

shafts, the rear frame bar 23, the transverse axle journaled in the bars 22, the ratchet discs 35 mounted on the axle, the ground wheels having their outer faces provided with oppositely disposed teeth for engaging the ratchets and loosely mounted on the axle coiled springs arranged at the inner sides of the ground wheels, collars between the wheels against which the springs abut, a gear-wheel carried by the outer end of the axle, a gear-wheel mounted on the feed shaft of the hopper, and an intermediate gear-wheel for communicating motion from the gear-wheel of the axle to that of the feed shaft, substantially as specified. 4th. In a machine of the class described, the combination with the front platform, the framework carrying the pulverizing devices, and the hopper arranged thereover and provided with a feed shaft extending beyond its ends, of a rear rectangular frame loosely connected at its terminals to said feed shaft, an axle journaled in the rectangular frame, ground wheels carried by the axle and adapted to rotate therewith, a gear loosely mounted on the outer end of the axle, an angular lever engaging the gear and adapted to reciprocate the same, a locking bar for said angular lever, a gear-wheel carried by the feed shaft of the hopper and an intermediate gear mounted upon the frame and adapted to communicate motion from the shifting gear to the gear of the feed shaft, substantially as specified. 5th. In a pulverizer, the combination of the beam 1, with the cross-planks 2 arranged in lap joint fashion, and the pulverizing knives 20 arranged at the front of the cross-planks and provided with rounded lower sides, and two or more tangs 21 formed on the upper edges of the knives and passing through openings of the planks to secure the knives thereto, substantially as described.

**No. 49,346. Electric Train Signal.**  
(*Signal de chemin de fer électrique.*)



Edward James Devine, Schreiber, Ontario, Canada, 26th June, 1895; 6 years.

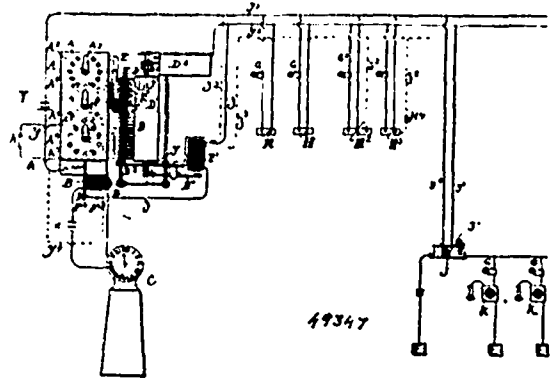
**Claim.**—1st. The herein described improvement in train signals, consisting of wires in each car of a train connected in series, signals and batteries at each end of the train, in circuit with said wires, and devices at each end of a car, said devices being provided with a fixed frame and a pivoted shutter, one of said wires being secured to the frame and also to the shutter, and another wire to the shutter, so that when the shutter drops said wires contact, substantially as set forth. 2nd. In a train signal, a series of wires, a circuit closer into which said wires extend, said closer having a movable portion designed to automatically close a circuit when out of its normal position, as set forth. 3rd. In a train signal, a series of wires, and a circuit closer provided with a frame and a movable shield or tongue, said wires being extended into or mounted on said frame and tongue, one of them having an uninsulated portion, another of said wires also having an uninsulated portion extending across the plane of said former uninsulated portion, as set forth. 4th. In a train signal, a series of wires, a fixed frame into which said wires extend, and a movable shield or tongue to which said wires are also connected, one of said wires having an uninsulated portion extended from said shield or tongue, another of said wires having an uninsulated portion in said frame contiguous to said former uninsulated portion, both of said uninsulated portions being designed to contact when said shield or tongue is out of its normal position, substantially as set forth. 5th. In a train signal, a series of wires, and a circuit closer into which said wires extend, the same consisting of a frame having an opening or cut-away portion, a shield or tongue pivoted to said frame at the top of said opening, and a spring bearing on said shield or tongue, said wires also being carried by said shield or tongue and two of said wires arranged so as to intersect the plane of each other and designed to contact when said shield or tongue is lowered, substantially as set forth. 6th. In a train signal, a series of wires, fixed frames into which said wires extend having invariable shields or tongues through which said wires are passed, two of said wires being arranged so as to intersect the plane of other and designed to contact when said shield or tongue is lowered, and couplers for uniting the corresponding wires of adjacent cars, the same comprising metallic plates, enclosing tubes and clamps, substantially as set forth. 7th. In a train signal, a series of wires, circuit closers into which said wires extend, having movable shields or tongues through which said wires are passed, and couplers for uniting the corresponding wires of adjacent cars, the same comprising metallic plates imbedded in gutta-percha at one end, semi-cylindrical tubes, and spring-held clamps encompassing said tubes, substantially as set forth.

