

10. The People — Race, Language, Population.

The earliest inhabitants of Britain probably crossed from the continent of Europe when it was connected to these islands by a land-bridge. They used very roughly made stone weapons and were mighty hunters, chasing the reindeer, the mammoth, the wild horse, and other animals that lived in this country in those days. From their stone weapons they are called palaeolithic (ancient stone), and their nearest representatives in modern times are believed to be the Bushmen of Africa. Authorities are almost unanimous in maintaining that there is no evidence that this race reached Scotland. These early palaeolithic men were followed by a race that used stone weapons of a much finer type (neolithic), and relics of this race are found all over Scotland.

One of the most constant and valuable physical characters of a race is the shape of the skull, which may be classed as long or broad. The primitive race of Scotland was long-skulled, short in stature, and probably very dark in complexion. They are known as Iberians, and have few affinities with Celts or Teutons. Later on Scotland was invaded by Celtic tribes, who were broad-skulled, and

who are generally supposed to have driven out or exterminated the Iberian race, for in early historic times the language of almost the whole of Scotland was Celtic, with, however, a number of non-Aryan peculiarities of syntax. Yet it is a remarkable fact that the majority of the people in Scotland at the present time are long-skulled, and therefore cannot possess much Celtic blood. Now the Teutons are long-skulled, but we know from history that the Scottish Highlanders are not of Teutonic stock, and in addition the Teutons are fair, while the Celtic speaking races are very much darker in complexion than the people of other districts. It would seem therefore that the Celtic invaders were merely a predominating and ruling caste, who imposed their language and culture on the conquered tribes, but did not seriously dilute their blood. The aboriginal stock absorbed the invaders, and thus on the whole the inhabitants of Scotland may be said to be of pre-Celtic and Teutonic blood. No definite agreement on these points, however, has yet been reached.

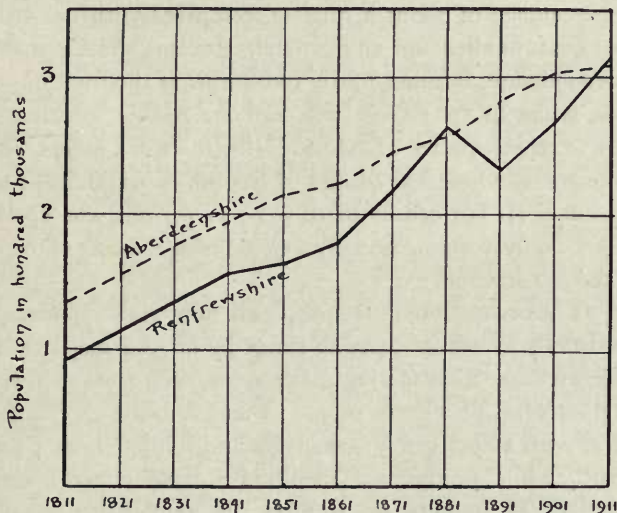
The earliest records relating to the Clyde valley state that it was in possession of the Damnonii, a Celtic-speaking tribe. At the end of the fourth century, when the Roman legions were withdrawn, Clydesdale was inhabited by the Scots, a Goidelic tribe, and the original inhabitants were driven to the south of the district. About the beginning of the fifth century the Teutonic race began to appear in Scotland, and for five hundred years this immigration went on, until practically the whole of the Lowlands was in the hands of Teutonic tribes, the ancestors of the present Lowland Scots.

The place-names of Renfrewshire are not so purely Gaelic in origin as those of many other parts of Scotland. The names of the hills illustrate this. The Celtic *bens*, *stobs*, *sgors*, *maols*, and *mealls* are as a rule conspicuous by their absence, although *dun*, *knock*, and *cairn* are found. The Anglo-Saxon words *hill* and *law* are much more common, while *rig* and *dod* (hopelessly unmusical compared with the sonorous Gaelic) are more sparingly met with. Celtic words of course occur all over the county, as is only to be expected from the fact that Renfrewshire formed part of the old Celtic kingdom of Strathclyde. *Kil*—a church, *auch*—a field, and *inch*—an island, are perhaps the commonest Gaelic words found in combination. Of the town names it is natural to find that the older are of Celtic origin while the newer are Anglo-Saxon.

We have seen in a former chapter that Renfrewshire ranks twenty-seventh among the counties of Scotland in size, but in population there are only two above it. Putting this in another fashion we may say that while the county comprises $\frac{1}{1\frac{1}{2}}$ of the total area, it contains almost $\frac{1}{15}$ of the population of all Scotland. The actual figures from the census of 1911 are 314,574 for Renfrew out of a total population of 4,759,445. It follows that the county must be densely populated in spite of the large areas of comparatively useless hill country. In this respect it takes third place also, ranking after Lanark and Edinburgh. There are 1290 persons to the square mile, and only Renfrew and the other two counties mentioned run into four figures for population density. In this

PEOPLE—RACE, LANGUAGE, POPULATION 65

respect it forms a striking contrast to Sutherland which has but $9\frac{1}{2}$ persons to the square mile, and even to all Scotland which has 157. It is only since the "Industrial Revolution" that the population of Renfrewshire has increased so much. Before the application of machinery to



Population of Renfrewshire 1811-1911

(The sudden fall between 1881 and 1891 was due to a change in the county boundaries)

industries in the second half of the eighteenth century, the county did not contain a tenth of the inhabitants it now possesses. This is strikingly shown by the fact that a hundred and fifty years ago the population of the whole

county was only one-third of the population of Paisley at the present time.

