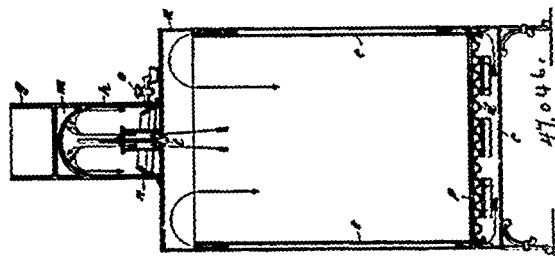


driven therefrom, of the reel secured to the shaft Q, the sprocket-wheel P, driven by a sprocket chain and gearing from the motor and frictionally connected by the discs P¹ and R, to the friction discs P², keyed on the shaft Q, and the cable on the reel arranged to lead from the reel, as shown and for the purpose specified. 5th. The combination, with the motor F, main axle and driving wheels driven therefrom, of the reel secured to the shaft Q, the sprocket-wheel P, driven by a sprocket chain and gearing from the motor, the friction discs P¹, R, P², spiral spring S, and nut p, on the outer end of the shaft Q, and the cable on the reel arranged to lead from the reel, as shown and for the purpose specified. 6th. The combination, with the motor F, main axle and driving wheels driven therefrom, of the sprocket-wheel P loose on the shaft Q, friction discs P¹, R, P², springs S, nut p, the sprocket-wheel P, being driven by the sprocket-chain c¹, sprocket pinion O¹, bevel gear-wheel O, bevel pinion I¹, gear-wheel L, pinion K¹, gear-wheel K, and pinion J, on the shaft G, of the motor as and for the purpose specified. 7th. The combination, with the motor F, the main shaft G, divided into sections connected together by universal couplings g, as specified, of the worm h, secured to the rear section, journalled in the arms G¹, connected to the hub G², loosely journalled on the axle and the worm-wheel I, secured to the axle, as and for the purpose specified. 8th. The combination, with the motor F, and shaft G, and intermediate gearings J, K, K¹, and the gear L, on the shaft I, which is connected at its front end by the universal coupling L¹, to the shaft L², of the clutch L¹, L², forked lever m, pivotally connected to the portion L², of the clutch at the rear end and at the forward end to the lever M, as shown as and for the purpose specified. 9th. The combination with the motor F, and rear axle E, driven from the motor-shaft G, by the worm I, and gear-wheel L as specified, of intermediate gearing connecting the shaft, G, to the friction disc P¹, loose on the reel shaft, which friction disc is held in frictional contact with the discs R, and P², secured to the reel shaft, as and for the purpose specified. 10th. The combination with the motor, and friction discs P¹, R, P², on the reel shaft and intermediate gearing for driving the disc P¹, which is loose on the shaft, from the motor, of means whereby the cable is guided to wind or unwind evenly upon the reel, as and for the purpose specified. 11th. The combination with the motor and friction discs P¹, R, P², reel, shaft and intermediate gearing for driving the disc P¹, which is loose on the shaft, from the motor, of the sleeve r, supported on the spindle U, and on the spindle r², by the arm r¹, and provided with a traveller r³, by which the sleeve is caused to have reciprocating movement on the spindle as it rotates and guiding rollers v¹, journalled on the sleeve and designed to guide the cable evenly on to and off the reel, as and for the purpose specified. 12th. The combination with the motor and friction discs P¹, R, P², reel shaft and intermediate gearing for driving the disc P¹, which is loose on the shaft, from the motor of the sleeve r, supported on the spindle U, and on the spindle r², by the arm r¹, and provided with a traveller r³, the sprocket pinion Q¹, secured to one end of the reel shaft and connected by a sprocket chain a¹, to the sprocket-wheel U², at one end of the double spirally grooved spindle U, as and for the purpose specified. 14th. The combination with the reel T, having a cable 2, wound upon it and leading from it to the dynamo as specified, of the sleeve r, supported on the spindle U, and upon the spindle r², by the arm r¹, and provided with a traveller r³, the sprocket pinion Q¹, secured to one end of the reel shaft and connected by a sprocket chain a¹, to the sprocket-wheel U², at one end of the double spirally grooved spindle U, and handle Y, secured on the other end of the spindle U, as and for the purpose specified. 15th. The combination with the motor F, and reel T, driven by frictional contact through the intermediate gearing between the friction discs and motor as specified, of the cable 2, consisting of the two wires 3, and 4, which lead from the dynamo to the reel, and are wound upon the reel as specified, the wire 3, of which leads to the collar t¹, and the wire 4, to the collar t², the brushes t³, t⁴, held in frictional contact with the collars t¹, t², respectively, and connected by the wires t⁵, t⁶, to the switch and motor, as shown as and for the purpose specified. 16th. The combination with the main axle E, driven from the motor, of the main driving wheels C, and frictional means for connecting them to the main axle, as and for the purpose specified. 17th. The combination with the motor, of the main axle E, journalled, and driven from the motor as specified, and having secured to it the peripheral friction wheel C³, capable of lateral movement on the shaft, each of which wheels is designed to be brought independently into or out of engagement with the ring C¹, forming part of each of the main driving wheels, as shown, as and for the purpose specified. 18th. The combination with the motor, of the main axle E, journalled and driven from the motor, as specified, and the frictional wheel C², supported on the collar C⁴, as specified, and laterally adjustable by the lever C⁵, the forked end of which is

