

No. 42,470. Signal for Railway.*(Signal de chemin de fer.)*

William Dart Sheldon, Providence, Rhode Island, U.S.A., 5th April, 1893; 6 years.

Claim.—1st. In a railroad signal, the combination with the main circuit conductors, and an electro motor connected with one of the main circuit conductors, of a switch connected with the other main circuit conductor, a semaphore, and mechanism intermediate between the switch and the electric motor, and the connections intermediate between the switch and the electro motor, constructed to start and stop the motion as described. 2nd. The combination with a railroad and a switch operated automatically by the train, of an electric motor, mechanism for operating a signal by the motor, and connections between the main circuit, the motor and the switch, constructed to operate the signal at a distance from the switch, as described. 3rd. A railroad block signal consisting of signals located at the ends of each section or block, electric motors connecting by mechanism, substantially as described, the motors with the signals, switches located near the end of each section or block, and connections between the switches, the motors and the electric conductors constructed to connect the motors with the circuit and operate the signal in advance of and in the rear of a passing train, as described. 4th. The combination with a railroad and a switch operated automatically by the train, of an electric motor mechanism for operating a signal by the motor, an electric lamp and a cut-out operated by the motor, and connections between the main circuit, the motor, the lamp, and switch, constructed to operate a signal and display a light in advance of the passing train, as described. 5th. The combination with a semaphore signal, an electric motor, mechanism for operating the semaphore, and automatically stopping the motor when the semaphore has moved to the desired position, and a railroad, of two switches placed one on each side and at any desired distance from the signal, each constructed to be operated automatically by a passing train, and the connecting conductor wires between the switches, the motor and the main circuit constructed to start the motor and operate the signal in advance of the passing train by one of the switches, and after passing the signal, start the motor and operate the signal by the other switches automatically, as described. 6th. The combination with a semaphore signal, an electro motor and mechanism intermediate between the motor and the signal, as described, of an electric lamp, a switch operated by the motor, conductor wires connecting the motor and lamp with the main circuit, and a switch or switches for closing the circuit and starting the motor, as described. 7th. The herein described system of automatic railroad signals, the same consisting of a series of semaphore signals placed at intervals along a railroad, electro motors connected by mechanism, substantially as described, with the semaphores, said mechanism being constructed to automatically stop the motor when the semaphore is placed in the predetermined position, switches placed near each semaphore signal connected with two signal operating motors in opposite directions, and a main circuit connected with a source of electric energy with the motor, and the switches constructed to successively start each motor and display a semaphore in advance of a moving train, and a semaphore in the rear of the train, and start the motor at the rear end of the section or block when the train leaves the section or block to operate the signal as described. 8th. A railroad signal system consisting of semaphores, electric lamps and electro motors for operating the semaphores, and lamp cut outs placed at intervals along a railroad connected with switches operated automatically by the passing train, and with a main circuit constructed to display a semaphore, and an electric light at each end of each section or block occupied by a train, as described. 9th. In a railroad signal, the combination with the curved arm 14, the lever 19, the standard 20, spring 21, base 25, magnet 24, armature 23, and contacts 26, of the electric motor 36, the semaphore 43, and intermediate mechanism for operating the semaphore by the motor, and the conductor wires connecting the motor and switch with the main circuit constructed to automatically connect the motor with the circuit by the passing train, as described. 10th. The combination with the electro motor 36, the pinion 37, the gear 38, the shaft 39, provided with the worm 40, the worm gear 41, provided with the pins 44 and 45, the shaft 42, and semaphore 43, of the contact posts 46 and 47, the spring arms 48 and 49, two switches located at points in opposite direction from the signal, and operated automatically by the passing of a train, and conductor wires connecting the electro motor and switches with the main circuit constructed to operate the signal, as described. 11th. The combination with the track of a railroad of the curved spring arm 14, the abutment 16, to which the arm is pivoted, and the plate 17, forming a bearing on which the free end of the arm 14 slides when the same is depressed by a passing train, as described. 12th. The combination with the motor 36, the shaft 42, and the disc 41, secured to the shaft 42, and provided with the pins 44 and 45, and intermediate mechanism between the motor and the shaft 42, of an electric lamp, the cam 57, secured to the shaft 42, the contacts 60 and 61, switches operated by the passing of a train, and conductor wires connecting the electric lamp, the motor and switches with an electric circuit, as described. 13th. The combination with the shaft 42, provided with a day signal or semaphore, of the cam 57, the contact 60 and 61, the worm gear 41, provided with the pins 44 and 45, the worm 40, shaft 39, gear 38, pinion 37, and motor 36, two switches constructed to close a circuit automatically by a passing train, located in opposite