**No. 49,347. Electric Time Signalling System, etc.**  
(*Système de signal horaire électrique, etc.*)

Walter Aloysius Pursell, Guttenberg, New Jersey, U.S.A., 26th June, 1895; 6 years.

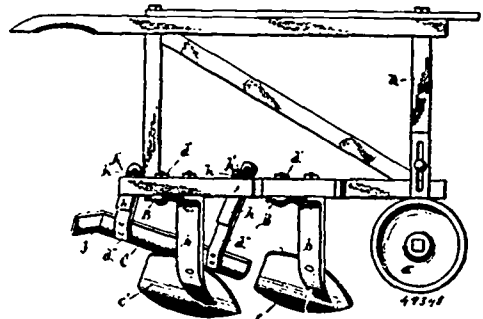
**Claim.**—1st. In a system for electrically transmitting time signals,

the combination of the time switch device divided into circles not concentric, each circle being provided with switch points and a



switch arm, brushes wired to said switch points, and a circuit wheel or drum, through which one or a series of impulses may be sent, substantially as set forth. 2nd. A system for electrically transmitting time signals, comprising a time indicator, a time switch, a circuit wheel or drum, means for operating said circuit wheel or drum and said time switch, and means for controlling said operation comprising an electro-magnet in circuit with the time indicator and an electro-magnet in the main circuit or in a separate circuit, said electro-magnets operating armature levers to release the moving mechanism, and brushes connecting said circuit wheel or drum with said time switch, substantially as set forth. 3rd. A system for electrically transmitting time signals, comprising a time indicator, a time switch provided with contact points divided into series, each series being provided with a contact arm, means for operating said contact arms at suitable intervals, a series of brushes wired to said contact points, a circuit wheel or drum provided with contact ribs, and means for revolving said circuit wheel at proper intervals, substantially as set forth. 4th. In a system for electrically transmitting time signals the combination with a clock, a motor operated by said clock at determined intervals, of a time switch device divided into circles not concentric, each circle being provided with switch points and a switch arm, brushes wired to said switch points, and engaging with contacts upon a circuit wheel or drum, substantially as set forth. 5th. The combination with a time switch device provided with two or more series of contacts arranged in line, of a contact arm for each series, a circuit wheel formed as a cylinder adjacent to said time switch device, and brushes for said contact points, contracting with said cylinder to transmit one or a series of impulses through the same, substantially as set forth. 6th. The combination with a circuit wheel or drum provided with a series of contact ribs of definite width, of another rib or ribs of greater width, and a circuit breaker wired to the last named rib or ribs, substantially as set forth. 7th. In a system for electrically transmitting audible time signals, the combination with a time switch device provided with contact points and electrically actuated switch-arms of a circuit wheel or drum provided with a series of contact ribs of definite width, and another rib of greater width, brushes for contacting with said ribs and wired to the contacts upon said time switch device, and a circuit breaker interposed between the contact plate and the brush engaging with the rib or ribs of greater width, substantially as set forth.

**No. 49,348. Cultivator. (Cultivateur.)**



William Fletcher, Johnson, Addison, New York, U.S.A., 26th June, 1895; 6 years.

**Claim.**—1st. The combination with the cultivator-frame, of two sets of blades pivoted to the underside of the frame at opposite sides of the central line of draft, and all independently adjustable to different angles in relation to the line of draft as set forth. 2nd. The combination with the cultivator-frame, of a plant-guard