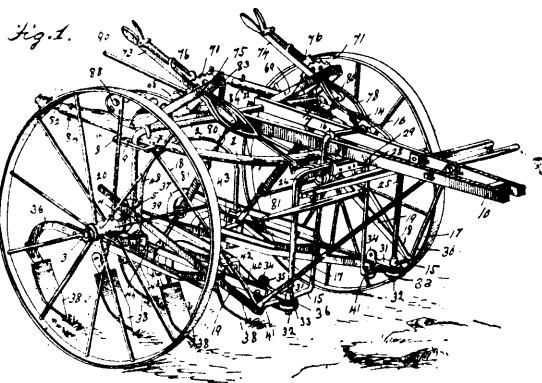


die plate under the fixed plate, substantially as described. 2nd. In a paper folding machine, in combination with a fixed plate, a reciprocating die plate, located on a plane beneath the fixed plate, a paper turning guide located at one side of, and extending over the reciprocating plate and arranged to turn the edge of the paper over the die plate, substantially as described. 3rd. In a paper folding machine, in combination with a fixed plate, and a reciprocating die plate, a reciprocating die plate, a reciprocating paper feeding mechanism comprising a table made with a top of longitudinal slats, a cross plate above the slats, fingers pivoted in hangers from the cross plate and adapted to engage between the slats and against the cross plate, and means for actuating the fingers, substantially as described. 4th. In a paper folding mechanism, a paper feeding device comprising a table of longitudinal slats, a cross bar located above the table, gripping fingers pivoted below the table, and adapted to engage between the slats and against the cross bar, and an actuating lever operating in conjunction with the folding mechanism, and arranged to bring the gripping levers into gripping contact on the forward movement and release them from gripping contact on the backward movement, substantially as described. 5th. In a paper folding mechanism, a severing knife, a lever arranged to operate said severing knife, a reciprocating mechanism, a grooved friction roll carried by said reciprocating mechanism, the end of the lever being arranged diagonally across the path of the travelling friction roll, and the friction roll being arranged to move longitudinally of its axis, substantially as described. 6th. In a paper feeding mechanism, in combination with a reciprocating mechanism arranged to fold the paper, a severing knife, and a lever adapted to actuate the severing knife, and means whereby the actuating lever is operated during one direction of the reciprocating movement, and is not operated during the reverse reciprocation, substantially as described. 7th. In a paper folding mechanism, in combination with a reciprocating former around which the bag is formed, a point turner consisting of a curved engaging piece, pivoted beneath the line of travel of the forming piece, and having a curved part which normally extends across the line of travel, but which can be turned on its pivot to engage entirely underneath the former, substantially as described. 8th. In a paper folding machine, in combination with a reciprocating former, and a stationary folding plate, a jaw pivoted to the reciprocating former, and means whereby the jaw closes toward the former, during part of the reciprocation thereof, substantially as described. 9th. In a paper folding machine, in combination with a paper roll holder, means for actuating the roll of paper, a reciprocating feeding device, a severing knife, a paste spreading device, a reciprocating former, a fixed folding plate, and edge turner, and a point turner, all substantially as described.

No. 68,280. Cultivator. (Cultivateur.)



Dennis S. Blue and Alfred D. Hetrick, both of Fremont, Ohio, U.S.A., 1st August, 1900; 6 years. (Filed 11th July, 1900.)

Claim.—1st. In a cultivator, the combination with a main frame, of an auxiliary frame having horizontal guide rods at its lower end, braces connecting the auxiliary frame to the main frame, a main axle having depending portions and adjusting braces connecting the guide rods of the auxiliary frame adjustably to the main axle. 2nd. In a cultivator, the combination with an auxiliary frame having guide rods, of a shifting frame having legs provided with collars, clevises straddling the guide rods and through which the legs aforesaid pass, one member of the clevises abutting on the collars, nuts for retaining the other members of the clevises, grooved pulleys journaled on the legs and located between the members of the clevises and bearing on the guide rods, cultivator gangs pivoted to the clevises so as to be capable of up-and-down movement, means for raising and lowering the gangs, and means for moving the shifting frame, whereby the gangs can be simultaneously shifted laterally, substantially as described. 3rd. In a cultivator, the combination with a main frame, of an auxiliary frame having horizontal guide rods at its lower end, braces connecting the auxiliary frame to the

