Abridgments of Interesting Patent Specifications.

No. 20,597. September 24th 1905.—Clutches and brakes for motor vehicles — P. Riley —A clutch drum (B) is mounted on the driving shaft (A), and the driven shaft (C) extends over the end of the driven shaft and has a thimble bearing on the latter. A disc (E), provided with lugs (E1, E2), is attached to a rotary flange (D) on the driven shaft, the lugs being diametrically opposite to one another Integral with the discs (E) are spring arms (F, F1), adapted to lie around the circumference of the disc (E). A diametric wedge (H) sliding in guides on the lugs (E1, E2) engages with anti-friction rollers on the ends of the spring arms; (G) is a cross bar attached to the

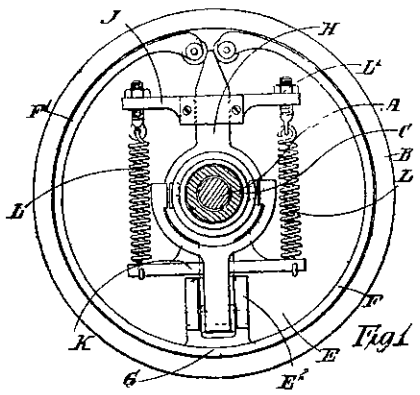


Fig1

lug (E1), and (K) a similar bar formed on the wedge (H). These cross bars are connected by springs (L), and have a tendency to force the wedge between the friction rollers on the arms (F, F1). A bell crank lever (M) engages the sliding wedge and is engaged by a sliding collar (N), operated by a clutch fork. When the collar is moved towards the clutch,

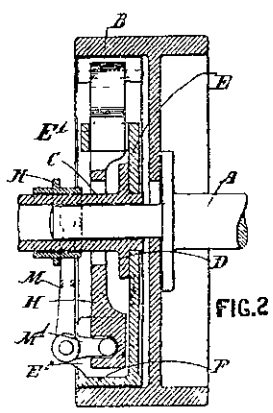
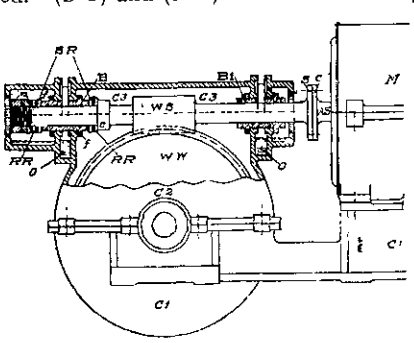


FIG.2

the wedge (H) is drawn down and frees the spring arms so that they are out of engagement with the clutch drum, and when the collar (N) is released the springs force the wedge between the ends of the arms and cause them to engage with the drum (B).

No. 16,363, dated July 25th, 1905.—Bearings for wheel gearing.—John H. Hindle, Denton.—The shaft to which the worm (W S) is fixed is driven direct from the motor (M) and is carried in bearings in the gear-case, the bearings being arranged to take the end thrust of the worm shaft. The case containing the gear is made in three portions (C1, C2, C3), in the extension of one of which the motor is carried. (S C) and (A S) are two solid couplings



The ball races (S) are stationary and attached to the bearing (B), whilst the revolving races (R R) are attached to the shaft. The thrust is transmitted by the collars (c), and the pull by the lock nuts (n), to their respective ball bearings, thence to the solid bearing (B), and by means of the flanges (f) to the gear case.

No. 1,044, dated January 19th, 1905.—Piston rings. — P. Enfield Downson. — The piston ring is constructed in two parts, a lower or under part (A) of angle or "L" section, and an upper part (B) of square or rectangular section. The upper rectangular part (B) of the ring is placed in the angle of the lower part (A), and is of a size and shape to exactly coincide therewith, thus

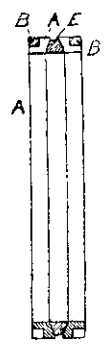


FIG1

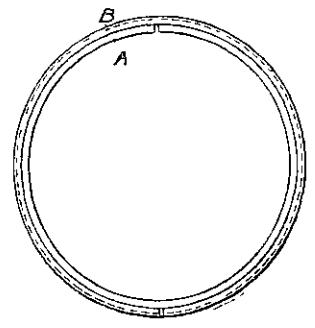
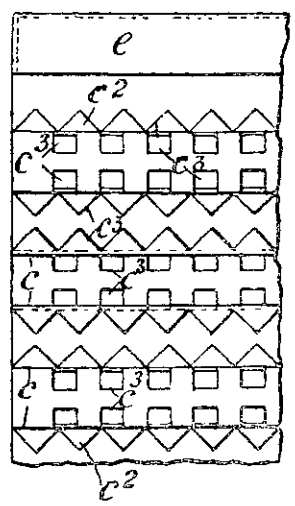


