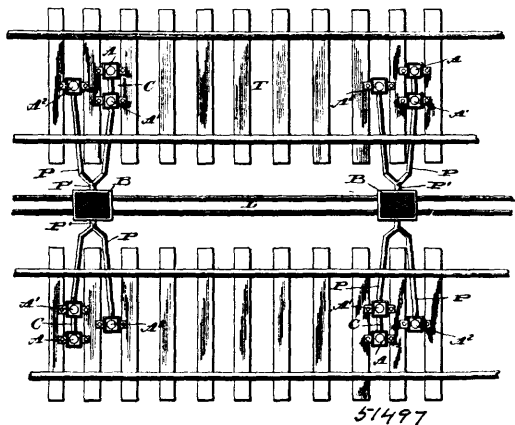


Claim.—1st. An electric railway system comprising a car provided with three contact shoes insulated from one another and from



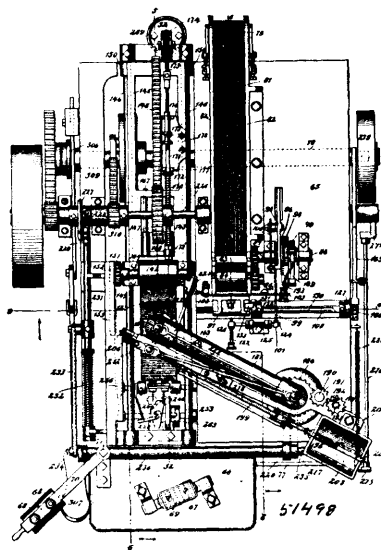
the body of the car, a source of electrical supply having its opposite poles connected to two of said shoes respectively, and a motor having one of its poles connected to one of said last named shoes only, and its opposite pole connected to the third shoe, in combination with track terminals in groups of three, one for each shoe, set at such intervals apart that the contact shoes on the car will reach one group before they leave the other, and all metal circuit, a feeder from the supply side and a return wire from the return side of said service circuit connected to the two track terminals of each group, through which the motor circuit is completed, normally open contacts in each feeder connection, an armature for closing said contacts, a pick up magnet for each armature having its energizing coil connected to the appropriate two of each group of track terminals, and circuit connections whereby when the car shoes meet a group of track terminals, the energizing circuit of the pick up magnet will be closed, substantially as and for the purposes hereinbefore set forth. 2nd. An electric railway system comprising a car provided with three contact shoes insulated from one another and from the body of the car, a source of electrical supply having its opposite poles connected to two of said shoes respectively, and a motor having one of its poles connected to one of said last named shoes only, and its opposite pole connected to the third shoe in combination with track terminals in groups of three, one for each shoe, set at such intervals apart that the contact shoes on the car will reach one group before they leave the other, an all metal service circuit, a feeder from the supply side and a return wire from the return side of said service circuit connected to the two track terminals of each group through which the motor circuit is completed, normally open contacts in each feeder and return connections an armature for closing both sets of said contacts, a pick up magnet for each armature having its energizing coil connected to the appropriate two of each group of track terminals, and circuit connections whereby when the car shoes meet a group of track terminals, the energizing circuit of the pick up magnet will be closed, substantially as and for the purposes hereinbefore set forth. 3rd. A track terminal holder comprising a socketed receptacle formed with a passage below the socket for the connecting wiring of the terminals in combination with a non-conducting block seated and held in said socket a track terminal pin passing up through said block, and a contact cap seated on said block and detachably connected to and covering the upper end of the terminal pin, substantially as and for the purposes hereinbefore set forth.

No. 51,498. Cigarette Machine. (Machine à cigarettes.)

John R. Williams, East Orange, New Jersey, U.S.A., 2nd March, 1896; 6 years. (Filed 13th January, 1896.)

