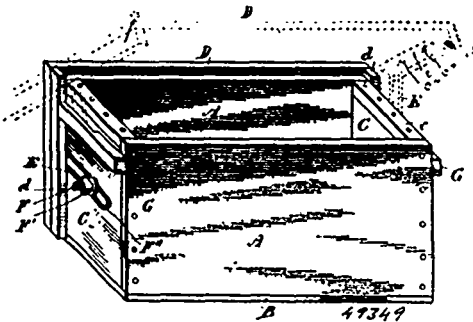


sustained over the cultivator-blade to keep the soil from the leaves of the plants as set forth. 3rd. The combination with the cultivator-frame and blade, of a plant-guard over said blade inclined toward the line of draft and laterally adjustable as set forth. 4th. The combination with a cultivator, of a plant-guard consisting of a shelf sustained laterally and vertically adjustable over the cultivator-blade and inclined forward and toward the central line of draft as set forth and shown. 5th. The combination with the cultivator-blade, of an inclined plant-guard over said blade and having a downwardly extending rear end portion for the purpose set forth. 6th. The combination with the frame A, of a plant-guard consisting of an inclined shelf C, formed with a downwardly extending leaf *j*, longitudinally slotted attaching arms *d*, carrying said shelf, and attaching bolts *e*, passing through said slots as set forth and shown. 7th. In combination with the cultivator-frame and blades, brackets secured to the frame adjustably toward and from the central line of draft and formed with downwardly extending and longitudinally slotted limbs, and the shelves C provided with longitudinally slotted vertical arms *n* and secured to the aforesaid limbs by bolts passing through the latter as set forth.

**No. 49,349. Crate and Cover Fastener. (Caisse et attache de couvercle)**



Charles Edward Weaver and Joseph Francis Weaver, both of Chelsea, Iowa, U.S.A., 26th June, 1895; 6 years.

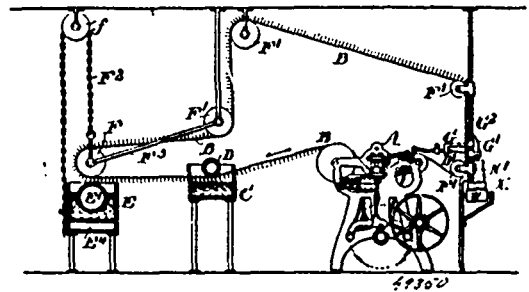
*Claim.*—1st. The combination with a box or crate and its top or cover, of a hasp secured to each end of the cover and projecting down and close to each end and consisting of a wire forming a looped slot, a bolt passing through each end of the box through the slot of said hasp and a thumb-nut adapted to clamp said hasp against the end of the box, substantially as set forth. 2nd. In a box or crate, the combination of the sides and bottom with the ends having their grain running vertically and cut short at the top and the spaces thus left made up by strips forming continuations of the ends, substantially as set forth. 3rd. In a box or crate, the combination of the sides and bottom with ends having their grain running vertically and the upper edges cut short and made good by strips *e*, a top or cover *D* having ends *d*, hasps *E* secured to the ends of said cover, bolts *F* passing through the ends of the box and the slots of the hasps, thumb-nuts *F'* and washers *F''* kept on said bolts by upsetting their ends, and notched cleats *G* secured to said ends of the box, substantially as set forth. 4th. In a box or crate fastening, a hasp consisting of doubled up wire forming a looped slot, arms bent in opposite directions to each other and in the same plane as the legs forming the slot and short ends bent at right angles to the plane of the legs and arms, substantially as set forth. 5th. The combination with the ends *C* of a box or crate, of a top or cover, a hasp secured to each end of said cover projecting down the ends and forming a slot, a bolt passing through each end through said hasp and having its end upset and a thumb-nut on each bolt made inseparable therefrom by said upsetting, substantially as set forth.

**No. 49,350. Pump. (Pompe.)**

George Russell Hamilton and John McPherson, Ancaster, both of Ontario, Canada, 27th June, 1895; 6 years.

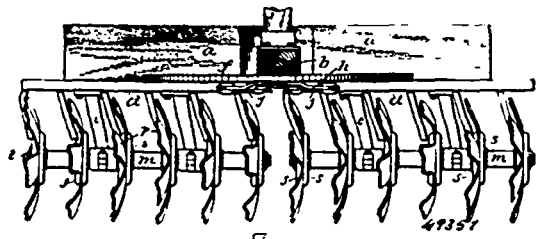
*Claim.*—1st. In a pump, a water pipe inserted into a cylinder, the latter having an opening at the bottom with a disc valve to open and close the opening, and having pins on the under side with shoulders to come in contact with the bottom of the cylinder to prevent the valve from rising too high, an outer cylinder enclosing the inner cylinder to easily move vertically on it, and provided with a similar

valve opening and valve, with shouldered pins on the under side to prevent its rising too high, a bale attached to the outer cylinder



connected by a rod to the top end of a pump handle, all substantially as and for the purpose specified. 2nd. In a pump a water tube *A* connected to an inner cylinder *B*, in the bottom of a well, and enclosed in an outer cylinder *C*, the latter made to slide vertically on the former, the inner cylinder *B* having an opening *a*, and a disc valve *c* and pins *d*, with shoulders 2 attached to the under side of the said disc valve to prevent it rising too high, the outer cylinder *C* having an opening *f* in the bottom and covered with a disc valve *g*, and pins *h* attached thereto having shoulders 3 at the lower end to prevent said disc valve from rising too high, a bale *F* attached to the outer cylinder *C*, and a connecting rod *D*, connecting the said bale of the outer cylinder to the pump handle *i*, all constructed substantially as and for the purpose specified. 3rd. In a pump, the combination of the water pipe *A*, inner cylinder *B*, outer cylinder *C*, valves *c*, *g*, and their openings, and the leather flange *n*, secured in the bottom of the inner cylinder *C*, all substantially as and for the purpose specified.

**No. 49,351 Disc Harrow. (Herse à disque.)**



George Sheldon Kermee, Boston, Massachusetts, U.S.A., 27th June, 1895; 6 years.

*Claim.*—1st. A disc harrow, comprising in its construction a plurality of gangs of discs all arranged to throw the soil in the same direction, said gangs being pivoted to the frame off their longitudinal centres, an adjustable draft pole, a lever fulcrumed on the draft pole, and a link rod at each end of said lever and extending therefrom to the disc gangs, substantially as described. 2nd. A disc harrow, comprising in its construction the cross-beam *a*, the draft pole pivoted thereto, two gangs of discs all arranged to throw the soil in the same direction and pivoted to the beam *a*, each side of the draft pole, the segmental bar *f*, having teeth *g*, the lever *h* pivoted to the draft pole, and having pinion *i* engaging the teeth *g*, and link rods *j*, connecting the said lever with the inner ends of the disc gangs, substantially as described. 3rd. A wheel or disc for disc harrows, comprising in its construction a clamping hub, and a plurality of independently removable blades curved from the hub to their ends, the forward or cutting edge of each blade extending in a plane with the body, and the lower or outer portion of the rearward or trailing part being re-entrant or curved inward toward the earth-work face, as described. 4th. A wheel or disc for disc harrows, comprising in its construction a plurality of independently removable blades, a two-part hub between which the inner ends or bases of the blades are held, the edges of each blade from its inner end outward to substantially the edge of the hub bearing against the opposing edges of the bases of the adjacent blades, as described.