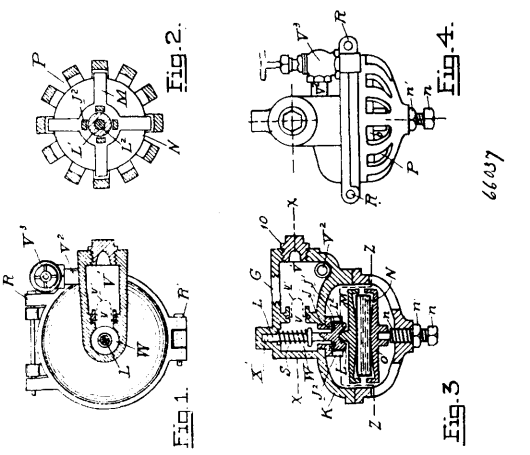
and remaining horizontal until the interleaving action has ceased. 6th. In an elevator of the class described, the combination of a landing composed of parallel bars and spaces, located at a slight angle with respect to the horizontal, a series of moving steps forming in their operation an endless chain, each step having a tread surface composed of parallel bars and spaces which are kept horizontal throughout their operative movement, wheels for the stops, and rails for the wheels extending below said landing in a line such that the steps when in a horizontal plane interleave with the grating of the landing, each tread surface at the beginning or ending of the interleaving action occupying a maximum elevation at least flush with the upper surface of the grated landing and subsequently sinking or previously having risen through said landing so as to deposit the load thereon or take it therefrom and remaining horizontal until the interleaving action has ceased. 7th. In an elevator of the character described, the combination of a series of steps united at opposite ends into an endless jointed chain or structure, wheels or rollers at the ends of each step and a pair of rails at each end of the steps on the lower or return run, one rail above and one rail below each wheel to maintain control in case of separation of said chain, substantially as described. 8th. In an elevator, a series of steps united at opposite ends into a jointed structure or chain, wheels or rollers at each end of each step, rails upon which said wheels travel, a moving hand rail located at one side and a sheathing for the interior exposed side of said hand rail extending down between the ends of the steps and said supporting rollers to the axles of said rollers, substantially as described. 9th. In an elevator, a series of steps united at opposite ends into a jointed structure or chain, wheels or rollers at each end of each step, rails upon which the wheels travel, a moving hand rail located at one side thereof, a sheathing for the interior exposed side of said hand rail and a continuous rail or projection upon said sheathing, substantially as and for the purpose described. 10th. In an elevator of the character described, a series of steps each consisting of a tread and a riser, each riser having an exterior convex surface, said steps being united at each end by links into an endless chain, wheels upon which said chain is supported, and a track for said wheels arranged in horizontal sections joined to incline sections, substantially as described. 11th. The combination in an elevator of the character described of horizontal and inclined track sections, a series of steps each composed of a tread and a riser the latter having an exterior convex surface, pivoted links between successive steps uniting them into an endless chain and a series of antifriction devices supporting the chain structure upon the track, substantially as described. 12th. In an elevator of the character described, a track arranged in horizontal and inclined sections, said sections being united, a series of steps, a series of links flexibly uniting said series of steps into an endless movable structure, each step being composed of a tread and a riser, said riser having a convex exterior surface, the arc of curvature being substantially equal to an arc having a radius in length equal to the link connecting the adjacent steps, substantially as and for the purpose described. 13th. In an elevating apparatus, a series of travelling steps arranged to move together, the treads of which are adapted to remain severally horizontal whether the steps be moving horizontally or on an incline, the said steps being provided with risers, having convex surfaces toward the adjacent edge of adjacent steps, substantially as and for the purpose described. 14th. In an elevating apparatus, a series of travelling steps arranged to move together, the treads of which are adapted to remain severally horizontal whether the steps be moving horizontally or on an incline, the said steps being provided with curved risers having convex surfaces toward the adjacent edge of adjacent steps adapted to prevent any divergence between the riser and the edge of the adjacent step in passing from an inclined to a horizontal portion of the track and vice versa. 15th. The combination in an elevator, of a series of carriages constructed to move from inclined to horizontal positions, and vice versa, each carriage having a tread and a riser curved outward to substantially coincide with the path travelled, relative to said carriage, by the edge of the adjacent tread in moving from one position to another, the curve of the riser being so laid out that the edge of the following tread diverges slightly from the riser in passing from an inclined to a horizontal position, substantially as and for the purposes described.

