

may be included and excluded with respect to the motor circuit, substantially as described. 7th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an electromagnetic locking device for holding said switch in any contact position and means for throwing said locking device out of action in emergency. 8th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an electro magnetic locking device for holding said switch in any contact position, means for throwing said locking device out of action and a tell-tale to normally hold said means in position, consisting of a severable section of metal, arranged substantially as described. 9th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for locking or holding said switch in any contact position, and means for mechanically disengaging said locking device, substantially as described. 10th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for holding said switch in any contact position and means for disengaging said locking device by directly and mechanically displacing the movable member thereof, substantially as described. 11th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic electro magnetic locking device for holding said switch in any contact position, and means for disengaging said locking device consisting of a manually operated arm in position to engage and displace the movable member of said locking device, and an actuating handle for said arm, substantially as described. 12th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic locking device controlled by an electro magnet for holding said switch in either contact position and means for instantly unlocking said locking device by overcoming its electro magnetic control consisting of a manually operated arm in position to engage the movable member of the locking device and force it out of engagement, substantially as described. 13th. The combination of an electric motor, a suitable circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic locking device controlled by an electro magnet for holding said switch in any contact position and means for instantly unlocking said locking device by directly and mechanically overcoming its electro magnetic control, consisting of a movable part or member of said locking device and an operating lever fixed to said movable arm, substantially as described. 14th. The combination of an electric motor, a motor circuit therefore, means for varying the effective strength of current in said circuit including a multiple contact switch, an automatic device controlled by an electro magnet in the motor circuit to hold said switch in any contact position, means for instantly unlocking said lock consisting of an operating arm and a cam lever located on a spindle with a seal or tell-tale consisting of a severable section of metal arranged to block and hold said spindle in its normal position, normal position, substantially as described. 15th. In a motor controlling switch having a series of contact positions and electrical connections with the motor and with the source of electricity, the combination of an automatic electro magnet locking device including a toothed ratchet, a vibrating finger or dog to engage therewith and a section of non-magnetic metal in position to prevent the establishment of magnetic continuity through the ratchet and dog, substantially as described. 16th. In a motor controlling switch having a series of contact positions and electrical connections with the motor and with the source of electricity, the combination of an automatic electro magnet locking device including a toothed ratchet and a vibrating finger or dog, said dog being composed of a section of non-magnetic material and a hardened contact point to engage with said ratchet, substantially as described.

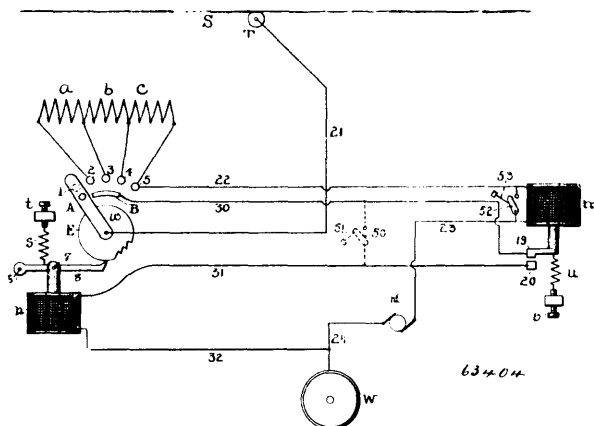
No. 63,401. Electric Motor Switch.

(Commutateur pour moteurs électriques.)

Reese Hutchinson, Mobile, Alabama, U.S.A., 7th July, 1899; 6 years. (Filed 29th March, 1899.)

Claim.—1st. The combination of an electric motor, an electric circuit, a motor switch for varying the current strength in said circuit, and means for normally locking and automatically controlling the movement of said switch. 2nd. The combination of an electric motor, a suitable circuit, a switch for varying the strength of current in the motor coils, an automatic lock for said switch and an electromagnetic device to control said lock, said electromagnetic device being connected with the motor circuit and so adjusted that upon the establishment of a predetermined strength of current the switch is released, substantially as described. 3rd. The combination of an electric motor, a suitable circuit therefore, a multiple contact motor switch for varying the strength of current in the motor coils, an automatic lock, normally holding the switch at rest, and an electromagnetic device connected with the motor circuit operating to release the switch upon the establishment of a predetermined strength of current only. 4th. The combination with an electric

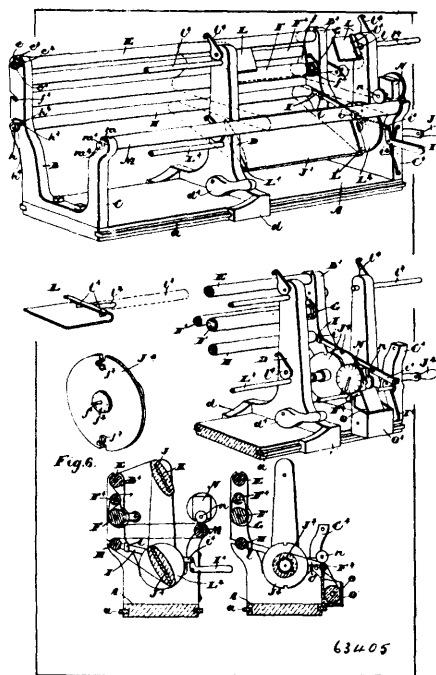
motor, a circuit therefore, a multiple contact switch to vary the strength of current in the motor, a lock to normally hold the switch



in any contact position, and a magnet to operate said lock located in a branch or second circuit responsive to a predetermined strength of current in the motor circuit. 5th. The combination with an electric motor, a circuit therefore, a multiple contact switch to vary the strength of current in the motor coils, a lock arranged to normally engage and hold said switch, a magnet to disengage said lock located in a second circuit, and a magnet located in the motor circuit operating break points in said second circuit. 6th. The combination with an electric motor, a circuit therefore, a multiple contact switch to vary the current strength in the motor coils, a lock arranged to normally engage and hold said switch, a magnet to disengage said lock having its coils in a branch of the motor circuit and break points in said branch circuit operated by the switch, substantially as described. 7th. The combination with an electric motor, a circuit therefore, a multiple contact switch to vary the current strength in said circuit, and a lock arranged to normally engage and hold said switch, a magnet to control said lock having its coils in a branch circuit and a break point in said branch controlled by said switch, substantially as described.

No. 63,405. Fabric Winding Machine.

(Machine pour enrouler les tissus.)



Brinton Dougall Wight, Napinka, Manitoba, Canada, 7th July, 1899; 6 years. (Filed 29th March, 1899.)

Claim.—1st. The combination with the holding roller for the wound fabric, of the winding spindles provided with end plates having suitable holding spicular projections and gripping lips and the pair of tension rollers, one journaled on the arms secured to the spindle of the roller and the helical spring for exerting a