Roads.

Communication.—In the 12th century an Act was passed providing that the highways between market-towns should be at least 20 feet broad. Over the principal rivers at this early period there were bridges near the most populous places, as over the Dee near Aberdeen, the Esk at Brechin, the Tay at Perth, and the Forth near Stirling. Until the 16th century, however, traffic between distant places was carried on chiefly by pack-horses. The first stage-coach in Scotland was that which ran between Edinburgh and Leith in 1610. In 1658 there was a fortnightly stage-coach between Edinburgh and London, but afterwards it would appear to have been discontinued for many years. Separate Acts enjoining the justices of the peace, and afterwards along with them the commissioners of supply, to take measures for the maintenance of roads were passed in 1617, 1669, 1676, and 1686. These provisions had reference chiefly to what afterwards came to be known as "statute labour roads," intended primarily to supply a means of communication within the several parishes. They were kept in repair by the tenants and cotters, and, when their labour was not sufficient, by the landlords, who were required to "stent" (assess) themselves, customs also being sometimes levied at bridges, ferries, and causeways. By separate local Acts the "statute labour" was in many cases converted into a payment called "conversion money," and the General Roads Act of 1845 made the alteration universal. By the Roads and Bridges (Scotland) Act of 1878 the old organization for the management of these roads was entirely superseded in 1883. The Highlands had good (military) roads earlier than the rest of the country. The project, begun in 1725, took ten years to complete, and the roads were afterwards kept in repair by an annual parliamentary grant. In the Lowlands the main lines of roads have been constructed under the Turnpike Acts, the earliest of which was obtained in 1750. Originally they were maintained by tolls exacted from those who used them; but this method was—after several counties had obtained separate Acts for its abolition—superseded throughout Scotland in 1883 by the general Act of 1878, providing for the maintenance of all classes of roads by assessment levied by the county road trustees.

Canals.

Scotland possesses two canals constructed primarily to abridge the sea passage round the coast,—the Caledonian and the Crinan. The Caledonian Canal, extending from south-west to north-east, a distance of 60 miles along the line of lochs from Loch Linnhe on the west coast to the Moray Firth on the east coast, was begun in 1803, opened while yet unfinished in 1822, and completed in 1847, the total cost being about £1,300,000. Constructed originally to afford a quicker passage for ships to the east coast of Scotland and the coasts of Europe, it has, owing to the increased size of vessels, ceased to fulfil this purpose, its chief service having been in opening up a picturesque route for tourists, assisting local trade, and affording a passage for fishing boats between the east and west coasts. The Crinan Canal, stretching across the Mull of Cantyre from Loch Gilp to Jura Sound, a distance of 9 miles, and admitting the passage of vessels of 200 tons burden, was opened in 1801 at a cost of over £100,000. The principal boat canals are the Forth and Clyde or Great Canal, begun in 1768, between Grangemouth on the Forth and Bowling on the Clyde, a distance of 30¾ miles, with a branch to Port Dundas, making the total distance 33¾ miles; the Union Canal between Edinburgh and the Forth and Clyde Canal at Port Dundas, near Glasgow, completed in 1822; and the Monkland Canal, completed in 1791, connecting Glasgow with the Monkland mineral district and communicating with a lateral branch of the Forth and Clyde Canal at Port Dundas. Several other canals in Scotland have been superseded by railway routes.

Railways.

The first railway in Scotland for which an Act of Parliament was obtained was that between Kilmarnock and Troon (9¾ miles), opened in 1812, and of course worked by horses. A similar railway, of which the chief source of profit was the passenger traffic, was opened between Edinburgh and Dalkeith in 1831, branches being afterwards extended to Leith and Musselburgh. By 1840 the length of the railway lines in Scotland for which Bills were passed was 191¼ miles, the capital being £3,122,133. The chief railway companies in Scotland are the Caledonian, formed in 1845, total capital in 1884-85 £37,999,933; the North British, of the same date, total capital £32,821,526; the Glasgow and South-Western, formed by amalgamation in 1850, total capital £13,230,849; the Highland, formed by amalgamation in 1865, total capital £4,445,316; and the Great North of Scotland, 1846, total capital £4,869,983. The management of the small branch lines belonging to local companies is generally undertaken by the larger companies. By 1849 there were 795 miles of railway in Scotland. The following table (X.) shows the progress since 1857 (see also RAILWAY, vol. xx. pp. 226-230):—

Year.	Mean Length.	Passengers. First Class.	Second Class.	Third and Mixed Classes.	Total.	Receipts from Passenger Traffic.	Receipts from Goods Trains.	Total.
						£	£	£
1857	1243	1,223,542	2,180,284	10,729,677	14,733,503	916,697	1,584,781	2,501,478
1874	2700	4,261,473	3,769,485	30,189,934	38,220,892	2,250,593	3,884,424	6,235,017
1884	2999	4,711,500	2,715,032	46,877,642	54,305,074	2,931,737	4,426,023	7,357,760

Agriculture.—Table XI. shows the divisions of land as regards ownership according to the return (the latest) of 1873:—

Owners holding each	Number of Owners.	Estimated Acreage.	Gross Annual Value.	Average Rental per Acre.	Percentage of Total Average to each Owner.
			£	£ s.	
Less than 1 acre	113,005	28,177	5,860,046	203 17	·1
More than 1 acre and less than 10	9,471	29,327	1,433,106	48 17	·2
" 10 " 50	3,409	77,619	843,471	10 17	·4
" 50 " 100	1,218	86,483	380,345	4 8	·5
" 100 " 500	2,367	556,372	1,674,773	3 0	2·9
" 500 " 1,000	826	582,741	1,263,524	2 3	3·1
" 1,000 " 2,000	506	835,242	1,179,756	1 8	4·4
" 2,000 " 5,000	387	1,843,378	1,946,507	1 1	9·7
" 5,000 " 10,000	250	1,726,869	1,043,519	0 12	9·1
" 10,000 " 20,000	159	2,150,111	965,166	0 9	11·3
" 20,000 " 50,000	103	3,071,723	945,914	0 6	16·2
" 50,000 " 100,000	44	3,025,616	588,788	0 4	16·9
100,000 and upwards	24	4,931,884	623,148	0 3	26·1
No areas	11	..	10,740	..	..
No rental	11	1,147	..	..	..
Total	132,136	18,946,694	18,698,804	1 0	100·0

Scotland, as compared with either England or Ireland, is emphatically a country of large proprietors. Taking the population of 1871 as the basis of comparison, a little over 3·9 per cent. of the population of Scotland have a share in the ownership of the soil, the proportion in England and Wales being about 5 per cent., while in Ireland it is only about 1·7. On an average each owner in England possesses 33 acres, in Scotland 143, and in Ireland 293. While in Ireland, however, only a little over one-half of the number of proprietors possess less than 1 acre, and in England about five-sevenths, this class in Scotland amounted to about five-sixths of the whole. They possessed only ·1 per cent. of the total area, the remaining 99·9 being possessed by 19,131 persons, while 171 persons held 58·3, and 68 persons 42·1. Whereas in England 1 and in Ireland only 3 proprietors held upwards of 100,000 acres each, in Scotland there were 24 persons who each held more than this amount, and together they possessed 26·1 per cent. of the total area. The excessive size of the properties of Scotland may be partly accounted for by the fact that a large proportion of the land is so mountainous and unproductive as to be unsuitable for division into small properties; but two other causes have also powerfully co-operated with this, viz., the wide territorial authority exercised by some of the lowland nobles, as the Scotts and Douglases, and such powerful Highland nobles as the Argylls and Breadalbanes, and the stricter law of entail introduced by the Act of 1685 (see ENTAIL, vol. viii. p. 452). The largest estates are thus in the hands of the old hereditary families. The almost absolute power anciently wielded by the landlords, who within their own territories were lords of regality, tended to hinder independent agricultural enterprise, and it was not till after the abolition of hereditary jurisdictions in 1746 that agriculture in Scotland made any real progress.

