tribunate, rather than upon a metamorphosed dictatorship, upon traditions which were democratic rather than upon traditions which were patrician and optimate. The tribunes continued to exist till a late period, with gradually vanishing dignity and rights ; but it is not necessary here to trace their decay in detail.

The name “ tribune ” was once again illuminated by a passing glory when assumed by Cola di Rienzi. The movement which he headed was in many respects extremely like the early movements of the plebeians against the patricians, and his scheme for uniting Italy in one free republic was strangely parallel with the greatest dream of the Gracchi. See Rome, vol. xx. p. 800 *sq.*

The history of the tribunate is interwoven with that of Rome, and must, to a large extent, be sought for in the same sources. The principles attaching to the office are profoundly analysed by Mommsen in his *Staatsrecht,* and are clearly set forth by E. Herzog in his *Geschichte u. System der römischen Staatsverfassung* (Leipsic, 1884). (J∙ S. R.)

TRICHINA, TRICHINOSIS. See Nematoidea, and Parasitism, vol. xviii. p. 270.

TRICHINOPOLI, a district of British India, in the Madras presidency, lying between 10° 37' and 11° 30' N. lat. and 78° 12' and 79° 30' E. long. Its area is 3561 square miles. It is bounded on the north and north-west by Salem, on the north and north-east by South Arcot, on the east and south-east by Tanjore, on the south by Pudukottai state and Madura, and on the west by Coim­batore. The surface is generally flat, though diversified by masses of crystalline rock, of which the Trichinopoli rock in the fort is a well-known example. The district is well wooded, though nothing worthy of the name of forest is to be found in it. The only mountains are the Pachaimalais, which rise to 2500 feet and extend into Salem district. The Kaveri *(q.v.)* and its branch the Colerun are the only rivers of any importance. Trichi­nopoli has numerous roads, and the South Indian Railway traverses it from east to west. The climate is very hot, and not liable to great variations; the annual average rainfall is about 38 inches.

In 1881 the population of the district was 1,215,033 (males 586,434, females 628,599), of whom Hindus numbered 1,119,434, Moham­medans 34,104, and Christians 58,809. The only town with a population exceeding 10,000 is Trichinopoli, the capital, with 84,449 inhabitants. This city is chiefly noticeable for its strong fort, perched on a granite peak 500 feet high, and the group of temples and temple buildings situated on and around it. The town next in importance is Srirangam (*q.v.*). The chief crops of the district are rice, cotton, tobacco, indigo, sugar-cane, cocoa-nut, plantain, areca-nut, and chillies ; and the most important local industries are weaving and the manufacture of cigars. The prin­cipal exports are grain of all kinds, especially rice ; the imports, tobacco and salt. In 1885-86 the gross revenue of the district was £225,896, the land-tax yielding £185,889. Trichinopoli dis­trict, along with the rest of the Carnatic, of which it formed part, passed to the British by treaty in 1801.

TRIC TRAC. See Backgammon, vol. iii. p. 199.

TRICYCLE. Though velocipedes were made and used more than one hundred years ago, none were practically successful until the brothers Starley constructed in 1876 the Coventry tricycle. One of the earliest descriptions of a cycle occurs in the *Journal de Paris* of 17th July 1779. Somewhat later M. Richard invented a machine driven by mechanism almost identical with that of the modern omnicycle, but without the expanding segments. Early in the 19th century the cranked axle worked by treadles and levers came into fashion ; then the heavy four-wheelers were preferred. All these machines, how­ever, laboured under three fatal defects : it was almost impossible to drive them up-hill, to check them in going down-hill, and to prevent their overturning in rounding a corner.

It was the success of the early bicycle (see Bicycle) which suggested the belief that a serviceable tricycle could be made. One of these bicycles was specially constructed for ladies, the hind wheel being placed well on one side ; but, though it could be ridden, it was not a commercial success. The brothers Starley, by putting a second small wheel in front of the large driving wheel and on the same side as the small hind wheel, gave stability to the machine : it was steered by turning the small wheels opposite ways, and driven by the large wheel by means of cranks and connecting rods. The same machine with chain driving —the Coventry rotary—is still very largely used. In 1877 James Starley, it is believed without any knowledge of the gear used by Fowler for traction engines, re-in­vented the same differential gear for tricycles. By this the same force is, under all circumstances, applied to each of two equal driving wheels, and the evil effects of driving a single wheel are done away with. This gear was used in the original Salvo tricycle, which is the type of the surest machine at the present day. In the early days of the modern tricycle other designs were carried out, which have now become practically obsolete. In one form the hind wheel of a bicycle was replaced by a pair of equal wheels, one on each side, but the instability of such a construction was fatal. In another, the Challenge, the two wheels were placed in front of the large driver and turned together to steer the machine; stability was ob­tained by putting the rider in front of the large wheel and lower down, the power being communicated by cranks and connecting rods. But the weight of this machine and the small proportion of the load on the driving wheel were serious defects.

Single-driving rear-steerers were at this time very com­mon, and, though highly objectionable, are still to be seen. Rear-steerers were improved by making both front wheels drivers and allowing for the overrunning of one or the other by clutch, as in the Cheylesmore, or by ratchet driv­ing ; but steering by the hind wheel is essentially wrong, and these machines are avoided by experienced riders. Rear-steerers have, however, lately been made with a through axle and differential gear (Rover), the rider being placed further back so as to increase the load on the steering wheel ; but the evil of rear-steering is only re­duced, not removed. The clutch is also employed on some front-steerers ; and, though in certain respects it has an advantage over the differential gear, for general use it is not so suitable. The differential gear is an essential feature of the modern tricycle.

In 1878 Messrs Doubleday and Humber patented the Humber machine, which is both driven and steered by the two front wheels, the rider being seated on a trailing backbone and hind wheel as in the bicycle. This machine requires skill to manage : the steering is at first difficult to control and a spill over the handles is quite possible ; under a skilful rider, however, the Humber is generally recognized as one of the fastest machines. It is steered by a cross handle, like the bicycle, and this method of steering, in spite of the fact that it boxes the rider into the machine, is becoming very general in front steerers in place of the rack and pinion steering hitherto in use. The Gripper is a very popular example. The brake is an im­portant feature in roadster tricycles. It is always made to act on the box of the differential gear where that is used ; but in clutch or single-driven machines one or two independent band-brakes or spoon-brakes are used.

In early days the steering wheel was made small to save weight ; the drivers were often 50 inches or more in diameter; and the machine was as short as possible. Owing to the discomfort attending a small wheel and a short base the tendency at present is to increase the size of the steering wheel and the length of the base, and to diminish the diameter of the drivers,—two notable examples being the Quadrant and the Crescent. It is usual, especially when small driving wheels are used, to gear the machine up, just as in the old days they were commonly geared down ; that is, the chain wheel on the crank axle has more or fewer teeth than that on the wheel axle, and thus the wheels turn faster or slower than the