

straight and rigid in cross section, and a strip of elastic material, such as india-rubber, of plano-convex form in cross section secured at its flat side to said protecting band, so as to form therewith a combined protecting band and elastic strip, substantially as herein described for the purpose specified. 2nd. In a pneumatic tire, a protecting band composed of sheet metal corrugated transversely throughout its length, and flat or straight and rigid in cross section, and an outer strip of elastic material of plano-convex form in cross section, substantially as herein described for the purpose specified. 3rd. In a pneumatic tire, a protecting band composed of sheet metal corrugated transversely throughout its length, and flat or straight and rigid in cross section, and a strip of elastic material of plano-convex form in cross section, and in which said protecting band is molded or embedded, so as to form therewith a combined protecting band and elastic strip, substantially as herein described for the purpose specified. 4th. In a pneumatic tire, the combination, with an outer covering or tube forming or inclosing the air tube or chamber of the tire and an inner protecting band capable, when said tire is in use, of readily undergoing slight longitudinal contraction and expansion at a number of places throughout its length, of an elastic strip arranged between the protecting band and the outer covering or tube, so as to be constantly subjected to the pressure of the air within said air tube or chamber, substantially as herein described for the purposes specified. 5th. In a pneumatic tire, the combination of an outer covering forming or inclosing the air tube or chamber, a protecting band composed of transversely corrugated sheet metal, and an elastic strip of plano-convex cross section arranged between said air tube or chamber and outer covering and surrounding said protecting band, substantially as herein described for the purpose specified. 6th. In a pneumatic tire, the combination of an outer tubular covering forming the wall of an air tube or chamber, a strip of flexible material located within and secured at its edges to said tubular covering, a protecting band capable, when in use, of readily undergoing slight longitudinal contraction and expansion at a number of points throughout its length and arranged between said tubular covering and said strip of flexible material, and an elastic strip of plano-convex cross section arranged between said protecting band and outer tubular covering, substantially as herein described. 7th. A pneumatic tire, comprising a tubular covering composed of suitable material, such as canvas, having on each side a layer of india-rubber and forming an air tube or chamber, a strip of flexible material located within and secured at its edges to said tubular covering, a strip of india-rubber arranged between said flexible strip and tubular covering, and a protecting band composed of transversely corrugated sheet metal embedded within said strip of india-rubber, substantially as herein described for the purposes specified.

#### No. 40,824. Cultivator. (*Cultivateur*.)

Orrin R. Baldwin, Detroit, Michigan, U.S.A., 2nd November, 1892; 6 years.

*Claim.*—1st. In a wheel cultivator, the combination with the main frame and axle, of a lever arm pivotally secured to the axle, the rear portion of which is provided with a lateral extension, a shovel frame jointly suspended from the main frame at its front end, and from the lateral extension of said lever arm toward the rear end, and laterally vibratory on said lateral extension, and an operating lever to engage with said lever arm adapted thereby to elevate and lower the shovel frame, substantially as described. 2nd. In a wheel cultivator, the combination with the main frame, of a shovel frame jointly suspended at its forward end therefrom, a lever arm pivotally secured to the axle of the cultivator, the rear end of which is provided with lateral extension, a lever for operating said arm, a toggle arm jointly connecting the said lever arm and operating lever, whereby the lower end of the operating lever may be thrown past the centre to lock the frame in an upward position, said cultivator frames being provided with handles, the construction of the whole being such that a driver by seizing said handles may throw the cultivator frame into a locked upward position, without grasping the operating lever, substantially as described. 3rd. In a wheel cultivator, the combination with the main frame, of the shovel frame flexibly suspended therefrom at its front end whereby it may be moved longitudinally thereto, a lever arm pivotally secured to the axle, the rear end of which is provided with a lateral extension, a link pivotally secured to the shovel frame at its lower end, and engaging with and laterally movable upon the extension of the lever arm, and a lever for operating the front end of said lever arm, substantially as set forth. 4th. In a wheel cultivator, the combination with the main frame, provided with standards, each bifurcated at its lower end and provided with means for attaching it to an axle, a lever arm pivotally secured to the axle within said bifurcation, a shovel frame suspended from the main frame at its front end and from the rear end of said arm, substantially as set forth. 5th. In a wheel cultivator, the combination with the frame, of a substantially U-shaped lever arm, one arm of which is perforated in a line with a perforation at the end of the other arm and is extended, the extended portion of the arm being also perforated, the axle passing through the end of the shorter arm and through the perforation of the other arm in a line with said end, and a cultivator frame suspended from said arm and from the main frame, and means for operating the same, substantially as described. 6th. In a wheel cultivator, the combination with a main frame and axle, of a shovel frame having at its rear end a vertically and laterally movable