The following table (XII.) gives a classification of the holdings of Scotland in 1875 and 1880:—

Years.	50 Acres and under. Number.	Area in Acres.	From 50 to 100 Acres. Number.	Area in Acres.	From 100 to 300 Acres. Number.	Area in Acres.	From 300 to 500 Acres. Number.	Area in Acres.	From 500 to 1000 Acres. Number.	Area in Acres.	Above 1000 Acres. Number.	Area in Acres.	Total. Number.	Area in Acres.
1875	56,311	666,356	9878	697,620	11,823	1,980,081	1967	729,885	691	427,478	126	109,675	80,796	4,611,095
1880	55,280	653,295	9726	721,844	12,348	2,082,914	2007	750,295	661	418,650	79	114,298	80,101	4,741,296

It will be observed that nearly one-half of the total area of the holdings is occupied by those possessing from 100 to 300 acres each. The holdings over 300 acres are generally sheep farms, and it is to the enterprise of the medium class of holders that the agricultural progress of Scotland is chiefly due. A society of improvers in the knowledge of agriculture was founded in 1723, but ceased to exist after the Rebellion of 1745; and the introduction of new and improved methods, where not the result of private enterprise, has been chiefly associated with the efforts of the Highland Society, instituted in 1783, and latterly known as the Highland and Agricultural Society. A great stimulus was also afforded in the beginning of the 19th century by the high prices obtained during the

Landlord and tenant.

Continental wars, and, although periods of occasional severe depression have occurred since then, not only has the science of agriculture continued rapidly to advance but the position of the large farmer has until within recent years been one of increasing prosperity. The system of nineteen years' lease had proved, as regards both agricultural progress and the interests of the farmer, a much superior arrangement to the system of yearly tenancy so largely prevailing in England; but it was conjoined with customs and modified by conditions which during the period of agricultural distress prevailing since 1872 have caused the relations between landlord and tenant to become severely strained. The more prominent grievances of the farmer were the difficulty of obtaining sufficient compensation for improvements, the inconveniences resulting from the law of hypothec (see HYPOTHEC, vol. xii. p. 598), and the hardships suffered from the existence of the game laws. Hypothec was abolished in 1879, except as regards the Act of Sederunt; a ground game Act was passed in 1880; and, succeeding the report of the duke of Richmond's commission in 1882, the Agricultural Holdings Act was passed in 1883, containing provisions for securing to the tenant control in the disposition of his lease, and also compensation for improvements; but already it is evident that these reforms have failed to meet the difficulties created by the altered conditions of things, due to the increasing scarcity of land and the importation of foreign produce.

While the relations between the landlord and the large farmer cannot be regarded as satisfactory, the difficulties of the crofters—small holders now chiefly to be found in the western Highlands and the islands to the north and west of Scotland—have reached a more acute stage. The crofter system prevailing in Orkney and Shetland—described in the article on those islands—has a totally different origin from that prevailing in the Highlands. On account of the ancient relations between the Highlander and his chief, the inheritance is claimed by the Highland crofters of an inalienable right to security of tenure; but when the old feudal system of the Highlands was suddenly abolished after the Rebellion of 1745 no legal steps were taken for the recognition of this right, and from the beginning of the 19th century wholesale clearances of tenants were carried out in many districts even by the heirs of the old Highland chiefs. In the words of the report of the crofters commission of 1884:—"The crofter of the present time has through past evictions been confined within narrow limits, sometimes on inferior land and exhausted soil. He is subject to arbitrary augmentations of money rent, he is without security of tenure, and has only recently received the concession of compensation for improvements." The crofters in Scotland are now estimated to number 40,000 families or 200,000 persons, and many of them support themselves partly by fishing. In the struggle for existence they have had to contend against the tendency towards the creation of large farms, the demand for sporting estates, the desire of landlords to escape the burden of poor rates, and the fact that they have absolutely no choice as regards the conditions imposed on them by the landlord. In March 1883 a commission was appointed to inquire into the condition of the cotters and crofters in the Highlands and islands of Scotland; this commission gave in its report in 1884, and an Act based on their recommendations was passed in 1886.

Distribution of agricultural crops.

Notwithstanding the unsatisfactory condition of agricultural affairs in Scotland at present, there is no country in the world tion of where farming is prosecuted with more skill and enterprise. On account of the great variety of soil and climate the methods in operation differ greatly in different districts, and for special details the reader is referred to the articles on the several counties. The following table (XIII.) shows the cultivated area and the areas under each kind of crop in different years, with the proportion of the acreage under each kind of crop, &c., to every 1000 acres of cultivated land for 1885 in Scotland, England, and Ireland:—

	Yearly Averages. 1867-70.	1871-75.	1880.	1885.	Average per 1000 Acres 1885. Scotland.	England.	Ireland.
	Acres.	Acres.	Acres.	Acres.	Acres. 1000	Acres. 1000	Acres. 1000
Total acreage under crops, bare fallow, and grass	4,420,375	4,590,325	4,738,127	4,845,805			
Permanent pasture	1,036,844	1,084,983	1,159,353	1,220,000	252	492	673
Arable land	3,383,531	3,474,842	3,578,774	3,625,805	748	508	327
Corn crops—							
Wheat	124,206	122,513	73,976	55,155	11	95	5
Barley or bere	227,988	252,105	264,120	237,472	49	76	11
Oats	1,011,480	1,007,339	1,037,254	1,046,285	216	66	87
Rye	8,135	10,480	7,338	7,095	2	2	1
Beans	25,714	26,746	19,677	23,135	5	16	--
Pease	2,367	2,332	1,227	1,750		9	--
Total under corn crops	1,397,977	1,421,515	1,403,887	1,370,892	283	264	104
Green crops—							
Potatoes	170,978	167,880	187,061	148,904	31	14	53
Turnips and swedes	490,598	503,709	485,987	434,213	100	50	20
Mangold	944	1,748	1,822	1,495	--	14	2
Carrots	964	1,048	1,303	1,296	--	1	--
Cabbage, kohl-rabi, and rape	3,441	4,656	5,473	5,333	1	6	3
Vetches, &c.	14,529	14,780	15,705	18,088	4	16	2
Total under green crops	681,454	693,821	697,446	659,919	136	110	80
Grasses under rotation	1,248,747	1,338,106	1,455,745	1,571,745	324	110	134
Flax	1,417	731	182	41	--	--	7
Hops	1	--	--	--	--	3	--
Fallow	54,289	21,669	21,514	23,208	5	21	1

The earliest year included in this table (1867) is the date at which the agricultural statistics began to be collected and published by the Board of Trade. The work previous to this had been undertaken by the Highland and Agricultural Society of Scotland, but their returns were necessarily less complete and accurate. The return for 1857, for example, gives the arable acreage ("acreage under a rotation of crops") as 3,776,572; but this is clearly too much, as it exceeds that of 1885, and since 1867 there has been a gradual increase. Only a little over one-fourth of the area of Scotland is cultivated, while in England only one-fourth is left uncultivated. It must, however, be taken into consideration that in the agricultural returns "permanent pasture" does not include the mountainous districts which form such a large portion of the surface of Scotland, where heaths and natural grasses occupy the soil and yield a scanty herbage for sheep and cattle. In the return "permanent pasture" is represented as occupying an area little more than a third as large as that occupied by arable land, while in England the two areas are pretty nearly equal, but as a matter of fact pasturage plays a much more important part in the economy of the Scottish than of the English farmer. It will be observed that as regards the main divisions of arable land the total areas under both corn crops and green crops have been slightly decreasing, while there has been a considerable increase in the area under rotation grasses. The following table (XIV.) shows the yield of the principal crops in 1857, 1884, and 1885, with the average yield per acre in the last two years:—

	1857.	1884.	1885.	Average per Acre 1884.	1885.
Wheat .. Bushels	6,154,986	2,348,261	1,893,501	34·17	34·32
Barley .. "	7,236,207	7,901,209	8,245,820	34·27	34·72
Oats ... "	32,750,763	36,713,321	33,407,127	35·10	31·93
Beans } .. "	1,037,760	1,705,398	799,577	32·23	30·67
Pease }		38,551	37,464	24·74	21·41
Turnips .. Tons	6,090,109	7,582,779	6,496,189	13·03	13·39
Potatoes .. "	430,468	986,808	803,523	6·02	5·39

This table being founded on estimates can, of course, only be regarded as approximately correct. The average yield of both wheat and barley is higher than that of England, while the average yield of both oats and potatoes is lower, which may be accounted for by the fact that the first two crops occupy the best soils of Scotland, while the last two occupy every variety of soil in the country. Wheat is grown chiefly in the sea-coast districts and the fertile river-valleys. The area under wheat has declined more than a half since 1867, the combined causes of this being wet seasons and increased foreign competition. Barley, for which the distilleries keep up a steady demand, and oats, the staple crop of the country, have rather increased in area since 1867. The area under potatoes—a very uncertain crop—has rather declined within recent years, and

that under turnips has considerably declined, partly owing to the increased use of artificial stuffs in cattle-feeding. The following table (XV.) shows the number of live stock in different years, with the average number to every 1000 acres of cultivated land in 1885 in Scotland and England :—