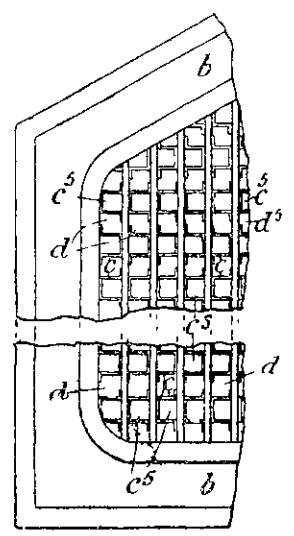
FIG2

forming a compound ring The two rings are turned with a slightly larger outside diameter than the bore of the cylinder, and cut in the usual manner, so that when the ends are sprung together they fit the bore of the cylinder, and are so arranged relatively to one another that the joints come at different parts of the periphery, preferably diametrically opposite to one another.The piston is formed with an annular groove, into which the rings (A and B) are sprung, or a junk ring may be fitted on the end of the piston to form the groove and to hold the rings in position. The compound rings (A and B) are employed in pairs, placed in a single broad groove in the piston, back to back, with an intermediate ring or spring (E) between them to act laterally to force the two compound rings against the sides of the grooves, thereby more effectually preventing leakage past them.

No. 7,711, dated April 11th, 1905 —Radiator.—Lamplough and Albany Co —Five flat tubes are shown; (b, b) are the upper and lower parts of the tank with which the ends of the said tubes communicate, (c, c) are gills or radiating surfaces soldered to said tubes. The gills or radiating



surfaces (c, c) are formed from stampings of sheet metal bent into trough-shaped form and having flanges (c2) preferably serrated, and apertures (c3) The gills not only act as distance pieces between



the flat tubes rendering the construction strong, but the air entering the spaces (c5 and d) can, by passing through the apertures (c3), travel vertically towards the centre of the fan, thus causing the air passing between the upper and lower portions of the flat tubes (a) that are away from the centre of the radiator, to have a greater cooling effect than if it passed through the spaces (c5 and d d).

No 18.045, dated August 19th, 1905.—Carburetter —Hamilton.—Fuel is fed to the mixing chamber (A) by a nozzle (C) Free to slide in the mixing chamber is a sleeve (C1) At the upper end of this sleeve are apertures (B2) by which the interior of the sleeve may communicate with the cylinder of the engine by passage (A2) At the

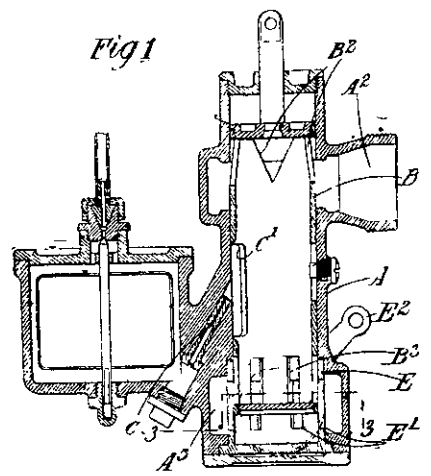


Fig1

base of the sleeve are other apertures (B3) which co-operate with openings (E1) in a ring (E) surrounding the lower end of the tube. The ring (E) lies in an annular space (A3) in communication with the atmosphere by an inlet (A1), and can be

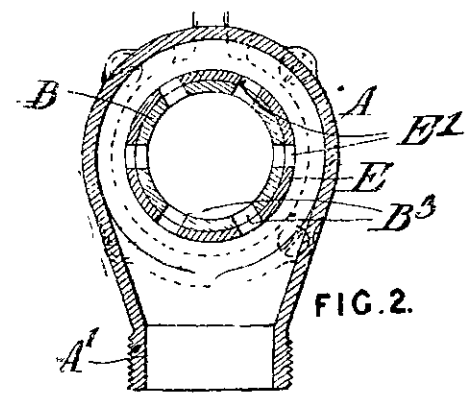


FIG.2.

partially rotated by a lever (E2) so that its apertures are brought more or less into, or out of, register, with those in the lower end of the sleeve (C1). The sleeve (C1) may be raised and lowered by hand or automatically, but it will be observed that when it is raised to partially throttle the (C1). The sleeve (C1) may be raised and lowered outlet (A2) the inlets for air through the orifices (B3) are correspondingly restricted, although these can be further separately controlled by the ring (E)

Wireless Telegraphy.

SOME months ago (says "The Advocate"), the Postmaster-general announced at a social function in Wellington that when in Australia he had gone into the subject of wireless telegraphy, and that there was a prospect of a system being established between New Zealand and the Commonwealth, at a cost of about £20,000. The ministerial head of our Department is nothing, if not progressive, and it may be taken for granted that as soon as the time is ripe to advantageously undertake this latest-found necessity of civilisation, New Zealanders will be brought into line with the rest of the world. The firms interested in "wireless" are beginning to turn their attention to this colony. A representative of the International Telegraph Construction Co., is in the colonies, looking for business. He naturally gives an alluring picture of the possibilities of "wireless," especially if installed by his company. However, that there are national interests to be furthered by the adoption of the latest application of electrical science, cannot be gainsaid, and our Minister is the first to appreciate the fact At various times we have published references to the development of "wireless" in other parts of the world, and not the least interesting of these have been letters from an ex-New Zealand officer, Mr. Mayne. Wireless telegraphy is no longer an interesting experiment; it is a commercial and social adjunct, and it is evident that the day is not far distant when we in New Zealand will accept its advantages as a matter of course.