The alien element is by no means strong in Renfrew. Compared with Lanark, for example, which contains more than half the foreigners in Scotland, the numbers are insignificant, reaching a total of 646 in 1901. This gives a percentage of about a quarter, compared with one-half per cent. of aliens for all Scotland. Italians and Germans preponderate, forming nearly two-thirds of the total number, while in 1901 there was but one Asiatic, and not a single representative of Africa. But there are others, not foreigners, whose knowledge of English is insignificant or absent. At last census there were 41 persons who spoke Gaelic only, forming literally a Celtic fringe, for 25 of them lived in Greenock.

The occupations of the people are numerous and varied. Naturally industrial pursuits claim by far the majority of the workers. Considering males alone, such workers form 73 per cent. of all the people occupied, commerce ranks next with 17 per cent., agriculture and fishing claim 4 per cent., while professional men are a trifle fewer. The number of miners in Renfrew is remarkably small. There are only between seven and eight hundred compared with over fifty thousand in Lanark. Naturally the conditions are different with women. Household duties, no matter how heavy, receive no salary, and are therefore not considered "work" by the census, so that nearly seventy thousand women are (nominally) unoccupied. In Paisley, as might have been expected, the proportion of female to male workers is abnormal. Between a third

and a half of the industrial workers of all Scotland are female, but in the textile industry of Paisley the proportions are exactly reversed, the females outnumbering the males by nearly three to one.

II. Agriculture.

Although at the present time Scottish gardeners and Scottish farmers have a world-wide reputation, yet it was not till the eighteenth century that there was any agriculture worthy of the name in Scotland. Most of the country was unenclosed, roads and bridges were almost unknown, artificial drainage was not employed, and only the driest parts were tilled. Yokes of oxen dragged a rude plough far up the hill-sides, because the lower parts were hopeless swamps. A few sentences may be quoted from Henry Grey Graham's description of the state of agriculture at the beginning of the eighteenth century. "There were no enclosures, neither dyke nor hedge between fields, or even between farms; so that when harvest began or the cereals were young, the cattle either required to be tethered, or the whole cattle of the various tenants were tended by herds."... "When the harvest was over the cattle wandered over all the place, till the land became a dirty, dreary common, the whole ground being saturated with the water which stood in the holes made by their hoofs. The horses and oxen being fed in winter on straw or boiled chaff, were so weak and emaciated that when yoked to the plough in spring they helplessly fell

into bogs and furrows, even although to fit them more thoroughly for their work they had been first copiously bled by a 'skilful hand!' "... "The harrows, made entirely of wood,—'more fit,' as Lord Kames said, 'to raise laughter than to raise soil,'—had been in some districts dragged by the tails of the horses, until the barbarous practice was condemned by the privy council." "... "If one man dared to cultivate a neglected bit of ground, the others denounced him for infringing on their right of grazing on the outfields. How could he begin the growing of any new crop? The others viewing every innovation with the contempt which comes from that feeling of superiority, which ignorance and stupidity produce, would refuse to join him." "... "With a system so atrocious, with land uncleaned, unlimed, unmanured, undrained, it frequently happened that the yield could not feed the inhabitants of the district, and men renting from 40 to 100 acres needed to buy meal for their families."

Gradually new crops and better methods were introduced. The cultivation of turnips and potatoes marked the beginning of a more rational agriculture. Old ideas, such as the determination to use no mechanical aids to winnowing, because it contravened the Scriptures, and "was making Devil's wind," gradually disappeared. Stock-breeding was introduced, the land was let in larger holdings, alternation of crops was practised, artificial fertilisers were used, until at the beginning of the nineteenth century agriculture was on a satisfactory basis.

In some respects Scotland will always be at a disadvantage compared with England. In many parts the soil

is as fertile as any south of the border, but the more favourable climate of England causes an earlier harvest. An additional crop of turnips or cabbages or vetches can then often be secured after the main crop has been got in, whereas in Scotland this can very seldom be done.