	Yearly Average.		1880.	1885.	Average per 1000 Acres 1885.	
	1867-70.	1871-75.			Scotland.	England.
Horses (including ponies)—						
Used solely for agricultural purposes	138,564	136,689	141,332	141,522	29	30
Unbroken horses and mares kept for breeding	[1] 34,307	41,963	52,681	46,770	10	13
Total horses	[1] 172,871	178,652	194,013	188,292	39	43
Cattle—						
Cows and heifers in milk or in calf	380,509	392,252	387,195	419,210	87	74
Other cattle—two years old and above	249,541	267,920	258,967	260,503	54	43
" under two years	392,836	467,165	453,124	496,289	102	72
Total cattle	1,022,886	1,127,337	1,099,286	1,176,004	243	189
Sheep—						
One year old and above	4,582,835	4,735,008	4,651,116	4,560,436	941	407
Under one year old	2,355,142	2,426,114	2,420,972	2,396,762	495	269
Total sheep	6,937,977	7,161,122	7,072,088	6,957,198	1436	676
Pigs	153,959	166,143	120,925	150,984	31	82

This table does not indicate any constant decrease or increase in any of the classes of live stock. It will be observed that the average number of cattle to the acreage of cultivated land in Scotland is about a third more than in England, and of sheep more than double as many; but the number of pigs in England is more than double as many to the acreage of cultivated land as it is in Scotland, and the number of horses is greater. The special breeds of horses in Scotland are the Shetland ponies, the Highland ponies, and the Clydesdale draught horses, the latter originally bred in the Clydesdale district from crossing with Flemish stallions imported about the beginning of the 18th century. The breeds of cattle include the Ayrshire, which, since they are chiefly noted for their yield of milk, and are specially adapted for dairy farms (which prevail especially in the south-west of Scotland), have in a great measure supplanted the Galloway in their native district, except where these are kept for feeding purposes; the polled Angus or Aberdeen, fair milkers, but chiefly valuable for their beef-making qualities, and on this account, as well as their hardihood, in especial favour in the north-east of Scotland, where the art of cattle-feeding has reached its greatest perfection; and the west Highland breed, noted for their long horns, their shagginess, the decided character of their various colours—black, red, dun, cream, and brindle—and their power of thriving on wild and heathy pasture. The special breeds of sheep are the fine-woolled breed, peculiar to Shetland; the blackfaced, native to the Highland districts; and the Cheviots, native to the range of hills of that name, and now the favourite breed in the south of Scotland, although border Leicesters and other English breeds, as well as a variety of crosses, are kept for winter feeding on the lowland farms.

The area under orchards as returned on 4th June 1885 was 1892 acres and under nursery grounds 1654. Orchards, chiefly for apples, are most numerous in the Carse of Gowrie and the neighbourhood of Perth, and along the banks of the Clyde above Hamilton. The area under woods in 1812 was 907,695 acres, of which 501,469 acres were natural woods and 406,226 planted; by 1872 it had declined to 734,490, but by 1881 (*i.e.*, by the latest return) it had increased to 829,476, the principal increase having been in Aberdeen, Perth, and Inverness, the counties where the growth of woods is largest. The Board of Trade returns do not distinguish between planted and natural woods, but it is well known that large cuttings have been made in the indigenous forests of the Highlands, while at the same time considerable attention has been paid within the present century to the growth of plantations in the Lowlands, partly as a covert for game; the science of forestry has made great advances within recent years owing to the encouragement and guidance of the Scottish Arboricultural Society, established in 1854, and of the Highland and Agricultural Society. The modern plantations are formed chiefly of Scotch fir with a sprinkling of larch. On the botany of Scotland H. C. Watson's *Topographical Botany* (1883) may be consulted.

Deer forests, game, &c.

According to the report of the crofters commission, the area under deer forests in Scotland is 1,975,209 acres, or about one-tenth of the whole area of the country. The species of deer peculiar to the Scottish Highlands is the red deer; the fallow deer is not uncommon in the Lowlands, especially in the hilly south-western districts. The grouse moors of Scotland occupy a much more extensive area, and are also much more widely distributed, while they supply sport to a much greater number of persons. Ptarmigan and blackcock are abundant in many districts; and pheasants and partridges, as well as hares, are carefully preserved on many estates in the cultivated districts. Rabbits are common throughout the whole country. Fox-hunting is a fashionable sport in most of the Lowland counties; but otter-hunting has almost died out. The bear, wolf, and beaver, at one time common in Scotland, have become extinct. The last wolf, it is said, was killed by Sir Ewen Cameron of Lochiel in 1680. The wild cat is still to be found in the Highlands, and the polecat, ermine, and pine marten exist in considerable numbers. The golden eagle and the white-tailed eagle tenant the wilder mountainous districts, but other larger birds of prey, as the osprey and the kite, are becoming scarce. In all there are more than 300 species of birds in Scotland, including a great variety of water-fowl in the sea and inland lochs.

Fisheries.

Fisheries.—Details regarding the Scottish fisheries will be found under FISHERIES (vol. ix. pp. 257-262). The former Board of White Herring Fishery was abolished in 1882 and the Fishery Board of Scotland established, which has devoted more systematic attention to the collection of statistics and the general encouragement of the industry. In 1856 the herring and deep-sea fisheries engaged only about 30,000 persons in Scotland, but in 1884 they employed directly or indirectly 103,804 persons, while the total estimated produce in 1884 was valued at £3,351,848,—the value of cured fish being £2,279,614 (herrings, £2,121,346; cod, ling, and hake dried, £149,407; ditto pickled, £8861); of white fish sold fresh, £716,295 (haddocks, £300,712; herrings, £150,720; cod, ling, and hake, £97,443; torsk and saithe, £10,481; whitings, £32,808; sprats, £5232; mackerel, £5286; turbot, £9368; holibut, £17,624; flounders, £47,723; skate, £14,17; soles and other flat fish, £24,727); of shell-fish, £80,939; and of salmon, £275,000.

Coal.

Mining Industries.—The chief sources of the mineral wealth of Scotland are coal and iron, which are generally found in convenient juxtaposition. The principal coal-fields are described under COAL (vol. vi. p. 52 *sq.*). The privilege of digging coal in the lands of Pittencrieff was conferred by charter on the abbot and convent of Dunfermline in 1291, and at a very early period the monks of Newbattle Abbey dug coal from surface-pits on the banks of the Esk. Æneas Sylvius (afterwards Pope Pius II.), who visited Scotland in the 15th century, refers to the fact that the poor people received at the church doors a species of stone which they burned in place of wood; but, although the value of coal for smith's and artificer's work was early recognized, it was not generally employed for domestic purposes till about the close of the 16th century. In 1606 an Act was passed binding colliers to perpetual service at the works at which they were engaged, and their full emancipation did not take place till 1799. An Act was passed in 1843 forbidding the employment of children of tender years and of women in underground mines. According to the census of 1851, the number of persons engaged in connexion with coal-mining was 36,973 males and 358 females (the latter employed above ground), and in 1881 the numbers were 53,340 and 41. According to the mineral statistics of 1885 there were 69,425 persons employed in the coal-mines of Scotland,—45,082 in the western and 24,343 in the eastern district. The output within twenty years has been more than doubled. In 1854 it was 7,488,000 tons, by 1866 it had increased to 12,034,638, and in 1884 it was 21,186,688.

Iron.

The rise of the iron industry in Scotland dates from the establishment in 1760 of the Carron ironworks near Falkirk. The number of persons employed in iron-mining in 1851 was 7648, and in iron manufacture 13,296; and by 1881 the numbers had increased respectively to 10,473 and 38,309. The total output of iron ore and ironstone in Scotland in 1884 was 1,885,376 tons, valued at £854,416, less than the estimated amount in 1858, which was 2,312,000 tons, valued at £750,000. There has been no increase in the manufacture of pig-iron since about 1866. The imports of iron ore were 356,380 tons in 1883, valued at £359,918, and in 1884 406,007 tons, valued at £356,451. The production of pig-iron increased with great rapidity after the introduction of railways. In 1796 the quantity produced was 18,640 tons, and in 1830 only 37,500; in 1840 it had risen to 241,000, in 1845 to 475,000, in 1865 to 1,164,000; but in 1884 it was only 988,000, the industry being confined to Ayrshire, Fifeshire, and Lanarkshire. The iron-mills and forges in operation are confined to the last county, there being in 1884 22 works, 334 puddling furnaces, and 82 rolling mills. In 1884 there were 63 open-hearth steelworks in operation, of which 46 were in Glasgow, 10 in Holytown, 4 in Motherwell, and 3 in Wishaw, the quantity made in 1884 being 208,650 tons.

