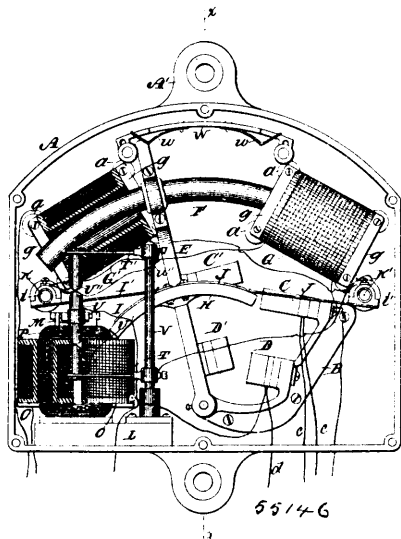


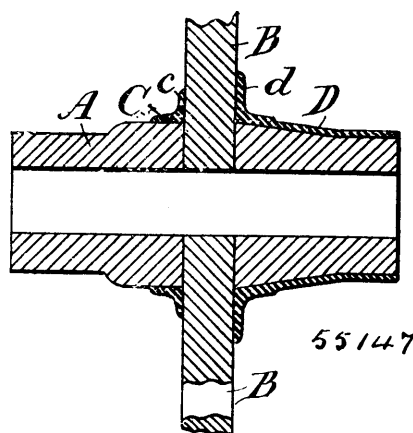
any circuit and connections through said electro-magnet, armature and secondary circuit, whereby said armature alternately connects



said switch-actuating magnets with said permanent source of electrical energy. 2nd. The combination with a permanent source of electrical energy and primary and secondary mains communicating therewith, of a transformer in circuit with the primary and secondary mains through suitable switches, an electro-magnet in series with one of the secondary mains, an armature therefor having electrical connection with one of the secondary mains and provided with a suitable retractile spring, a pair of contacts with which said armature may alternately engage, a pair of switch-actuating electro-magnets having alternate electrical connection with the secondary mains through suitable switches, switch terminals for the primary and secondary transformer circuits, and for the auxiliary, switch-actuating electro-magnet circuits, and an oscillating switch-lever adapted to open or close said circuits, substantially as and for the purpose set forth. 3rd. In an organized cut-out for electrical transformers, the combination with a wall-plate or bracket having means for attaching the same to a wall or post and suitable supports for the fixed and moving parts, substantially as described, of an oscillating controller, one or more solenoids adapted to move it electrically in one direction, means substantially as described for moving it in the opposite direction, switches adapted to be alternately closed by the movement of said controller, an oscillating switch-closer, a pair of solenoids to actuate the same, alternately-operating switches adapted to close the solenoid circuits, and a pair of switches to close both the primary and secondary circuits through the temporary transformer, and operating in connection with the said switch-closer, substantially as described. 4th. The combination with a suitable retaining frame adapted to be attached to a wall or post, and having supports for the fixed parts and bearings for the moving apparatus, of an oscillating controller in permanent electrical connection with a permanent source of electrical energy, switches alternately closed by the movement of said controller, a solenoid adapted to move said controller in one direction, suitable means for moving it in the opposite direction, an oscillating switch-closer adapted to close the primary and secondary circuits of a transformer and solenoid circuits through suitable switches, solenoids adapted to oscillate said switch-closer, switches to close said primary, secondary and solenoid circuits, and a permanent source of electrical energy with suitable electrical connections, whereby the controller is moved one way by the opening of the service circuit and in the other direction by its closing, the movement of said controller switching in one or other of the switch-closer solenoids and thereby cutting a transformer in or out, as specified. 5th. In a cut-out for electrical transformers, the combination with a suitable supporting frame, of a pair of solenoids oppositely inclined to each other, means substantially as described for alternately energizing them, a switch arm adapted to open and close switches in the primary and secondary circuits, with a curved armature attached to its free end and co-acting with said solenoids, a pair of solenoid switch-plates connected with the switch-arm and contacts bearing thereon, except near the limit of the arm's movement, substantially as and for the purpose set forth. 6th. In an automatic cut-out, the combination of a pair of solenoids with means for alternately energizing them, substantially as described, a switch-arm pivoted to oscillate between them and having a curved armature co-acting therewith, and friction springs adapted to engage with said arm at the limits of its stroke and prevent its rebound, substantially as described. 7th. In an automatic cut-out for electrical transformers, the combination with a three-wire system of distribution, of a controller having a plurality of solenoids in separate electrical connection with the positive and negative wires of said system respectively, and electrically connected