directions from the above signals, and connected with the main circuit and with the contact posts 46 and 47, the arms 48 and 49, and conductors connecting the motor and lamp with the main circuit, constructed to operate the signal and display the light, as described. 14th. The combination with the railroad track, and switches operated automatically by the passing train to close an electric circuit, of the posts 34 placed at intervals along the road, and provided with a box 35 containing an electric motor, and mechanism for operating a signal and connecting and disconnecting a lamp, the signal consisting of the disc 52, arms 53, and the lantern 54, provided with the electric lamp 55, constructed to display the signal and the light in front of and in the rear of each train, and extinguish the light and remove the signal when any section or block is cleared, as described.

No. 42,471. Gate for Railways.*(Barrière de chemin de fer.)*

William Dart, Sheldon, Providence, Rhode Island, U.S.A., 5th April, 1893; 6 years.

Claim.—1st. The combination with a railroad gate, of an electro-motor and mechanism for operating the gate by the motor and switches placed on each side of the gate constructed to operate a switch automatically by the passing train to connect the motor with the circuit, as described. 2nd. The combination with switches automatically operated to close a circuit, of a railroad gate, an electro-motor and mechanism constructed to operate the gate by the motor and break the circuit, as described. 3rd. The combination with a railroad gate an electro-motor and mechanism for opening and closing the gate provided with two contact points and two contact arms operated automatically, of a switch placed at a distance from the gate constructed to close a circuit by the passing train and start the electro motor to close the gate, and a switch placed at a distance beyond the gate and operated by the train to close a circuit and start the electro-motor to open the gate, as described. 4th. The combination with the switch 10 constructed to operate automatically by a passing train to close the circuit, of the conductor wires 48 and 44, the electro-motor 36, the conductor wire 47, and the circuit wires 8 and 9, the gate shaft 20 and intermediate mechanism for operating the gate by the motor, as described. 5th. The combination with the motor 36, the pinion 35, gear wheel 34, shaft 33, worm 32, the worm gear 29, shaft 26, and mechanism intermediate between the shaft 26 and gate shaft 20 constructed to operate the gate, as described. 6th. The combination with the electric motor 36 and mechanism for rotating the shaft 26, of the pins 30 and 31, the spring arms 39 and 40, the contact posts 42 and 43, connections with the circuit and the switches, and the crank 24, connecting rod 25 and crank 23 secured to the shaft 20 of the gate, as described. 7th. The combination with a gate having connections by which other gates are operated, of an electro-motor connected by mechanism, substantially as described, with the grate operating mechanism, two or more switches operated automatically to close the circuit with the motor by the passage of a train by one of the switches, two automatic circuit breakers operated by the motor and connections between the motor, the switches and the main circuit constructed to open the gates on both sides of the track on the approach of a train and close the same, after the train has passed the gates, automatically, as described.

No. 42,472. Machine for Coating Fabrics.*(Machine pour enduire les étoffes.)*

William P. Cole, Montreal, Quebec, Canada, 5th April, 1893; 6 years.

Claim.—1st. An apparatus of the character described, comprising a fabric holding support, a tank arranged adjacent thereto and having a drum therein, parallel chain guides, clamping chains held to move oversuitable pulleys and adapted to pass through the guides, the chains being adapted to carry the fabric, and brushes arranged between the guides and the tank and in the path of the fabric, substantially as described. 2nd. An apparatus of the character described, comprising parallel slotted guides, carrying chains adapted to fit together and pass through the guides, a fabric holding support at one end of the guides, a tank arranged between the guides and the support, means for immersing the fabric in the tank as it passes from the support to the guides, and movable brushes arranged between the tank and the guides and in the path of the fabric, substantially as described. 3rd. An apparatus of the character described, comprising groups or series of longitudinally slotted guides, carrying chains adapted to travel through the guides and to clamp the fabric between them, a sizing tank arranged at the forward end of the first group of tanks, means for immersing the fabric in the sizing tank, a paint tank arranged between the two groups of guides, means for immersing the fabric in the tank, brushes arranged adjacent to the tank and in the path of the fabric, and a winding device to receive the fabric as it comes from the guides, substantially as described. 4th. An apparatus of the character described, comprising parallel longitudinally slotted guides movable back and forth in relation to each other, clamping chains held to move longitudinally through the guides and adapted to hold the fabric between them, a tank arranged at the forward end of the guides, a drum mechanism for forcing the fabric into the tank, and movable brushes arranged between the tank and the guides, sub-