Since about the years 1850-55 shale-mining has become an important industry, especially in Linlithgowshire and Midlothian. the total quantity raised in Scotland in 1884 being 1,469,649 tons, valued at £370,024. Lead ore is worked at Abington in Lanarkshire and Wanlockhead in Dumfrieshire; the dressed lead ore obtained amounts to 4327 tons, valued at £34,997, and yielding

1 These figures are for 1870 only.

3219 tons of lead and 20,011 ounces of silver. The amount of fire-clay dug in 1884 was 463,294 tons, valued at £56,237. Stone quarrying, especially of granite, sandstone, flagstone, slate, and limestone, is extensively carried on, but the returns of the several amounts raised annually are incomplete. The number of persons engaged in quarries in 1881 was 13,742, and the value of the materials raised in 1884 was estimated at £1,030,650. The principal granite works occur in Aberdeenshire and Kirkcudbrightshire, while freestone quarries are common throughout the greater part of the Lowland district, although whinstone also is frequently used for building purposes. Large quantities of paving stones are exported from Caithness and Forfarshire, and there are very extensive slate-quarries at Ballachulish and other places in Argyllshire.

Manufactures.—Although a company of woollen weavers was incorporated by the town council of Edinburgh in 1475, the cloth worn by the wealthier classes down to the beginning of the 17th century was of English or French manufacture, the lower classes wearing "coarse cloth made at home," in the fashion still prevailing in the remoter districts of the Highlands. In 1601 seven Flemings were brought to Edinburgh by commissioners from the burghs to instruct the people in the manufacture of serges and broadcloth, and eight years later a company of Flemings was established in the Canongate (Edinburgh) for the manufacture of cloth under the special protection of the king; but, notwithstanding also the establishment in 1681 of an English company for the manufacture of woollen fabrics near Haddington, the industry for more than fifty years after this made very tardy progress in the country. In fact its importance dates from the introduction and improvement of machinery in the 19th century. The most important branch of the trade, that of tweeds, first began to attract attention shortly after 1830; though still having its principal seat in the district from which it takes its name, including Galashiels, Hawick, Innerleithen, and Selkirk, it extends to a large number of towns throughout Scotland, especially to Aberdeen, Elgin, Inverness, Stirling, Bannockburn, and Paisley. The chief seat of the hosiery trade is Hawick. Carpet manufacture has had its principal seat in Kilmarnock since 1817, but is also carried on in Aberdeen, Ayr, Bannockburn, Glasgow, Paisley, and other towns. Tartans are largely manufactured in Tillicoultry, Bannockburn, and Kilmarnock, and shawls and plaids are largely manufactured in several towns. In 1850 there were in Scotland 188 woollen and worsted factories, with 233,533 spindles and 247 power-looms, employing 10,210 persons. Twenty-eight years later (1878) the total number of factories was 246, in which there were 559,021 spinning spindles, 62,013 doubling spindles, and 6284 power-looms, the number of persons employed being 22,667, of whom 10,083 were males and 12,584 females.

Linen and jute.

The manufacture of cloth from flax is of very ancient date in Scotland, and towards the close of the 16th century Scottish linen cloths were largely exported to foreign countries, besides having an extensive sale in England. Regulations in regard to the manufacture were passed in 1641 and 1661. In a petition presented to the privy council in 1684, complaining of the severe treatment of Scotsmen selling linen in England, it was stated that 12,000 persons were engaged in the manufacture. Through the intercession of the secretary of state with the king these restrictions were removed. To further encourage the trade it was enacted in 1686 that the bodies of all persons, with the exception of poor tenants and cotters, should be buried in plain linen only, spun and made within the kingdom. The Act was repeated in 1698 and 1695, and in the former year another Act was passed prohibiting the export of lint and permitting its import free of duty. At the time of the Union the annual amount of linen cloth manufactured in Scotland is supposed to have been about 1,500,000 yards. The Union gave a considerable impetus to the manufacture, as did also the establishment of the Board of Manufactures in 1727, which applied an annual sum of £2650 to its encouragement, and in 1729 established a colony of French Protestants in Edinburgh, on the site of the present Picardy Place, to teach the spinning and weaving of cambric. From 1st November 1727 to 1st November 1728 the amount of linen cloth stamped in Scotland was 2,183,978 yards, valued at £103,312, but by the year ending 1st November 1771 it had increased to 13,672,548 yards, valued at £632,389, during the year ending 1st November 1798 to 21,297,059, valued at £850,405, and by the year ending 1st November 1822, when the regulations as to the inspection and stamping of linen ceased, to 36,268,530 yards, valued at £1,396,296. The counties in which the manufacture is now most largely carried on are Forfar, Perth, Fife, Kinross, and Clackmannan, but Aberdeen, Renfrew, Lanark, Edinburgh, and Ayr are also in a considerable degree associated with it. Dundee is the principal seat of the coarser fabrics, Dunfermline of the table and other finer linens, while Paisley is widely known for its sewing threads. The allied industry of jute is the staple industry of Dundee. The number of persons employed in the flax-factories of Scotland in 1837 was 15,462. The following table (XVI.) gives particulars of these factories for the years 1856, 1867, and 1878 :—

Years.	Factories.	Spindles.		Power-Looms.	Persons employed.
		Spinning.	Doubling.		
1856	168	278,304		4,011	31,722
1867	197	487,579		19,917	77,195
1878	155	265,268	18,495	16,756	56,476

Principally owing to foreign competition, the linen manufacture has within recent years been in a very languid condition.

The first cotton-mill in Scotland was built at Rothesay by an English Company in 1778. It was soon afterwards acquired by David Dale, who was the agent in Scotland for Arkwright, and had the invaluable aid of his counsel and advice. Dale also established cotton-factories in 1785 at New Lanark, afterwards so closely associated with the socialistic schemes of his son-in-law, Robert Owen, and thus laid the foundation of the industry in the two counties, Lanark and Renfrew, which are now its principal seats in Scotland. Nine-tenths of the cotton-factories of Scotland are now concentrated in Glasgow, Paisley, and the neighbouring towns, but the industry extends into other districts of the west of Scotland and is also represented in the counties of Aberdeen, Perth, and Stirling. The following table (XVII.) gives particulars for 1850, 1861, 1875, and 1885 :—

Years.	Factories.	Spindles.	Power Looms.	Persons employed.
1850	168	1,683,093	23,564	34,325
1861	163	1,915,398	30,110	41,237
1875	96	1,711,214	29,171	33,652
1885	147	1,149,514	29,684	37,167

For further particulars regarding the manufacture in Scotland, see CORTON, vol. vi. pp. 501-503.

Silk, &c.

Silk is manufactured in Paisley and Glasgow, but the industry is of minor importance, employing only about 600 persons. Floor-cloth is manufactured at Kirkcaldy, where also the first linoleum factory in Scotland was established in 1877.

Whisky.

Next to textile fabrics, the most important manufacture in Scotland is that of whisky, in which it has Ireland for its only competitor. Distillation was introduced into Scotland from England, but by 1771 large quantities of spirits were sent to England from Scotland. The legal manufacture of whisky was greatly checked in the 19th century by occasional excessive advances in the rates of duty, but after the reduction to 2s. 4¾d. per gallon in 1823 the number of licensed distillers rapidly increased, while illegal distillation became much less common. The following table (XVIII.) shows the number of gallons made in various years since 1824 :—

Year.	Gallons.	Year.	Gallons.	Year.	Gallons.
1824	5,108,373	1855	11,283,636	1878	17,670,460
1840	9,032,353	1865	13,445,752	1884	20,164,962

Beer.

Ale was a common beverage in Scotland as early as the 12th century, there being one or more brew-houses attached to every religious house and barony. So important was the use of the beverage even in the beginning of the 18th century that a threatened imposition of a tax on malt in 1725 led to serious riots in Glasgow and a proposal to repeal the Union. Though ale has been superseded by whisky as the national beverage, Scotland still possesses several large breweries, and Edinburgh ales vie in repute with those of Burton-on-Trent. The number of barrels charged with duty in Scotland in 1885 was 1,237,323, the number in England being 24,519,173.

Miscellaneous industries.