with a continuous source of electrical energy, a switch-closer adapted to open and close the primary and secondary circuits, a plurality of switches for said secondary circuit, solenoids adapted to oscillate said primary and secondary switch-closer, and a separate electrical connection of the controller solenoids with said secondary switches, substantially as and for the purpose set forth. 8th. The combination with a cut-out switch and its actuating solenoids, substantially as described, of a controller consisting essentially of an oscillating arm with a carbon contact at one end, one or more solenoids suitably connected to draw down said contact, a spring to draw it in the opposite direction, and carbon terminals upon which said contact abuts alternately, to switch one or the other of the aforesaid switch solenoids into circuit, substantially as and for the purpose set forth. 9th. The combination with a cut-out switch and its actuating solenoids, substantially as described, of a controller consisting of an oscillating arm with a carbon contact-piece secured at one end, a pair of adjustable carbon terminals with which it alternately engages to close different solenoid circuits, a suitable electro-magnet to draw said arm downward at the switch end thereof, a retractile spring, and an electro-magnet connected with the other portion of the arm to throw it in the opposite direction, as described. 10th. In an automatic cut-out, the combination with an oscillating switch-arm having a curved armature, and inclined solenoids co-acting therewith, of a pair of curved contact-plates, suitably insulated, mounted on said arm, and a pair of flexible and adjustable brushes or terminals adapted to bear on said plates except when at or near the limit of the arm's outward movement from said brushes, respectively.

No. 55,147. Vehiele Wheel. (*Roue de voiture.*)



William Chipman and Robert Lennox, both of Ottawa, Ontario, Canada, 4th March, 1897; 6 years. (Filed 21st August, 1896.)

Claim.—1st. In a vehicle wheel, the combination with the hub and spokes, of a band upon said hub having a flange fitting tight against the front of the spokes and a rear band having a serrated flange fitting tight against the rear of the spokes, each point or tooth registering with one of the spokes and extending beyond the height or diameter of the flange of the front band and the two flanges connected by bolts or rivets, substantially as set forth. 2nd. In a vehicle wheel, the combination with the hub and spokes, of a band upon said hub having a flange fitting flat and tight against the front of the spokes and a rear band having a flange of larger diameter than the front band fitting flat and tight against the rear of the spokes and rivets or bolts passing through said flanges and the joints of the spokes, substantially as set forth. 3rd. In a vehicle wheel, a hub band having a serrated flange adapted to fit flat and tight against the spokes, substantially as set forth. 4th. In a vehicle wheel, a support at the front and at the rear of each spoke, both of unequal length or height, fitting tight against the front and rear faces of said spokes respectively and rigidly supported on the hub by one or more bands, substantially as set forth.

No. 55,148. Preparation of Malt Liquor.

(*Préparation de liqueur de malt.*)

Ferol Brothers & Conway, assignees of Alfred Emmanuel Ferol, all of Madelin, Tivoli, New York, U.S.A., 4th March, 1897; 6 years. (Filed 4th September, 1896.)

Claim.—1st. In the manufacture of ales and other fermented liquors, the herein described process of treating them previous to filtration, which consists in confining fermenting hopped beer wort in a tight vessel at that stage of fermentation when its subsequent fermentation in said tight vessel will sufficiently carbonate it for use, then facilitating sedimentation by applied pressure, then carbonating it by its own fermentation while under the applied pressure, ripening it by continued fermentation, and when sufficiently carbonated separating it from the yeast and sediment precipitated by the applied pressure, then cooling it to render the semi-soluble albuminoid matter in it insoluble so that it may be removed by fil-