attractive residential districts. The principal building is that of the Federal government (1894), which is built of Indiana cut stone. Springfield is the seat of Loretto Academy, of a state normal school, and of Drury College (co-educational; founded in 1873 by Congregationalists, but now undenominational), which comprises, besides the college proper, an academy, a conserva­tory of music and a summer school, and which in 1908-1909 had 500 students. Near the city is the Academy of the Visitation under the Sisters of St Chantal. The municipal water-supply is drawn from springs 3 m. north of the centre of the city. There are four large private parks (340 acres) on the outskirts, and two municipal cemeteries—a Confederate cemetery, maintained by associations, the only distinctively Confederate burial ground in Missouri; and a National cemetery, maintained by the United States government. Springfield is one of the two chief commercial centres of this region, which has large mining, fruit, grain, lumber and livestock interests. The jobbing trade is important. Springfield ranks fourth among the manufac­turing cities of the state; in 1905 the value of its factory pro­ducts was $5,293,315 (28∙2% more than in 1900). Flour and grist mill products constituted in 1905 a third of the total; and carriages and wagons ranked next. The St Louis & San Francisco railway has large shops here.

Springfield was settled in the years following 1829, and was laid out in 1833, though the public lands did not pass from the United States for sale until 1837. In 1838 and again in 1846 Springfield was incorporated as a town, and in 1847 was chartered as a city; though government lapsed during much of the time up to 1865, when prosperous conditions became settled. At the opening of the Civil War, Springfield was one of the most important strategic points west of the Mississippi river. In 1861-62 it was occupied or controlled a half dozen times in succession by the Confederate and the Union forces, the latter retaining control of it after the spring of 1862. In the battle of Wilson’s Creek (August 10, 1861), fought about 10 m. south of the city, and one of the bloodiest battles of the war, relatively to numbers engaged, a force of about 5500 Union soldiers under General Nathaniel Lyon was defeated by about 10,000 Con­federates under Generals Benjamin McCulloch (1811-1862) and Sterling Price. The other occupations and abandonments were unattended by serious conflicts in the immediate vicinity. In January 1863, after Springfield had been made an important Union supply post, it was attacked without success by a Confederate force of about 2000 men under General J. S. Marmaduke. The year 1870 was marked by the arrival of the first railway. In the same year North Springfield was laid out, and was incorporated as a town in 1870 and 1871. In 1881 Springfield was chartered as a city of a higher class, and in 1887 it absorbed North Springfield. After 1902 the city’s growth in population and in industries was very rapid.

**SPRING FIELD,** a city and the county-seat of Clark county, Ohio, U.S.A., at the confluence of Mad river and Lagonda Creek, about 45 m. W.S.W. of Columbus. Pop. (1890), 31,895; (1900), 38,253, of whom 3311 were foreign-born (including 1337 German, 1097 Irish and 308 English) and 4253 were negroes; (1910, census), 46,921. Springfield is served by the Cleveland, Cincinnati, Chicago & St Louis; the Pittsburg, Cincinnati, Chicago & St Louis; the Erie, and the Detroit, Toledo & Ironton railways, and by an extensive inter-urban electric system. The older portion of the city is in the narrow valley of Lagonda Creek, but from here the city has spread over the higher and more undulating surface farther back until it occupies an area of about 81/2 sq. m. Among the public buildings are the United States government building, the Clark county court house, the City building (the first floor of which is occupied by the city market), the Warder public library (established 1872), which in 1908 contained 25,000 volumes, the city hospital, and the city prison and work-house. On hills near the city border are the Ohio state homes for the Masons, the Independent Order of Oddfellows, and the Knights of Pythias. The city park contains more than 250 acres, and in 1908 the city adopted plans for an extensive park system. Ferncliff cemetery is a picturesque burial-ground. On a hill on the north side of the city is Wittenberg College (Lutheran; 1845), which in 1909 had 35 instructors and 710 students. Springfield is in a productive farming region, and water power is provided by Lagonda Creek, so that manufac­tures closely related to agriculture have always been prominent. The value of the factory product in 1905 was $13,654,423, of which $4,051,167 was the value of agricultural imple­ments, $2,914,493 of foundry and machine-shop products, and $1,025,244 of flour and grist-mill products. The municipality owns and operates the waterworks. Natural gas is piped from Fairfield county.

In 1799 Simon Kenton and a small party from Kentucky built a fort and fourteen cabins near Mad river 3 or 4 m. beyond the present western limits of the city. Later in the same year James Demint built a cabin on a hill-side over­looking Lagonda Creek. In 1801 he engaged a surveyor to plat a town here and soon after this the site of the Kenton settlement was abandoned. The new town was near the border­line that had been fixed between the Whites and the Indians, and the latter threatened trouble until 1807, when in a council held on a large hill in the vicinity, at which Tecumseh was the principal speaker for the Indians, peace was more firmly established. In 1818, when Clark county was erected, Springfield was made the county-seat. It was incorporated as a town in 1827, and in 1850 it was chartered as a city.

See E. S. Todd, *A Sociological Study of Clark County, Ohio* (Springfield, 1904).

**SPRING-GUN, a** device formerly in use against poachers and trespassers. Wires were attached to the trigger of a gun in such a manner that any one stumbling over or treading on them would discharge it and wound himself. Since 1827 spring-guns and all man-traps are illegal in England, except within a house between sunset and sunrise as a protection against burglars. Spring-guns are sometimes used to trap wild animals.

**SPRINGTAIL,** the common name of a group of small insects, so named from the presence of a pair of tail-like appendages at the end of the abdomen, which acts as a spring. When the insect is undisturbed these appendages are turned forwards and held in position by a catch beneath the abdomen; but in case of alarm they are kicked forcibly downwards and back­wards, jerking the body into the air. This action may be rapidly repeated until a place of safety is reached. These insects usually live under fallen leaves, stones or the bark of trees, and sometimes occur in such quantities as to resemble patches of powder or dust. One species *(Podura aquatica)* may be seen floating in this way in masses upon the surface of standing water. Another *(Achorutes socialis)* may sometimes be found in abundance in the snow. Zoologically the springtails belong to the sub-order Collembola of the order Aptera (*q.v*.).

**SPRING VALLEY,** a city of Bureau county, Illinois, U.S.A·, on the north bank of the Illinois River, in the northern part of the state, about 104 m. S.W. of Chicago. Pop. (1890), 3837; (1900), 6214 (2845 foreign-born); (1910) 7035. It is served by the Chicago, Burlington & Quincy, the Chicago, Rock Island & Pacific, the Chicago & North Western, and the Chicago, Ottawa & Peoria (electric) railways. Spring Valley is a shipping and distributing point for a large number of bituminous coal-mines in its vicinity. It was chartered as a city in 1886.

**SPRUCE,** *i.e.* spruce-fir, a coniferous tree belonging to the genus *Picea,* of which there are several species, such as the Norway spruce, *Picea excelsa*; the black spruce, *Picea nigra,* &c. (see Fir). The name has a curious origin, which explains also the particular meaning of the adjective "spruce,” neatly dressed, smart in appearance, fine. From a number of early quotations given by Skeat *(Etym. Dict.)* it is clear that “ spruce ’’avariant of “ pruce,” simply stood for Prussian; the form “spruce,” rather than “ pruee,” being established partly by the German *Sprossen,* sprouts or young shoots (seen in *Spfossen-bier,* spruce beer, made of the sprouts of this fir).