difficulty encountered in the construction was the tendency to flood- ing, owing both to the river breaking into the works, and, more especially, to the underground springs encountered, one of which when tapped completely flooded the works at a rate of 6000 gallons per minute, and delayed the work for more than a year. In 1879, after this disaster, the contract for the whole work was let to Mr T. A. Walker. The total length of the tunnel is 4 m. 624 yds., of which 2¼ m. are beneath the river. On the east side the cutting leading to the tunnel has a gradient of 1 in 100, which is continued in the tunnel itself until the deepest part is reached beneath the river-channel known as “ the Shoots, which has a depth of about 60 ft. at low tide and 100 at high tide (ordinary spring). Beneath this the rails run level for 12 chains, after which the ascent of the tunnel and cutting on the west side is on a gradient of 1 in 90. At Sudbrook on the west side there is a pumping and ventilating station. The tunnel was completed in 1886; the time for passenger trains between Bristol and Cardiff was immediately reduced by nearly one half, and the value of the new route was especially apparent in connexion with the mineral traffic between the South Wales coal-field and London and the ports of the south of England.

**SEVERUS,@@1 LUCIUS SEPTIMIUS** (a.d. 146-211), Roman emperor, was bom in 146 at Leptis Magna on the coast of Africa. Punic was still the language of this district, and Severus was the first emperor who had learned Latin as a foreign tongue. The origin of his family is obscure. Spartianus, his biographer in the *Historia Augusta,* doubtless exaggerates his literary culture and his love of learning; but the taste for jurisprudence which he exhibited as emperor was probably instilled into him at an early age. The removal of Severus from Leptis to Rome is attributed by his biographer to the desire for higher education, but was also no doubt due in some degree to ambition. From the emperor Marcus Aurelius he early obtained, by intercession of a consular ancle, the distinction of the broad purple stripe. At twenty-six, that is, almost at the earliest age allowed by law, Severus attained the quaestorship and a seat in the senate, and proceeded as *quaestor militaris* to the senatorial province of Baetica, in the Peninsula. While Severus was absent in Africa in consequence of the death of his father, the province of Baetica, disordered by Moorish invasions and internal commotion, was taken over by the emperor, who gave the senate Sardinia in exchange. On this Severus became military quaestor of Sardinia. His next office, in 174 or 175, was that of legate to the proconsul of Africa, and soon after he was tribune of the plebs. This magistracy, though far different from what it had been in the days of the republic, was still one of dignity, and brought promotion to a higher grade in the senate. In 178 or 179 Severus became praetor by competition for the suffrages of the senators. Then, probably in the same year, he went to Hispania Citerior as *legatus juridicus;* after that he commanded a legion in Syria. After the death of Marcus Aurelius he was unemployed for several years, and, according to his biographer, studied at Athens. He became consul about 189. In this time also falls the marriage with his second wife, afterwards famous as Julia Domna, whose acquaintance he had no doubt made when an officer in Syria. Severus was governor in succession of Gallia Lugdunensis, Sicily and Pannonia Superior; but the dates at which he held these appointments cannot be determined. He was in command of three legions at Carnuntum, the capital of the province last named, when news reached him that Commodus had been murdered by his favourite concubine and his most trusted servants.

Up to this moment Severus had not raised himself above the usual official level. He had seen no warfare beyond the petty border frays of frontier provinces. But the storm that now tried all official spirits found his alone powerful enough to brave it. Three imperial dynasties had been ended by assassination. The Flavian line had enjoyed much shorter duration and less prestige than the other two, and the circumstances of its fall had been peculiar in that it was probably planned in the interest of the senate, and the senate reaped the immediate fruits. But the crises which arose on the deaths of Nero and of Commodus were alike. In both cases it was left to the army to determine by a struggle which of the divisional commanders should succeed to the command-in-chief, that is, to the imperial throne. In

each case the contest began with an impulsion given to the com­manders by the legionaries themselves. The soldiers of the great commands competed for the honour and advantages to be won by placing their general on the throne. The officer who refused to lead would have suffered the punishment of treason.

There is a widespread impression that the Praetorian guards at all times held the Roman empire in their hands, but its erroneousness is demonstrated by the events of the year 193. For the first time in the course of imperial history the Praetorians pre­sumed to nominate as emperor a man who had no legions at his back. This was Pertinax, who has been well styled the Galba of his time—upright and honourable to severity, and zealous for good government, but blindly optimistic about the possibilities of reform in a feeble and corrupt age. After a three months’ rule he was destroyed by the power that lifted him up. According to the well-known story, true rather in its outline than in its details, the Praetorians sold the throne to Didius Julianus. But at the end of two months both the Praetorians and their nominee were swept away by the real disposers of Roman rule, the provincial legions. Four groups of legions at the time were strong enough to aspire to determine the destiny of the empire— those quartered in Britain, in Germany, in Pannonia and in Syria. Three of the groups took the decisive step, and Severus in Pannonia, Pescennius Niger in Syria, Clodius Albinus in Britain, received from their troops the title of Augustus. Severus outdid his rivals in promptness and decision. He secured the aid of the legions in Germany and of those in Illyria. These, with the forces in Pannonia, made a combination sufficiently formidable to overawe Albinus for the moment. He probably deemed that his best chance lay in the exhaustion of his competitors by an internecine struggle. At all events he received with submission an offer made by Severus, who confirmed Albinus in his power and bestowed upon him the title of Caesar, making him the nominal heir-apparent to the throne.

Before the action of Severus was known in Rome, the senate and people had shown signs of turning to Pescennius Niger, that he might deliver them from the poor puppet Didius Julianus and avenge on the Praetorians the murder of Pertinax. Having secured the co-operation or neutrality of all the forces in the western part of the empire, Severus hastened to Rome. To win the sympathy of the capital he posed as the avenger and successor of Pertinax, whose name he even added to his own, and used to the end of his reign. The feeble defences of Julianus were broken down and the Praetorians disarmed and disbanded with­out a blow. A new body of household troops was enrolled and organized on different principles from the old. In face of the senate, as Dio tells us, Severus acted for the moment like “ one of the good emperors in the olden days.” After a magnificent entry into the city he joined the senate in execrating the memory of Commodus, and in punishing the murderers of Pertinax, whom he honoured with splendid funeral rites. He also en­couraged the senate to pass a decree directing that any emperor or subordinate of an emperor who should put a senator to death should be treated as a public enemy. But he refrained from asking the senate to sanction his accession.

The rest of Severus’ reign is in the main occupied with wars. The power wielded by Pescennius Niger, who called himself emperor, and was supposed to control one half of the Roman world, proved to be more imposing than substantial. The magnificent promises of Oriental princes were falsified as usual. Niger himself, as described by Dio, was the very type of medio- crity, conspicuous for no faculties, good or bad. This character had no doubt commended him to Commodus as suited for the important command in Syria, which might have proved a source of danger in abler hands. The contest between Severus and Niger was practically decided after two or three engagements, fought by Severus’ officers. The last battle, which took place at Issus, ended in the defeat and death of Niger (194). After this the emperor spent two years in successful attacks upon the peoples bordering on Syria, particularly in Adiabene and Osrhoene. Byzantium, the first of Niger’s possessions to be attacked, was the last to fall, after a glorious defence.

@@@1 For Marcus Aurelius Alexander Severus, Roman emperor from 222 to 235, see Alexander Severus.