The first sugar-refinery in Scotland was erected in 1765 in Greenock, where the industry made rapid progress and has still its principal seat, although it is extensively carried on in Leith and in a lesser degree in Glasgow and Dundee. Glass-making, introduced in 1610 by Sir John Hay at Wemyss in Fife, is now of considerable importance, Edinburgh being celebrated for the finer branches of the manufacture. A paper-mill was erected in 1675 at Dalry Mills on the Water of Leith, in which French workmen were employed to give instruction, with the result, as was reported by the owners, that "grey and blue paper was produced much finer than ever was done before in the kingdom." The most important seat of the industry is now Valleyfield near Penicuik, where it was introduced in 1709. Edinburgh has since the time of the Ballantynes enjoyed a widely-extended fame for the excellence and beauty of its printing. The other manufactures prevailing in different parts of Scotland, such as those of leather, soap, earthenware and hardware, carriages, and the various implements and utensils in general use, do not call for special characterization.

Commerce and Shipping.—That Scotland had a considerable trade with foreign countries at a very early period may be inferred from the importation of rich dresses by Malcolm III. and the enjoyment of Oriental luxuries by Alexander I. David I. receives the special praise of Fordun for enriching "the ports of his kingdom with foreign merchandise." In the 13th century the Scots had

acquired a considerable celebrity in shipbuilding; and a powerful French baron had a ship specially built at Inverness in 1249 to convey him and his vassals to the Holy Land. The principal shipowners at this period were the clergy, who embarked the wealth of their religious houses in commercial enterprises. Definite statements regarding the number and tonnage of shipping are, however, lacking till the 16th century. From two reports printed by the Scottish Burgh Record Society in 1881, it appears that the number of vessels belonging to the principal ports—Leith, Dundee, Glasgow, Kirkcaldy, and Montrose—in 1656 was 58, the tonnage being 3140, and that by 1692 they had increased to 97 of 5905 tons. These figures only represent a portion of the total shipping of the kingdom. At the time of the Union in 1707 the number of vessels was 215 of 14,485 tons. The following table (XIX.) gives the numbers for various years from 1850:—

	1850.		1860.		1870.		1884.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
Sailing vessels	3332	491,395	3172	552,212	2715	727,942	2065	827,295
Steam vessels	169	30,827	314	71,579	582	299,142	1403	866,780
Total	3601	522,222	3486	623,791	3297	937,084	3468	1,694,075

Table XX. shows the progress of the coasting and foreign trade since 1855:—

Year.	Coasting.		Colonial and Foreign.		Total.	
	Entered.	Cleared.	Entered.	Cleared.	Entered.	Cleared.
1855	1,963,552	2,057,936	668,078	840,150	2,631,630	2,898,086
1880	6,628,853	5,691,136	2,700,915	3,001,897	9,329,768	8,693,033
1884	7,167,230	6,098,938	3,073,561	3,638,423	10,240,791	9,737,361

Table XXI. shows the great expansion of the foreign and colonial trade since 1755:—

Year.	Imports.	Exports.	Year.	Imports.	Exports.
1755	£464,411	£385,576	1825	£4,994,204	£5,842,296
1790	1,688,837	1,235,405	1851	8,921,103	5,016,116
1795	1,268,520	976,791	1874	31,012,750	17,912,932
1800	2,212,790	2,340,069	1880	34,997,652	18,243,078
1815	3,447,853	6,997,709	1884	30,600,238	20,325,335

The value of the imports into Scotland is only about a tenth of that of England, but this does not represent the proper proportion of foreign imports used or consumed in Scotland, as large quantities find their way to Scotland from England by rail,—nearly all the tea, for example, consumed in Great Britain being imported into London, while various other ports have almost a monopoly of certain other imports. Reckoning by the combined value of their imports and exports, the principal ports of Scotland are Glasgow, Leith, Greenock, Dundee, Grangemouth, and Aberdeen, in the order named, but for particulars regarding the trade of these and other ports reference must be made to the articles on the several towns.

For many of the most important improvements in the construction of ships, especially steam vessels, Great Britain is indebted to the enterprise and skill of the Clyde shipbuilders. From the time of the construction by Mr Robert Napier of the steamers for the Cunard line, formed in 1840, the shipbuilders on the Clyde have enjoyed an unrivalled reputation for the construction of large ocean steamers, both as regards mechanical appliances and the beauty and convenience of the internal arrangements. Shipbuilding is also carried on to a considerable extent at Dundee, Leith, and Aberdeen, and to a certain degree at most of the ports of the kingdom, but within recent years the industry has been in a very fluctuating condition, the tonnage of the vessels constructed annually varying between 1880 and 1885 from a little over 100,000 to nearly 300,000.

National Wealth.—The immense increase in the wealth of Scotland within the last 200 years is sufficiently proved by the fact that, while in 1674 the valued rent was only £3,656,408 Scots or £304,700 sterling, the gross annual value of the land according to the estimate in the return of 1873 was £18,696,804, or more than sixty times as much, and about fifteen times as great as the proportional increase of population. This increase is of course partly due to agricultural improvements and partly to the discovery and development of the mineral wealth in coal and iron, but it may also be accounted for by the smaller representative value of money, and by the fictitious increase in rents in towns, which does not represent an increase in absolute value. The annual value of real property assessed for income-tax under schedule A in 1843 was £9,481,000; the average value for the three years ending 5th April 1883 was £16,995,718, and for the year ending 5th April 1884 the value was £17,066,705. For the year ending 5th April 1857 the amount of property and income charged with duty was £22,563,238; and during the following twenty-five years it was more than doubled, the average amount for the three years ending 5th April 1883 being £48,069,765, and for the year ending 5th April 1884 £49,600,348. This is less than a tenth of that for the United Kingdom. The total amount of money lying in deposit in savings banks in 1884 was £7,709,471,—about a seventh part of the whole amount deposited in the savings banks of the United Kingdom. Notice of the rise and progress of banking in Scotland will be found under BANKING (vol. iii. pp. 332-336). The total paid-up capital of the Scottish banks at the dates of balance in 1885 was £9,052,000 and their total liabilities £107,852,595.

National Wealth.

Education.—Notices of the existence of schools in the principal towns occur as early as the 13th century. They were under the supervision of the chancellor of each diocese and were chiefly devoted to studies preparatory for the church. Previous to the Reformation schools for general education were attached to many religious houses. In the *First Book of Discipline*, 1560, a comprehensive scheme of general education was propounded, but neither this proposal nor an Act passed in 1616 by the privy council for the establishment of a school in every parish was carried into effect; and the system of parochial schools which prevailed till the passing of the Education Act of 1872 really dates from the Act of William and Mary in 1696 providing for the maintenance of a school in every parish at the cost of the heritors. The various religious secessions in Scotland led to the founding of a large number of denominational and subscription schools, and at the Disruption in 1843 the Free Church made provision for the supply of secular education as well as religious instruction to its adherents. The Education Act of 1872 abolished the old management of the parish schools, and provided for the creation of districts under the management of school boards elected for three years by the ratepayers, male and female. These boards have the power to levy rates for the maintenance and erection of schools for primary instruction, elect the teachers, and enforce the clause in regard to compulsory attendance. The maintenance of schools is also aided by a Government grant, and the salary of the teacher is paid partly by school fees and partly by a grant dependent upon the result of the examination of the scholars by the Government inspector, the school board having the power, however, to make their own terms with the teacher. Denominational schools are permitted to receive a Government grant. The following table (XXII.) shows the proportion of persons in the receipt of education in Scotland in 1861, 1871, and 1881:—

Schools.

Year.	Population at different Ages.				Persons in Receipt of Education.			Percentages to the Population at each Age.			
	0-5 years.	5-15 years.	15 and above.	Total.	0-5 years.	5-15 years.	15 and above.	Total.	0-5 years.	5-15 years.	15 and above.	Total.
1861	417,259	685,912	1,959,123	3,052,294	8,666	439,888	19,002	467,556	2·08	64·05	0·96	15·25
1871	455,920	776,871	2,127,527	3,360,018	10,025	541,995	22,101	574,121	2·19	69·77	1·04	17·09
1881	510,591	855,015	2,369,967	3,735,573	14,152	675,314	30,633	720,099	2·77	78·98	1·29	19·28

Particulars in regard to schools under school board management are given in the following table (XXIII.):—

Year.	Total Expenditure.	Number of Scholars.	School Places.	Schools Inspected.	Expenditure per Scholar on Average Attendance.	Scholars Examined in Higher Subjects.	Certificated Teachers.	Assistant Teachers.	Pupil Teachers.
1875	£551,140	314,164	391,538	2730	£1 15 9½	12,938	3811	129	4202
1884	938,223	438,121	655,672	3131	2 1 5¾	61,429	6220	1012	3629

All the training colleges for teachers in board schools are connected with religious denominations—three with the Established Church, three with the Free Church, and one with the Episcopal Church.