**No. 66,037. Thermostatic Trap.** (*Piège thermostatique.*)

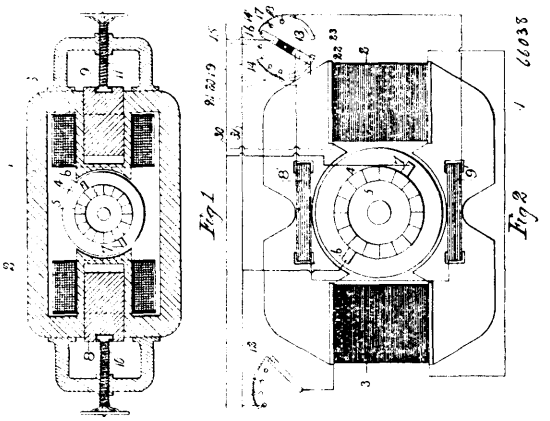
The Consolidated Car Heating Company, assignee of James F. McElroy, all of Albany, New York, U.S.A., 31st January, 1900; 6 years. (Filed 28th December, 1899.)

*Claim.*—1st. A thermostatic trap, consisting of a casing, within which casing are a sediment chamber, an overflow chamber, a perforated screen placed in the port connecting said sediment chamber and said overflow chamber, and a valve in said overflow chamber operated by means of a thermostatic cell placed in said casing, substantially as described. 2nd. A thermostatic trap, consisting of a casing, said casing containing a sediment chamber, an overflow chamber, a screen placed in the port communicating between said sediment chamber and said overflow chamber, a spring actuated valve in said overflow chamber, a thermostatic cell adapted to close said valve against the tension of said spring, with a blow-off pipe located in said sediment chamber, substantially as described. 3rd. In a thermostatic trap, a casing adapted to be connected to a car heating system, a sediment chamber in said casing, into which the discharge from said car heating system passes, a screen placed in a port communicating between said sediment chamber and an




overflow chamber, also located in said casing, a valve in said overflow chamber, a thermostatic cell adapted to close said valve, and a means for opening said sediment chamber and removing said screen when desired, substantially as described. 4th. In a thermostatic trap, adapted to be connected to a railway car heating system, a casing containing a sediment chamber and an overflow chamber, with a thermostatic cell and a valve adapted to be closed by said thermostatic cell, a drum and metallic connections between said casing and said drum, substantially as described.

**No. 66,038. Dynamo Electric Machine.**
(*Machine dynamo-électrique.*)




The Stow Manufacturing Company, assignee of Frederick Ayres Johnson, all of Binghampton, New York, U.S.A., 31st January, 1900; 6 years. (Filed 16th January, 1900.)

*Claim.*—1st. The method of producing and varying the magnetic flux in a dynamo-electric machine, which consists in creating a magneto-motive force in a magnetic circuit composed, at one or more points, of several branches generating in one or more of said branches, a second magneto-motive force, and varying said second magneto-motive force at will to vary the total flux through the machine, while maintaining a strong flux through those branches of the magnetic circuit which furnishes the field for the coils under commutation. 2nd. The method of regulating the speed of an electric motor, which consists in varying the total flux through the armature at will within wide limits to vary the speed of the motor, and maintaining at all speeds a strong field at those portions of the pole pieces under which the commutation takes place, substantially as described. 3rd. The method of varying the speed of an electric motor, which consists in varying the total flux through the armature at will within wide limits, to vary the speed of the motor, and maintain at all speeds a strong and approximately constant field at those portions of the pole pieces under which the commutation takes place, substantially as described. 4th. The method of varying the speed of an electric motor, which consists in generating a flux passing through the coils under commutation by a practically constant magneto motive force, and generating a second flux passing through other coils of the armature, by an independent magneto motive force, and varying said second flux at will independent of the conditions of the main circuit. 5th. The method of avoiding sparking in a dynamo