pivotally connected to the collar C⁴, and the front end of which lever C⁵, has a spring plunger c⁶, which is designed to be brought into one of the notches of the quadrant c⁷, so as to hold the periphery of the wheel C¹, into or out of frictional contact with the inner bevelled periphery of the ring C¹, as and for the purpose specified. 19th. The combination with each rear wheel, of a series of pairs of plungers 5, 5, extending into holes 6, means for retaining them within the rim and for throwing them out into the ground as they rotate, as and for the purpose specified. 20th. The combination with each rear wheel, and a series of plungers 5, 5, connected at their inner ends to a cross-bar 8, to the centre of which is connected the spring actuated plunger 11, which extends through the ring C¹, on the double bar 15, within which the rear wheel turns, the front end of the double bar being pivoted at 16, and the rear end flexibly supported and having downwardly extending cams 24, to come in contact with friction rollers 9, on the cross-bars 8, so as to gradually throw out the plungers 5, 5, as they arrive, in their rotation, near the bottom of the wheel, and to allow of their being drawn in as they leave the bottom of the wheel, as and for the purpose specified. 21st. The combination with each rear wheel, having a series of pairs of plungers 5, 5, actuated so as to be retained within the rim of the wheel, of the double-bar 15, pivoted at the front end at 16, having cams 24, connected together at the rear end, and the screw 19, bracket 20, hand-wheel 22 and spring 23, arranged as and for the purpose specified. 22nd. The combination with each rear wheel, having a series of pairs of plungers 5, 5, spring actuated so as to be retained within the rim of the wheel, of the double-bar 15, pivoted at the front end at 16, having cams 24, and connected together at the rear end, and the screw 19, bracket 20, hand-wheel 22, spring 23, and hand-wheel 21, as and for the purpose specified. 23rd. The combination with the vehicle of the class described, of the turning post Y, secured to the bottom of the fifth wheel and rotated by means of the worm-wheel p, and worm y¹, on the spindle p², which is rotated by the hand-wheel p⁶, as and for the purpose specified. 24th. The combination with the vehicle of the class described, of the front wheels connected to the ordinary fifth wheel and the post Y, fitting into a socket in the lower portion of the fifth wheel, and means whereby the post is rotated, as and for the purpose specified. 25th. The combination with the vehicle of the class described, the turning post Y, secured to the bottom of the fifth wheel and rotated by means of the worm-wheel p, and worm y¹, on the spindle p², which is rotated by the hand-wheel p⁶, of springs p⁸, on the spindle on each side of the worm, as and for the purpose specified.

No. 47,046. Hygienic Dry Air Apparatus.

(Appareil hygiénique d'air sec.)



Karl Ludwig Sandrowski, Berlin, Prussia, Germany, 13th September, 1894; 6 years.

Claim.—1st. An hygienic dry-air apparatus for treating diseased parts of the human body having a chamber formed by the bottom c and false bottom d, the hot air from said chamber passing up between the inner and outer walls of the apparatus and entering the perspiring chamber from above, an insulating plate being also provided to prevent one part of the body acted on being subjected to a greater heat than the other parts, substantially as hereinbefore set forth with reference to the drawings annexed, constructed and arranged, substantially as hereinbefore described. 2nd. In an apparatus of the class hereinbefore set forth the method whereby the body, or a part of it, can be made to perspire at a certain temperature, the perspiration being evaporated and then condensed and collected for further investigation or experiment, substantially as hereinbefore set forth, constructed and arranged, substantially as hereinbefore described.

No. 47,047. Electro-magnetic Car Brake.

(Frein électro-magnétique de char.)

John Cummings Henry, Westfield, New Jersey, U.S.A., 13th September, 1894; 6 years.

Claim.—1st. An electric train-brake, comprising a dynamo on each car, a magnetic clutch connected with said dynamo, and brake gearing operated by said clutch, substantially as described. 2nd. An electric train-brake, comprising a dynamo on each car, a magnetic clutch connected with said dynamo, and a drum operated by said clutch, substantially as described. 3rd. An electric train-