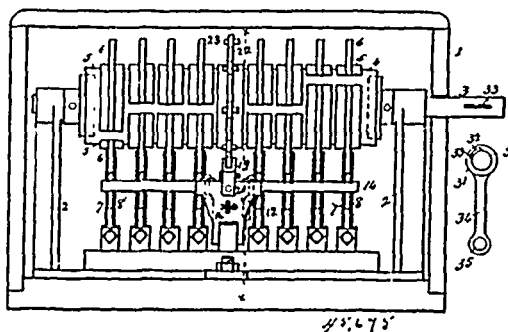


between different pairs of said conductors, and circuit-changing devices for altering the relation of the field magnet and armature-coils, substantially as described. 3rd. The combination, with the positive, negative, and neutral supply-wires, of a motor having one or more field-magnet coils and two or more armature-coils, means for closing the field-magnet circuit at will between two of said wires, and means for connecting the coils in series or in multiple are, substantially as described. 4th. The combination, with the positive, negative, and neutral supply-wires, of a motor having one or more field-magnet coils and two or more armature-coils, and means for closing the field-magnet circuit at will between the central and outer wires or between the two outer wires, and means for changing the connections of the motor-coils to series or to multiple, substantially as described. 5th. The combination, with the positive, negative, and neutral supply-wires, of a motor having several field-magnet and armature-coils, a switch having contacts which in one position of the switch close circuit between the neutral and an outer wire in series through all the motor-coils, contacts which in a second position of the switch close circuit between the two outer wires through all the coils in series, and contacts which in another position of the switch close circuit between the positive and negative conductors and then throw the motor-coils in multiple are, substantially as described. 6th. The combination, with the positive, negative, and neutral supply wires, of a motor having several field-magnet and armature coils, a switch having contacts which in one position of the switch close circuit between the neutral and an outer wire in series through all the motor-coils, contacts which in a second position of the switch close circuit between the two outer wires through all the coils in series, and contacts which in another position of the switch close circuit between the positive and negative conductors and then throw the motor-coils in multiple are, and a similar set of switch-contacts for reversing and governing the motor, substantially as described.

No. 45,675. Switch. (Commutateur.)

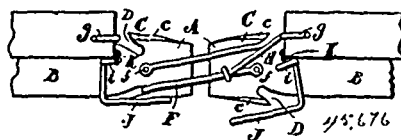


Robert Lundell, Brooklyn, New York, U.S.A., 3rd April, 1894; 6 years.

Claim.—1st. The combination, in a switch, of a switch member having contacts, a handle for moving it, a spring for throwing said member when the latter has been moved a predetermined distance, a second switch member, and an operating-spring therefor released at or about the same instant that the first mentioned spring throws its switch member, substantially as described. 2nd. The combination, in a snap-switch, of two switch members, one of which is provided with a suitable handle for moving it and with contacts and the other of which has contact devices adapted to make contact therewith, a spring put under tension by movement of the first mentioned switch member and acting on said member to throw it suddenly when the latter has been moved a predetermined distance, a second spring, also put under tension by movement of said first switch member, and means operated by said second spring for throwing the second switch member, whereby the circuit is made and broken by a double spring action, substantially as described. 3rd. The combination, in a switch, of a member in the form of a drum, on the surface of which are contact-plates in two series independent of each other, movable either to the right or to the left at will, co-operating switch-contacts, one or more springs opposing the movement of the movable member, whereby it or they will be put under tension by movement of the switch in either direction, and releasing devices for the springs, substantially as described. 4th. The combination, in a switch, of a body carrying two sets of contact-plates on opposite sides of a median line, respectively, forming one switch member and movable at will either to the right or left, a co-operating switch member having contact devices normally standing on said median line that is between said sets of plates, a spring so connected as to be put under tension by movement of the switch in either direction, an escapement or releasing device for said spring, and means operated by such spring for instantaneously changing the switch connections, substantially as described. 5th. The combination, in a switch, of a body carrying switch contact-plates, pivoted plates or springs adapted to make contact therewith, means for moving the body, a pivoted arm or device having a trip engaging the body,

whereby the arm or device is moved by said body, a spring connected to said pivoted arm or device and put under tension by such movement, said trip being made so as to disengage the connection between the body and the said arm or device at a predetermined point, whereby said spring can act, and a strip or bar carried by the pivoted arm and adapted to strike said pivoted contacts, whereby the connection of the switch is instantaneously changed, substantially as described. 6th. The combination, in a switch, of a body, several rows of contact plates thereon, pivoted springs or plates adapted to co-operate therewith, means for moving the body and for putting a spring under tension thereby, and means for releasing said spring, and a striker moved by the spring against the pivoted contact plates or springs, substantially as described. 7th. The combination of a drum or body carrying several contact-plates in the form of curved plates having flanges or webs extending in planes at right angles to the axis of the drum or body and in line with each other, some of said contact-plates being idle, but of the same shape as the other plates, and co-operating pivoted springs adapted to grasp and make contact with the plates, whereby the resistance to motion of the switch-body is the same in all positions, substantially as described.

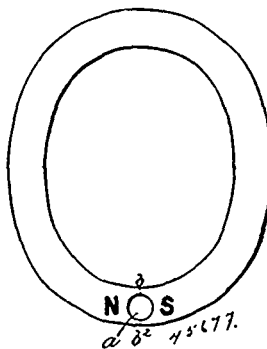
No. 45,676. Car Coupler. (Attelage de chars.)



Omer Sevigny and Zacharie Therien, St. Guillaume, Quebec, Canada, 3rd April, 1894; 6 years.

Claim.—1st. A car coupling consisting of the draw-head A, having hooks E formed on its upper and lower surfaces, projections c formed on the lip of the said hooks, the bail F pivoted to the said draw head, substantially as set forth. 2nd. In a car coupling device, the combination with a draw head having hooks formed on its upper and lower faces, a bail hinged to the said draw-head, of the rod G journaled on the end of the car having handles g, and the arm H engaging one side of the said bail, substantially as set forth. 3rd. In a car coupling device, the combination with a draw-head having hooks formed on its upper and lower faces, a bail pivoted to said draw head, and means for raising and lowering said bail, of the rod I journaled under the end of the car, having a stirrup J, handles i at the ends of said rod, and latches K, substantially as set forth.

No. 45,677. Magnet. (Aimant.)



The Whitney Electrical Instrument Company of Saco, Maine, assignee of Adrian Hazen Hoyt, Penacook, New Hampshire, U.S.A., 3rd April, 1894; 6 years.

Claim.—A permanent magnet composed of a bar of steel, provided with a substantially circular opening, and having its magnetic poles at opposite sides of and substantially surrounding said opening, substantially as and for the purpose described.

No. 45,678. Car Coupler. (Attelage de chars.)

Benjamin M. Whitlock, New York, Richard T. Haines, Frank A. Fox, Augustus Outerbridge and Arthur W. Dodge, assignees of James S. Scott, New York, State of New York, U.S.A., 3rd April, 1894; 6 years.

Claim.—1st. The combination with a coupler head, provided with a recess, and a pivoted angular knuckle having a portion capable of swinging into and out of the said recess, of a lock block having its front end pivotally connected to one end of a link, which at the other end is pivotally connected with the coupler-head, substantially as specified. 2nd. The combination with a coupler-head, provided