As early as the 14th century some of the burghs had grammar-schools partly under the control of the magistrates. In 1496 an Act was passed enjoining the attendance at the schools of the eldest sons of barons and freeholders until "they be founded in perfect Latin, and thereafter to remain at the schools of arts and law" (where ecclesiastics were trained). The grammar or burgh schools enjoyed a monopoly of teaching certain branches, and private schools were frequently prohibited as interfering with their rights. Grammar-schools were chiefly devoted to instruction in Latin, and the course usually extended to five years. According to the report of the education commissioners, the number of burgh schools in 1867 was twenty-six. By the Act of 1872 their management was transferred to the school board, but they were excluded from participation in the school fund, and no provision was made for their inspection. The Act of 1878 authorized certain grants of money, and contained certain provisions for inspection, which, however, have been practically inoperative. The Educational Endowments Act of 1882 provides for a more comprehensive scheme for the

promotion of secondary education, and also for a scheme of systematic inspection. These educational endowments—the result of private bequest—yield an annual income of £175,000, and, on account of the changed conditions of society, the primary objects of the donors were in a great degree frustrated by the manner in which they were being administered. Some of the best secondary schools in Scotland are under the management of trustees. For the four universities of Scotland (St Andrews, Aberdeen, Glasgow, and Edinburgh) see the articles on these cities, also UNIVERSITIES. University College in Dundee and Anderson's College in Glasgow have similar courses of instruction to the universities, but possess no power to grant degrees and receive no Government aid. A notice of the various medical schools and scientific colleges will be found in the articles on the towns in which they are situated.

Religion.—For an historical account of the more important religious denominations of Scotland the reader is referred to the articles SCOTLAND, CHURCH OF, FREE CHURCH OF SCOTLAND, UNITED PRESBYTERIAN CHURCH, and PRESBYTERIANISM. The bulk of the population is Presbyterian, and the following table (XXIV.) gives particulars reported in 1885 regarding the Church of Scotland and other churches originated by secessions from it at various times,—the "contributions" indicating the amounts raised by the churches for all purposes, and of course excluding the endowments of the Established Church:—

	Church of Scotland.	Free Church.	U.P. Church.	Evang. Union.	Original Seceders.	Reformed Presby.
Congregations..	1,479	1,667	543	87	27	12
Members	565,261	329,541	177,517	13,210	3249	1037
Contributions ..	£366,431	£626,028	£387,355	£21,790	£5606	£2592

Other denominations.

The Roman Catholic Church has 327 "churches, chapels, and stations,"—the estimated population connected with it being over 340,000. The Episcopal Church in Scotland has about 250 churches with 80,000 members (of all ages) and nearly 30,000 communicants. The churches in connexion with the Congregational Union number 101, 73 of which report a membership of 10,869, the money raised for all purposes in 1884-85 being £23,027. The Baptist Union has 88 churches with 9688 members; and the Wesleyan Methodists have 26 "circuits" with 4653. There are a few other religious denominations, such as the Primitive Methodists, the Catholic Apostolic Church, and the Glassites, but the membership of each is comparatively small.

Parliamentary representation.

Government, Law, and Local Administration.—By the Act of Union in 1707 Scotland ceased to have a separate parliament and its government was assimilated to that of England. In the parliament of Great Britain its representation was fixed at sixteen peers (the same number as at present) elected by the peers of Scotland at each new parliament, in the House of Lords, and at forty-five members in the House of Commons,—the counties returning thirty and the burghs fifteen. The power of the sovereign to create new Scottish peerages lapsed at the Union, and their number has already diminished by nearly one-half. By the Reform Act of 1832 the number of Scottish representatives in the Commons was raised to fifty-three, the counties under a slightly altered arrangement returning thirty members as before, and the burghs, reinforced by the erection of various towns into parliamentary burghs, twenty-three the second Reform Act (1868) increased the number to sixty, the universities obtaining representation by two members, while three additional members were assigned to the counties and two to the burghs; by the Redistribution of Seats Act of 1885 an addition of six members was made to the representation of the counties and six to that of the burghs, the total representation being raised to seventy-two. The management of Scottish business in parliament has since 1885 been under the charge of the secretary for Scotland.

Law.

At the Union Scotland retained its old system of law and legal administration, a system modelled on that of France; but since the Union the laws of England and Scotland have been on many points assimilated, the criminal law of the two countries being now practically identical, although the methods of procedure are in many respects different. The Court of Session, as the supreme court in civil causes is called, dates from 1532, and was formed on the model of the parlement of Paris; it is held at Edinburgh, the capital. Since the Union it has undergone certain modifications. It consists of thirteen judges, acting in an Inner and an Outer House. The Inner House has two divisions, with four judges each, the first being presided over by the lord president of the whole court, and the second by the lord justice clerk. In the Outer House five judges, called lords ordinary, sit in separate courts. Appeals may be made from the lords ordinary to either of the divisions of the Inner House, and, if the occasion demands, the opinion of all the judges of the Court of Session may be called for; but whether this be done or not the decision is regarded as a decision of the Court of Session. Appeals may be made from the Court of Session to the House of Lords. The lord justice general (lord president), the lord justice clerk, and five other judges form the High Court of Justiciary, instituted in 1672, for criminal cases, which sits at Edinburgh for the trial of cases from the three Lothians and of cases referred from the circuit courts. The latter meet for the south at Jedburgh, Dumfries, and Ayr; for the west at Glasgow, Inveraray, and Stirling; and for the north at Perth, Aberdeen, Dundee, and Inverness. The law agents who undertake cases to be decided before the supreme courts are either solicitors before the supreme courts or writers to the signet, the latter of whom possess certain special privileges. The lawyer authorized to plead before the supreme courts is termed an advocate. The principal law officer of the crown is the lord advocate, who is assisted by the solicitor-general and by advocates-depute. The lord advocate has since 1885 ceased to have the charge of Scottish business in the House of Commons. See ADVOCATE, vol. i. 173. The subordinate legal courts and officials are described under the next heading.

The largest administrative area is that of the county, but for purposes of registration Scotland is partitioned into eight divisions, to each of which an examiner for inspection of registers is appointed by the registrar-general; and for the carrying out of the provisions of the Lunacy Acts it is divided into twenty-two districts. Registration counties date from the Act of 1854 providing that for purposes of registration the areas of the counties may be altered. For the purposes of the General Police Act of 1862 part of the area of one county may also be brought into the area of another. Certain counties have been united for parliamentary or other purposes, and certain others have been divided for parliamentary purposes, while others again for certain administrative purposes retain their old subdivisions, Lanark for assessment purposes being still divided into wards. The civil counties were originally synonymous either with sheriffdoms or stewartries. Stewartries ceased with the abolition of hereditary jurisdictions in 1748, but Kirkcudbright still retains the designation. The office of sheriff, which formerly implied a much less limited authority than at present, was in existence in the reign of David I., when the greater part of the kingdom was divided into twenty-five sheriffdoms. In the latter part of the 13th century they numbered thirty-four. The counties now number thirty-three of which Ross and Cromarty constitute one, while Edinburgh is a "county of a city." The highest county dignitary is the lord lieutenant, the office being instituted in 1782. He is nominated by the crown, holds office for life, except in cases of misconduct, represents the crown in military matters, recommends for commissions of the peace, holds the position of high sheriff, and is a member of the police committee. Practically, however, the office is little more than honorary, and the real administration of county affairs is in the hands of commissioners of supply, who were originally appointed to apportion and collect the national revenue, but who now regulate the land-tax, control the county police, raise the militia, and levy rates to meet the county expenditure. In 1878 an Act was passed for the creation of road trustees, who have the power to levy rates for the maintenance throughout the county of roads and bridges (see p. 530 above). The practical administration of the law in the county is under the control of the sheriff. See SHERIFF. A large proportion of his duties are, however, delegated to the sheriff-substitute. At one time the functions of the sheriff-principal were confined to one county, but by an Act passed in 1855 it was arranged that as sheriffdoms fell vacant certain counties should be grouped into districts, each under the control of one sheriff-principal, and in 1870 this arrangement was further modified and extended. The sheriff-clerk, appointed by the crown, has, under the Ballot Act of 1872, the charge of ballot papers in connection with the parliamentary elections, and is *custos rotulorum*. The public prosecutor for counties is the procurator-fiscal, who takes the initiative in regard to suspected cases of sudden death, although in this respect the law of Scotland is less strict than that of England. Justices of the peace, who are unpaid and require no special qualification, but who, as they are recommended by the lord-lieutenant, are generally persons of position in the county, exercise a certain subordinate jurisdiction. Their office expires on the demise of the crown. In every commission of the peace certain public officials are included. The justices of the peace hold quarter sessions, take affidavits and declarations (such as declarations of marriage), sign warrants, try petty criminal cases (such especially as poaching and assault), and regulate public-house licences. Under BOROUGH (vol. iv. pp. 63-64) will be found an account of the history and constitution of the three classes of ancient burghs in Scotland,—royal burghs, burghs of regality, and burghs of barony. Police burghs, which may include any of the other classes of burghs, are formed of those places which have adopted the General Police and Improvement Acts (13 and 14 Vict. c. 33 and 25 and 26 Vict. c. 101). They are governed by police commissioners, who have power to regulate all sanitary matters. They may include more than one of the other burghs and may extend into another county. Under the Improvement Act (25 and 26 Vict. c. 101) most of the burghs with over 7000 inhabitants maintain their own police. The parliamentary burghs do not now include all the royal burghs and include various other towns in addition to them. The number of royal

