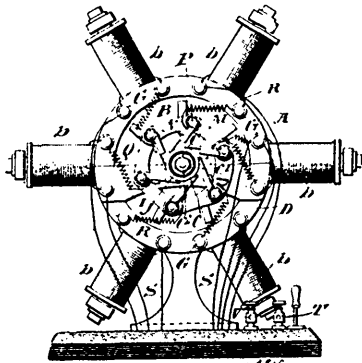


combination, with the trolley pole, comprising oppositely arranged spring-pressed toggle arms, of the trolley-wheel carried at the upper end of the toggle arms, and a device actuated by the upward extension of the trolley pole to pull the pole over, substantially as described. 4th. The combination, with the trolley pole, comprising the oppositely arranged spring-pressed toggle arms, of the spring secured to opposite toggle arms and to an adjacent support, a device actuated by the swinging of the toggle arms to disengage the springs, and a lock to alternately fasten the springs, substantially as described. 5th. The combination, with the oppositely arranged toggle arms pivoted together at the top and bottom, of the trolley-wheel, the supporting fork of the same having its shank extending downward through the upper pivot of the toggle arms, and the links pivotally connected to the shank and to the toggle arms, substantially as described. 6th. The combination, with the extension trolley pole, of the base supporting it, the springs connected with the opposite sides of the pole and with the base, releasing chains connecting the lower ends of the springs with the trolley pole, and a slide to alternately lock the springs, substantially as described. 7th. The combination, with the base, the oscillating cross-bar thereon, and the trolley pole mounted on the cross-bar and comprising oppositely arranged spring-pressed toggle arms, of the springs connected with the opposite toggle levers and hooked to staples on the base, and the slide mounted on the base and adapted to alternately lock the hooks to the staples, substantially as described. 8th. The combination, with the base, and the trolley pole comprising oppositely arranged spring-pressed toggle arms, of the springs secured to opposite toggle arms and hooked to staples on the base, the chains connecting the spring hooks with the toggle arms, and the slide movable on the base and adapted to alternately lock the springs to the staples, substantially as described. 9th. The combination, with the trolley pole, its supporting base, the springs secured to the pole and connected to the base of the slide to lock the springs to the base, of the lever fulcrumed on the base and connected with the slide, and the oppositely extending cords to work the lever, substantially as described.

No. 48,810. Electric Motor. (Moteur électrique.)

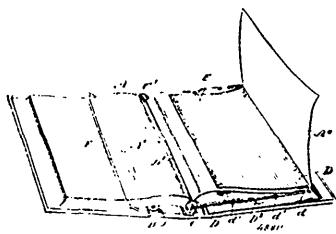


John Samuel Losch, Summit Station, John Hay Phillips, Joseph Winfield Meyer and John Harris Williams, Pottsville, all of Pennsylvania, U.S.A., 1st May, 1895; 6 years.

Claim.—1st. In an electric motor, the combination with a series of field magnets, and a series of armatures, of a commutator composed of a cylindrical shell, one end of which is divided into a number of distributing sections equal to the number of armatures, the fractional portion of the circumference of the shell occupied by each of said sections being represented by the product obtained in multiplying the number of field magnets by the number of armatures. 2nd. In a motor of the kind described, the combination of a non-magnetic casing having a series of openings formed therein through which the poles of a series of magnets mounted thereon project, an armature mounted upon a shaft revolvable within the casing, a commutator provided with a continuous ring through which current is distributed to the coils in series, and brushes bearing upon the distributing sections and connected to the field coils in such manner as to cause a change in location of the effective point of the magnetic field in response to and at a higher speed than the revolution of the armature. 3rd. In a motor of the kind described, the combination of an armature composed of a series of soft iron bars, an annular non-magnetic casing surrounding said armature and provided with a series of openings, field magnets mounted upon the casing with their poles projecting through the openings into operative relation to the armature, and means whereby the magnetic field may be caused to rotate in the direction of armature travel and at a higher speed than the same, and the point of highest efficiency between the field magnets and armature utilized. 4th. In an electric

motor, the combination of an armature, an annular non-magnetic casing surrounding the same, openings in the casing, magnets carried by the yokes secured to their outer ends and with their inner ends projecting through the openings in the casing, and bolts passed through the yokes and seated in the casing by which the magnets are retained in place, substantially as described. 5th. In an electric motor, the combination, with a commutator, of a brush provided with ribbed or flanged ends, whereby a greater wearing surface is provided, and whereby the brush is more readily retained in position. 6th. In an electric motor, the combination, with a commutator-brush ribbed or flanged at its ends and perforated at its centre, of a holder correspondingly grooved and perforated, a retaining-bolt whereby the brush is retained in position, means for holding the brush in operative relation to the commutator, and a spring whereby the pressure may be determined, substantially as described.

No. 48,811. Check Book. (Carnet de chèques.)



The Carter Crane Company, assignee of Edward Carney, both of Toronto, Ontario, Canada, 1st May, 1895; 6 years.

Claim.—1st. The combination with a check book or copying book comprised of a number of original leaves and duplicate leaves, of a wire loop, one side of which passes through the centre of the book next the binding and means for securing such side in position and the other side of which rests, close upon the outer edge of the leaves of the book and means for securing the carbon leaf to the outer side of the loop, as and for the purpose specified. 2nd. The combination with a check book comprised of a number of duplicate leaves and fly leaves or originals forming part of the duplicate leaf and folding inwardly thereupon, of a wire loop the inner side of which passes lengthwise through the centre of the leaves of the book next the binding and is suitably hinged at the ends to retain it in such position and the outer side of which rests close upon the outer edges of the leaves, and has spring fingers at the ends between which and this the folded edge of the carbon leaf is held, as and for the purpose specified. 3rd. The combination with a check book comprised of a number of duplicate leaves and fly leaves or originals forming part of the duplicate leaf and folding inwardly thereupon, of a cover provided with a plate extending across the inside of the back of the book, and having upwardly turned hooks, and a wire loop the inner side of which extends the length of the book between the centre of the leaves next the binding and passes between the hooks, and the outer side of which has spring fingers at the ends between which and this side the folded edge of the carbon leaf is held, as and for the purpose specified. 4th. The combination with a check book comprised of a number of duplicate leaves and fly leaves or originals forming part of the duplicate leaves and folding inwardly thereupon, of a wire loop the inner side of which passes lengthwise through the centre of the leaves of the book next the binding, and is suitably hinged at the ends to retain it in such position, and the outer side of which has spring fingers at the ends between which and this side the folded edge of the carbon leaf is held, and the sliding jointed ends each member of which is formed with loops *d*, through which the adjacent member passes, as and for the purpose specified. 5th. The combination with a check book or copying book comprised of duplicate leaves and originals, of a cover and a bail hinged in ears attached to it and designed to straddle the duplicate leaves when turned back, as and for the purpose specified. 6th. The combination with a check book or copying book comprised of duplicate leaves and originals, of a cover and bail *F*, hinged in ears *f*, attached to the cover and having ends *f'*, extending from the pivotal ends of the bail, as and for the purpose specified.

No. 48,812. Umbrella. (Parapluie.)

The Grispaux Umbrella Company, Glens Falls, New York, assignee of Clarence C. Frost, Norwich, Connecticut, both in the U.S.A., 1st May, 1895; 6 years.

Claim.—1st. In a folding umbrella having two-piece ribs connected