main frame, a main axle having depending portions, adjusting braces connecting the guide rods of the auxiliary frame adjustably with the main axle and cultivator gangs having sliding pivotal connection with the horizontal guide rods. 4th. In a cultivator, the combination with a shifting frame, composed of two sections having overlapping portions, one of which has a plurality of openings, and the other a single opening of a connecting rod, a bolt passing through the connecting rod and the openings aforesaid, cultivator gangs having a compound pivotal connection with the sections of the shifting frame, and shifting mechanism operatively connected to the connecting rod, substantially as described. 5th. In a cultivator, the combination with a shifting frame, of cultivator gangs pivotally connected thereto so as to be capable of vertical movement, and independent shifting devices operatively connected to the respective gangs and adapted for raising and lowering them, and also operatively connected to the shifting frame so that the latter can be moved laterally by either of them. 6th. In a cultivator, the combination with a shifting frame adapted for lateral movement, of cultivator gangs pivoted thereto so as to be capable of vertical movement, pivoted members, shifting levers pivoted to said members, operative connections between the levers and the respective gangs, whereby either gang may be raised or lowered independently of the other, and operative connections between the shifting frame and the pivoted members whereby movement of the latter causes a lateral movement of the gangs, substantially as described. 7th. In a cultivator, the combination with a shifting frame adapted for lateral movement, of cultivator gangs pivotally connected thereto, pivoted toothed segments adapted to swing laterally, shifting levers pivoted to said segments and having retractable locking mechanism to engage the teeth thereof, connections between said levers and the respective gangs, and shifting rods pivoted to the segments and the shifting frame, substantially as described. 8th. In a cultivator, the combination with a main frame, of an auxiliary frame having horizontal guide rods at its lower end, braces connecting the auxiliary frame to the main frame, a main axle having depending portions, adjusting braces connecting the guide rods of the auxiliary frame adjustably with the main axle and cultivator gangs having sliding pivotal connection with the horizontal guide rods, the forward ends of said cultivator gangs adjustably connected together. 9th. In a cultivator, the combination with a main frame, of an auxiliary frame having horizontal guide rods at its lower end, braces connecting the auxiliary frame to the main frame, a main axle having depending portions, adjusting braces connecting the guide rods of the auxiliary frame adjustably with the main axle and cultivator gangs having sliding pivotal connection with the horizontal guide rods, the forward ends of said cultivator gangs adjustably connected together and a connecting arch or frame for holding the rear ends of the cultivator gangs apart and admitting of independent vertical movement with respect to each other. 10th. In a cultivator, the combination with a main frame and axle having pivotal connection therewith, the axle having depending portions, of an auxiliary frame terminating at the lower end in horizontal guide rods, braces extending from the guide rods to the main frame, adjusting braces connecting the horizontal guide rods with the axle, cultivator gangs having sliding pivotal connection with said horizontal guide rods, means for holding said gangs apart at their forward and rear ends respectively and admitting of independent vertical movement at their rear ends and hand levers for raising and lowering said gangs, and for swinging them laterally. 11th. In a cultivator, the combination with a main frame, an axle having pivotal connection therewith, the axle having depending portions, of an auxiliary frame terminating at the lower end in horizontal guide rods, braces extending from the guide rods to the main frame, adjusting braces connecting the horizontal guide rods with the axle, cultivator gangs having sliding pivotal connection with said horizontal guide rods, means for holding said gangs apart at their forward and rear ends respectively and admitting of independent vertical movement at their rear ends, and hand levers having vertical and horizontal pivotal connection with the main frame and connected with the cultivator gangs for raising and lowering said gangs and for swinging them laterally. 12th. The combination with a main frame, an axle having depending portions, wheels in which the axle bears and an auxiliary frame connected with the main frame and provided at its lower ends with horizontal guide rods to the main frame, adjusting braces connecting the horizontal guide rods to the depending braces of the axle, of cultivator gangs connected together at their forward and rear ends and having sliding pivotal connection with the horizontal guide rods, and levers having vertical and horizontal pivotal connection with the main frame, and spring tension devices connecting these levers with the cultivator gangs. 13th. In a cultivator, the combination with a main frame, of clamp plates fitted against said frame and provided with slotted extensions, staples passing through the main frame and clamp plates, an axle loosely fitted in the staples and provided with the depending portions that lie in the slotted extensions, traction wheels in which the depending ends of the axle are mounted and braces for the axle. 14th. In a cultivator, a shovel comprising a standard having a curved and pointed lower end, a blade sunk flush in the end of the standard, whose upper portion is of considerably greater width than said standard, and which has lower sharpened edges converging toward the point of the standard, and a loop and fastener for connecting the standard to the foot of the cultivator. 15th. In a cultivator, the combination with side shovel gangs adapted for independent