burghs is seventy, and, as was to be expected, while some since their formation have enormously increased in population and wealth, others have so declined or made so little progress that they now rank only as villages. In 1881 there were ten royal burghs which had less than 1000 inhabitants each and four which had less than 500 each, Earlsferry (Fife) having only 286. Under the Public Health Act of 1867, amended in 1879, the erection of urban and rural sanitary districts was provided for. The corporation of the burghs is formed of the provost (or lord provost), bailies, and councillors. Bailie courts are held in the burghs for the trial of minor offences. The civil parish or parish *quoad omnia*, originally the ecclesiastical parish or area subject to one cure of souls, is a division of the county for registration of births, deaths, and marriages and for poor law administration. The boundaries are determined by the boundaries of the estates which appear to lie in the parish, but may be altered by consent of proprietors holding the major value of the property in it. For all sanitary purposes the areas of burghs are removed from those of the parishes, and certain civil parishes may be classed as burghal, landward, and mixed. Under Graham's Act (7 and 8 Vict. c. 44) a parish *quoad sacra* may be erected on the application of persons who have built and endowed a church. For administrative purposes the oldest parish organization is that of the heritors or landowners, who are required to provide and maintain a church, churchyard, manse, and church glebe, and, before the passing of the Education Act in 1872, had to maintain the parochial school. In 1579 the power was granted them of assessment for poor relief, but in 1600 the kirk-session was united with them for these purposes. This organization still exists in those parishes, now very few in number, which have not adopted the Poor Law Amendment Act of 1845; this Act provides for the constitution of a parochial board composed of nominees of the kirk-session and a proportion of persons elected by the ratepayers. Under the Education Act of 1872 the county is divided into school-board districts, whose area corresponds with the civil, or the *quoad sacra*, or landward, or burghal parish (see p. 534 above).

(T. F. H.)

INDEX.

Administration, local, 553.
Agricola, 471.
Agriculture, 530.
Albany, dukes of, 491, 497.
Alexander I., 482.
" II., 484.
" III., 485.
Angus, earls of, 495, 498.
Angus MacFergus, 476.
Area, 521, 528.
Argyll, earls of, 513, 517.
Arran, earl of, 498 *sq.*
Baliol, 486.
Bannockburn, 488.
Beatons, 498.
Berwick, treaty of, 489.
Books of Discipline, 503, 534.
Bothwell Bridge, 516.
Bothwell, earl of, 504.
Boundaries, 521.
Boyd of Kilmarnock, 495.
Brigham, treaty of, 486.
Britons of Strathclyde, 473, 475 *sq.*
Bruce, competitor, 486.
Bruce, Robert, 488-489.
Brunanburgh, 479.
Burghs, 484, 535.
Cambuskenneth, 487.
Canals, 530.
Celtic Church, 475.
Celts, 473, 480.
Charles I., 511.
" II., 514.
Chastelherault, duke of, 502 *sq.*
Civil War, 513.
Climate, 527.
Coast-line, 526.
Cochrane, 495.
Colonization, 511, 518.
Columba, 474, 475.
Commerce and trade, 492, 496, 534.
Confession of Faith, 503.
Congregation, Lords of, 501 *sq.*
Constantine I., 478.
" II., 478.
Constantius, 472.
Conversion to Christianity, 474.
Court of Session, 498, 535.
Covenant, 512.
Covenanters, persecution of, 515 *sq.*
Crichton, William, 493.
Crofters, 531.
Cromwell's invasion, 514.
Crops, 531.
Culloden, 520.
Cuthbert, 475.
Dalriada, 473 *sq.*, 477.
Darnley, 504.
David I., 482.
" II., 489.
David, earl of Huntingdon, 484, 486.
Donald I., 478.
" II., 478.
Douglas, 487 *sq.*, 491, 494.
Dunbar, battle of, 514.
Duncan, 480.
Ecclesiastical history, 482, 501 *sq.*
Edgar, 481.
Edinburgh, treaty of, 502.
Education, 534.
Emigration, 529.
Episcopacy, 507, 510.
Falaise, treaty of, 484.
Falkirk, 487.
Fisheries, 532.
Flodden, 497.
Forests, 532.
France, relations with, 489 *sq.*
Game, &c., 532.
Geography, 471, 522 *sq.*
Geology, 521 *sq.*
Glasgow, assembly of, 512.
Glencoe, 518.
Glens, 525.
Government, 535.
Gowrie conspiracy, 509.
Hadrian, 471, 472.
Halidon Hill, 489.
Hastings, the competitor, 486.
Highlands, pacification of, 517.
Highlands, physical features of, 522-523.
Highlands, subjugation of, 498.
Huntly, 498.
Inhabitants, early, 472.
Iona, 474 *sq.*
Islands, 527.
Isles, reduction of, 485.
Jacobite risings, 520.
James I., 491.
" II., 493.
James III., 494.
" IV., 496.
" V., 497.
" VI., 507 *sq.*
" VII., 517.
Kennedy, bishop, 494.
Kenneth I. (Macalpine), 477-478.
" II., 479.
Kentigern, 474.
Killiecrankie, 517.
Kirkaldy of Grange, 502.
Knox, 500 *sq.*, 505, 506.
Lakes, 526.
Largs, battle of, 482, 485.
Lauderdale, 515.
Law, 488, 535.
Lennox, regents, 506, 507.
Liturgy, introduction of, 511.
Livingstone, 493.
Lothian, conquest of, 480.
Lowlands, central, 523.
Macbeth, 480.
Maitland of Lethington, 502.
Malcolm I., 479.
" II., 479.
" III. (Canmore), 480.
" IV., 483.
Manufactures, 533.
Mar, regent, 506.
Margaret, Maid of Norway, 486.
Margaret, sister of the Atheling, 481.
Margaret Tudor, 496.
Mary of Guelders, 494.
Mary of Guise, 500.
Mary Stuart, 499 *sq.*
Melville, Andrew, 505.
Melville, Sir James, 505.
Middleton, 515.
Minerals, 532.
Monk's administration, 514.
Montrose, 513.
Moray, regent, 505 *sq.*
Morton, regent, 506.
Mountains, 522, 524.
Nationalities, 529.
Neville's Cross, 489.
Newcastle, treaty of, 480.
Ninian, 474.
Norsemen in Scotland, 477 *sq.*, 482.
Northampton, treaty of, 488.
Northumbrian supremacy, 475.
Occupations, 529.
Octavians, 509.
Otterburn, 490.
Ownership of soil, 530.
Parliamentary representation, 535.
Pauperism, 529.
Picts, 473 *sq.*, 476 *sq.*
Pinkie, 500.
Population, 528.
Presbyterianism, 504 *sq.*
Pretenders, 520.
Railways, 530.
Reformation, 497, 501.
Religion, 535, 536.
Rivers, 524.
Roads, 471, 472, 530.
Robert I., 483.
" II., 490.
" III., 490.
Romans in Scotland, 471.
Ruthven, Raid of, 507.
St Andrews, bishopric of, 474, 477, 482, Sauchie, 495.
Scone, monarchy of, 477, 480.
Scots of Dalriada, 473, 477.
Severus, 472.
Sheriff, 483, 535.
Shipping, &c., 533-534.
Solemn League and Covenant, 513.
Southern uplands, 523.
Statistics, 528 *sq.*
Stirling, 494, 496, 507.
Stuart, Lord James, regent, 501, 507.
Stuarts, 490-520.
Tacitus, on ancient inhabitants, 472.
Trade and commerce, 492, 496, 534.
Union of crowns, 509.
Union of parliaments, 515, 518.
Valleys, origin of, 524.
Vital statistics, 529.
Wallace, 487-488.
Wall of Antoninus, 471.
" " Hadrian, 471.
Wealth, national, 534.
William III., 517.
William the Lion, 484.