connection therewith, a lever arm for controlling the vertical movement of the shovel frame, and an operating lever connected with the lever arm for raising and lowering the shovel frame, substantially as described. 7th. In a wheel cultivator, the combination with a main frame and axle, of a shovel frame having at its rear end a vertically and laterally movable connection therewith, a lever arm for controlling the vertical movement of the shovel frame, an operating lever, a toggle arm connecting the lever arm with the operating lever and means to hold the operating lever in a given position, substantially as described. 8th. In a wheel cultivator, the combination with a main frame and axle, of a shovel frame having at its rear end a vertically and laterally movable connection therewith, a lever arm fulcrumed to an axle connection and extended forward from its fulcrum for controlling the vertical movement of the shovel frame, and an operating lever connected with the forward projecting end of the lever arm, substantially as described. 9th. In a wheel cultivator, the combination with a main frame and axle, of a lever arm, a shovel frame jointly suspended from the main frame at its forward end and suspended upon said lever arm at its rear end, an operating lever, a toggle arm jointly connecting the operating lever with the lever arm, whereby the lower end of the operating lever may be thrown past the centre to lock the shovel frame in position, substantially as set forth. 10th. In a wheel cultivator, the combination with a main frame and axle, of a lever arm, a shovel frame jointly suspended from the main frame at its forward end, and supported upon said lever arm at its rear end, an operating lever connected with the lever arm, whereby the lower end of the operating lever may be thrown past the centre to lock the shovel frame in an upward position, the construction being such that a driver by seizing the shovel frame may throw it into a locked position without grasping the operating lever, substantially as described. 11th. In a wheel cultivator, the combination with the main frame and axle, of a shovel frame having at its rear end a vertically and laterally movable connection therewith, an operating lever to lift the rear end of the shovel frame, into an upward position, and means for locking the frame in an upward position, substantially as described. 12th. In a wheel cultivator, the combination with a main frame and axle, of a lever arm, a shovel frame jointly suspended from the main frame at its forward end, and supported on said lever arm at its rear end, an operating lever, a toggle arm connecting the operating lever and lever arm, locking mechanism to hold the operating lever in desired position, the construction being such that the shovel frame may be locked in a downward position, substantially as described.

#### No. 40,825. Potato Planter. (*Semoir à patates*.)

Gustav Hoffmann, Tischdorf, Prussia, 2nd November, 1892; 6 years.

*Claim.*—A potato planting machine having a horizontal shaft *n*, with hole digger *k* thereon, together with the feeding tubes *d*, the hinged lid *g* of which on being struck is momentarily opened, whereupon the book formed pins *x, x*, seated on the hinged lid *g* pass into the interior of the feeding tubes in order to prevent the falling of more than one seed potato at a time, substantially in the manner and for the purposes hereinbefore described and illustrated in the drawings hereunto annexed.

#### No. 40,826. Combined Low Water Alarm and Water and Steam Gauge. (*Indicateur d'eau et de vapeur combinés*.)

Isaac Willan, Detroit, Michigan, U.S.A., 2nd November, 1892; 6 years.

*Claim.*—1st. In combination, a water gauge provided with alarm mechanism, and a float to control the operation of the water gauge and alarm mechanism, said gauge provided with a dial and an index finger traversing said dial, substantially as described. 2nd. In combination, a float, a water gauge having a rotatable spring case, and alarm mechanism operated by the movement of said spring case, said gauge provided with a dial and an index finger traversing said dial, substantially as described. 3rd. The combination of the float, the arm C, made tubular at its upper end, the water gauge provided with a rotatable spring case connected with the float, alarm mechanism communicating with the interior of said gauge, and a controlling valve operated by the movement of the spring case, substantially as described. 4th. The combination of the float, the arm C, made tubular at its upper end, the water gauge provided with a rotatable spring case connected with the float, alarm mechanism communicating with the interior of said gauge, and a self-closing controlling valve arranged to be opened by the movement of said case, said valve provided with a valve stem projecting to the exterior, substantially as described.

#### No. 40,827. Car Truck. (*Châssis de chars*.)

George Martin Brill, Philadelphia, Pennsylvania, U. S. A., 2nd November, 1892; 6 years.

*Claim.*—1st. In a motor truck, the combination, with a stationary frame supported upon the running gear, said frame having sections extending outwardly from the axle, of a movable frame supported upon said truck, spiral springs located between the movable and stationary frames, and elliptical springs located between the extended sections of the said rigid frame and the movable frame, substan-