Claim.—1st. In a cigarette making machine, the intermittent tobacco feed mechanism, the cutter, and cigarette rolling mechanism, combined with the shuttle having a hinged lid adapted to travel between said tobacco feed mechanism and said cigarette rolling mechanism and to deposit the severed charge of filler tobacco on the said rolling mechanism, means for opening and closing said lid, the grooved rod upon which said shuttle is secured, the carriage in which said rod is mounted, means for reciprocating said carriage, and the rigid stud entering the groove of said rod and effecting thereby the turning of said shuttle downward to deposit the charge of filler tobacco and then back to a horizontal position, substantially as set forth. 2nd. In a cigarette making machine, the intermittent tobacco feed mechanism, the cutter, and cigarette rolling mechanism, combined with the reciprocating carriage for the shuttle, the grooved shaft mounted in and carried by said carriage, the rigid stud entering the groove of said shaft, and the shuttle mounted upon said shaft and adapted to travel therewith between said tobacco feed mechanism and the said rolling mechanism, the said shuttle being open at one edge to receive the filler tobacco and adapted thereafter, when turned downward by the action of said stud and groove, to discharge the severed charge of tobacco upon said rolling mechanism, substan-

tially as set forth. 3rd. In a cigarette making machine, the intermittent tobacco feed mechanism, the cutter, and cigarette rolling



mechanism, combined with the shuttle adapted to travel between said feed mechanism and said rolling mechanism and having a hinged side and a spring plunger provided with ratchet teeth, the pawl engaging said ratchet teeth and carried by the hinged side of said shuttle, means for holding said hinged side of the shuttle normally closed, means for freeing said pawl from said ratchet when said shuttle is over the rolling apron in position to discharge the severed quantity of filler tobacco, and means for reciprocating said shuttle and turning it downward to discharge the filler tobacco therefrom, substantially as set forth. 4th. In a cigarette making machine, the intermittent tobacco feed mechanism, the cutter, and cigarette rolling mechanism, combined with the shuttle adapted to travel between said feed mechanism and said rolling mechanism and composed of the opposite plates forming the receptacle, one of said plates being hinged, means for opening and closing said hinged plate, the yielding plunger within said shuttle, means for locking the plunger as it recedes under the pressure of the tobacco, means for freeing the said plunger to eject the tobacco when in position over the rolling mechanism, and means for reciprocating said shuttle and turning it downward to deposit the filler tobacco, substantially as set forth. 5th. The feed belt and rollers, the pawl and ratchet mechanism for effecting the intermittent movement of said belt and rollers, the cutter for severing the charges of tobacco, the rod 99 and plate 96 connected with said pawl and ratchet mechanism for disengaging the pawl from the ratchet when in their upward position, the catch for retaining the said rod when its lower position, the rock-shaft carrying said catch and the stop connected with said catch, combined with means for rolling the cigarette, the shuttle adapted to travel between said feed mechanism and said rolling means and composed of the opposite plates forming a receptacle, the yielding plunger within and carried by said shuttle and having an arm in line with said stop, and adapted under the pressure of the tobacco fed into the shuttle to engage said stop and free said catch from said rod for stopping the feed, and means for reciprocating said shuttle and turning it downward to discharge the filler tobacco, substantially as set forth. 6th. In a cigarette making machine, the intermittent tobacco feed mechanism, and cigarette rolling mechanism, combined with the cutter, the shuttle adapted to reciprocate between said feed mechanism, and said rolling mechanism and to convey the separate charges of filler tobacco from the former to the latter, means for reciprocating said shuttle and turning it downward to discharge the filler tobacco therefrom, a yielding plunger within and carried by said shuttle, means for retaining the plunger at its inward position during the travel of said shuttle from the tobacco feed mechanism to the rolling mechanism, and means for freeing said plunger when the shuttle is turned downward, substantially as set forth. 7th. In a cigarette making machine, the intermittent tobacco feed mechanism, the cutter, and cigarette rolling mechanism, combined with the shuttle carriage, means for reciprocating the same from said feed mechanism to said rolling mechanism, the revoluble shaft mounted in said carriage and containing the cam-groove, the rigid stud entering said groove, and the shuttle mounted on said shaft, the yielding plunger in said shuttle, means for locking the plunger at its inward position, and means for freeing said plunger when the shuttle is in position over the said rolling mechanism, the said groove being of a form to turn the shuttle downward into a vertical position while over the rolling mechanism, and to restore the same to a horizontal position in line with the filler