SCOTLAND, CHURCH OF. In the article PRESBYTERIANISM the history of the Church of Scotland was brought down to the middle of the 18th century, and the story of the secessions of 1733 and 1751 was there told. We take up here the church's history at the beginning of the "Moderate" rule. Her annals during the next three-quarters of a century are singularly uneventful. In close alliance with the state, she increases in power and dignity, and becomes the home of letters and philosophy. But there is no great movement of a theological nature, no striking religious development to lend her popular interest.

The strength of the church as well as her tendency to moderation arose in great part out of the political circumstances of the early part of the 18th century. Presbytery, being loyal to the house of Hanover, while Episcopacy was Jacobite, enjoyed the royal favour and was treated as a firm ally of the Government. The Patronage Act of 1712 threw the filling up of parishes into the hands of those well-affected to the Government, and the example of the mode of patronage practised in England may have tended to promote a disregard of the religious feelings of the people. The effect on the clergy was to encourage them to seek the friendship of the landed gentry and to regard the higher rather than the lower orders of society as their natural allies, so that they were at the same time led to liberal ways of thinking and rendered largely independent of their congregations.

Period of Moderate ascendency.

It is remarked by Dr Hill Burton, and Carlyle repeats the remark, that "Scots dissent never was a protest against the principles of the church, but always tended to preserve the old principles of the church, whence the Establishment—by the progress of enlightenment as some said, by deterioration according to others—was lapsing." The secessions carried off the more fervent elements; yet enough of the old leaven always remained to exert a powerful influence. Thus, while the church as a whole was more peaceful, more courtly, more inclined to the friendship of the world than at any former time, it contained two well-marked parties, in one of which these characteristics of the religion of the 18th century were more marked than in the other. The Moderate party, which maintained its ascendency till the beginning of the 19th century, and impressed its character on the church, sought to make the working of the church in its different parts as systematic and regular as possible, to make the assembly supreme and enforce respect for its decisions by presbyteries, and to render the judicial procedure of the church as exact and formal as that of the civil courts. The popular party, regarding the church less from the side of the Government, had less sympathy with the progressive movements of the age, and desired greater strictness in discipline. The main subject of dispute arose at first from the exercise of patronage. Presbyteries in various parts of the country were still disposed to disregard the presentations of lay patrons, and to settle the men desired by the people; but legal decisions

had shown that if they acted in this way their nominee, while legally minister of the parish, could not claim the stipend. To the risk of such sacrifices the church, led by the Moderate party, refused to expose herself. By the new policy inaugurated by Dr Robertson, which led to the second secession, the assembly compelled presbyteries to give effect to presentations, and in a long series of disputed settlements the "call," though still held essential to a settlement, was less and less regarded, until it was declared that it was not necessary, and that the church courts were bound to induct any qualified presentee. The substitution of the word "concurrence" for "call" about 1764 indicates the subsidiary and ornamental light in which the assent of the parishioners was now to be regarded. The church could have given more weight to the wishes of the people; she professed to regard patronage as a grievance, and the annual instructions of the assembly to the commission (the committee representing the assembly till its next meeting) enjoined that body to take advantage of any opportunity which might arise for getting rid of the grievance of patronage, an injunction which was not discontinued till 1784. It is not likely that any change in the law could have been obtained at this period, and disregard of the law might have led to an exhausting struggle with the state, as was actually the case at a later period. Still it was in the power of the church to give more weight than she did to the feelings of the people; and her working of the patronage system drove large numbers from the Establishment. A melancholy catalogue of forced settlements marks the annals of the church from 1749 to 1780, and wherever an unpopular presentee was settled the people quietly left the Establishment and erected a meeting-house. In 1763 there was a great debate in the assembly on the progress of schism, in which the popular party laid the whole blame at the door of the Moderates, while the Moderates rejoined that patronage and Moderatism had made the church the dignified and powerful institution she had come to be. In 1764 the number of meeting-houses was 120, and in 1773 it had risen to 190. Nor was a conciliatory attitude taken up towards the seceders. The ministers of the Relief desired to remain connected with the Establishment, but were not suffered to do so. Those ministers who resigned their parishes to accept calls to Relief congregations, in places where forced settlements had taken place, and who might have been and claimed to be recognized as still ministers of the church, were deposed and forbidden to look for any ministerial communion with the clergy of the Establishment. Such was the policy of the Moderate ascendency, or of Principal Robertson's administration, on this vital subject. It had the merit of success in so far as it completely established itself in the church. The presbyteries ceased to disregard presentations, and lay patronage came to be regarded as part of the order of things. But the growth of dissent steadily continued and excited alarm from time to time; and it may be questioned whether the peace of the church was not purchased at too high a price. The Moderate period is justly regarded as in some respects the most brilliant in the history of the church. Her clergy included many distinguished Scotsmen, of whom an account is given under their respective names. See REID (Thomas), CAMPBELL (George), FERGUSON (Adam), HOME (John), BLAIR (Hugh), ROBERTSON (William), and ERSKINE (John). The labours of these men were not mainly in theology; in religion the age was one not of advance but of rest; they gained for the church a great and widespread respect and influence.

Another salient feature of the Moderate policy was the consolidation of discipline. It is frequently asserted that discipline was lax at this period and that ministers of scandalous lives were allowed to continue in their charges. It cannot, however, be shown that the leaders of the church at this time sought to procure the miscarriage of justice in dealing with such cases. That some offenders were acquitted on technical grounds is true; it was insisted that in dealing with the character and status of their members the church courts should proceed in as formal and punctilious a manner as civil tribunals and should recognize the same laws of evidence, in fact, that the same securities should exist in the church as in the state for individual rights and liberties.

The religious state of the Highlands, to which at the period of the Union the Reformation had only very partially penetrated, occupied the attention of the church during the whole of the 18th century. In 1725 the gift called the "royal bounty" was first granted,—a subsidy amounting at first to £1000 per annum, increased in George IV.'s reign to £2000, and continued to the present day; its original object was to assist the reclamation of the Highlands from Roman Catholicism by means of catechists and teachers. The Society for Propagating Christian Knowledge, incorporated in 1709, with a view partly to the wants of the Highlands, worked in concert with the Church of Scotland, setting up schools in remote and destitute localities, while the church promoted various schemes for the dissemination of the Scriptures in Gaelic and the encouragement of Gaelic students. In consequence of these efforts Roman Catholicism now lingers only in a few islands and glens on the west coast. In these labours as well as in other directions the church was sadly hampered by poverty. The need of an increase in the number of parishes was urgently felt, and, though chapels began to be built about 1796, they were provided only in wealthy places by local voluntary liberality; for the supply of the necessities of poor outlying districts no one as yet looked to any agency but the state. In every part of the country many of the ministers were miserably poor; there were many stipends, even of important parishes, not exceeding £40 a year; and it was not till after many debates in the assembly and appeals to the Government that an Act was obtained in 1810 which made up the poorer livings to £150 a-year by a grant from the public exchequer. The churches and manses were frequently of the most miserable description, if not falling to decay.

With the close of the 18th century a great change passed over the spirit of the church. The new activity which sprang up everywhere after the French Revolution produced in Scotland a revival of Evangelicalism which has not yet spent its force. Moderatism had cultivated the ministers too fast for the people, and the church had become to a large extent more of a dignified ruler than a spiritual mother. About this time the brothers Robert and James Haldane devoted themselves to the work of promoting Evangelical Christianity, James making missionary journeys throughout Scotland and founding Sunday schools and in 1798 the eccentric preacher Rowland Hill visited Scotland at their request. In the journals of these evangelists dark pictures are drawn of the religious state of the country, though their censorious tone detracts greatly from their value; but there is no doubt that the efforts of the Haldanes brought about or coincided with a quickening of the religious spirit of Scotland. The assembly of 1799 passed an Act forbidding the admission to the pulpits of laymen or of ministers of other churches, and issued a manifesto on Sunday schools. These Acts helped greatly to discredit the Moderate party, of whose spirit they were the outcome; and that party further injured their standing in the country by attacking Leslie, afterwards Sir John Leslie, on frivolous grounds,—a phrase he had used about Hume's view of causation—when he applied for the chair of mathematics in Edinburgh. In this dispute, which made a great sensation in the country, the popular party successfully defended Leslie, and thus obtained the sympathy of

The Haldanes.