Renfrewshire compares favourably with Scotland as a whole with regard to the proportion of its surface under cultivation. About three-quarters of Scotland is uncultivated, whereas the proportion for Renfrewshire is only about two-fifths. If we make allowance for its size, the county is, like Wigtown, one of the greatest dairy-farming shires in Scotland and possesses about 165 cattle to every thousand acres. The causes are mainly geographical. The western side of Scotland is rainy, and rich grass is therefore easily grown, while the decomposition of the volcanic rocks of Renfrew produces a loam that nourishes a thick, sweet pasture. The cattle are kept chiefly for dairy purposes, and therefore the great majority of them are Ayrshires. This breed has been found peculiarly suitable to the moist climate of the south-western counties. It is not only hardy, but yields a larger proportion of milk to food consumed than any other breed in the country. Glasgow and other large towns absorb the supply of most of the dairy-farms, and cheese-making is consequently not so general as it once was, except for home use. In the number of horses, too, Renfrew compares favourably with its neighbours Ayr and Lanark. In every thousand acres in Renfrew there are 21 horses, while Lanark has 16, and Ayr 13, per thousand acres.

On the other hand sheep-rearing is not of special

importance in the county. There are some 280 sheep to each thousand acres, whereas in Roxburgh there are in the same area more than four times as many. The stock consists chiefly of Cheviots and black-faced sheep. The wool of the black-face does not bring so high a price as that of the Cheviot, but the former breed is hardier and more suited to hilly tracts. It will thrive on poor fare and withstand privations that would exterminate any other breed. In 1910 the actual number of sheep in the shire was 43,010.

Scotland is not a great wheat-growing country; the summers are too wet and cold. In fact, in several of the counties not a single acre of land is given to wheat. By far the most important crop is oats, which is peculiarly well suited to our moist, cool climate. In Renfrewshire, for example, oats occupy more than seven times the area devoted to wheat. This contrasts very markedly with some of the English counties, such as Cambridgeshire, where wheat is grown over nearly twice the extent occupied by oats. A sunny, dry summer is necessary if the best conditions for wheat-growing are to be realised, and in this respect the east of England has obvious advantages over any western county. The conditions are similar in Scotland, where of all the counties Fife grows most wheat in proportion to its area. It is twice the size of Renfrew but it grows more than six times the quantity of wheat. The actual areas in Renfrewshire devoted to oats and wheat in 1910 were 10,164 acres and 1802 acres respectively. There are no other corn crops of any importance in the shire, but of other products potatoes

and turnips are the most valuable. There are 2863 acres under potatoes and 2088 under turnips. The area given up to hay is of course extremely large, there being 18,876 acres thus cultivated in 1910. (See diagrams, pp. 175, 176, 177.)

12. Industries and Manufactures.

Most of the industries of the west of Scotland date their birth to some time within the last century and a half. Their present flourishing condition is due almost entirely to the development of the coalfields of Lanarkshire and Ayrshire. It was not until James Watt had improved the steam engine that coal could be obtained in large quantities. Then came the application of steam to manufactures, each trade reacting on and stimulating the others. The introduction of machinery in the textile trades during the second half of the eighteenth century was a great factor in the Industrial Revolution, and the west of Scotland took full advantage of the inventions of Hargreaves, Arkwright, Crompton, and Cartwright, in England.

One of the healthiest features of the industries of Renfrewshire, and in fact of the whole Clyde basin, is the great variety of manufactures, and the absence of any exclusive specialisation in any single line. We do not find groups of towns engaged almost entirely in the cotton trade as in Lancashire, or in the woollen trade as in West Yorkshire, or in the iron trade as in the "Black Country"



On the Clyde

of England. This is undoubtedly a favourable state of affairs, for it is seldom that several of the great industries are notably depressed at the same time, and sudden fluctuations from excessive prosperity to the depths of adversity are not nearly so common in Renfrewshire as in certain other great manufacturing districts. This, however, was formerly not the case. More than once in the first half of the nineteenth century there was intense misery in Paisley owing to depressions in weaving at a time when little else was done in the town.

Of all the manifold branches of industry in the west of Scotland, Renfrewshire takes a pre-eminent position in two only—ship-building and thread-making—but here she is supreme. The Clyde is the greatest ship-building centre in the whole world, and Renfrewshire takes first place among the counties bordering the river. The priority of the Clyde in the last hundred years is well illustrated by the simple statement that the first passenger steamer (the *Comet*), the first turbine passenger boat (the *King Edward*), and the first turbine ocean-liner (the *Virginian*), were all built on that river. In 1910 a tonnage running into six figures was produced by four foreign countries, the United States, Germany, Holland, and France, but the single district of the Clyde, in spite of a lock-out lasting for three months, easily outdistanced all of them. We find again the same variety marking the ship-building as marked the manufactures as a whole. The river is not confined to one or two types. Every kind of craft that floats will be found on the stocks of the Clyde, from an ocean palace to a tramp, from a racing

yacht to a dredger, from a battle-ship to a Port Glasgow wind-jammer.

The geographical causes of the Clyde's pre-eminence are fairly obvious. Like the ship-building centres next in importance—the Tyne and the Tees—the Clyde estuary runs into a busy coalfield, where iron and steel working and marine engineering are staple industries, and all



Dock and Ship-building, Renfrew

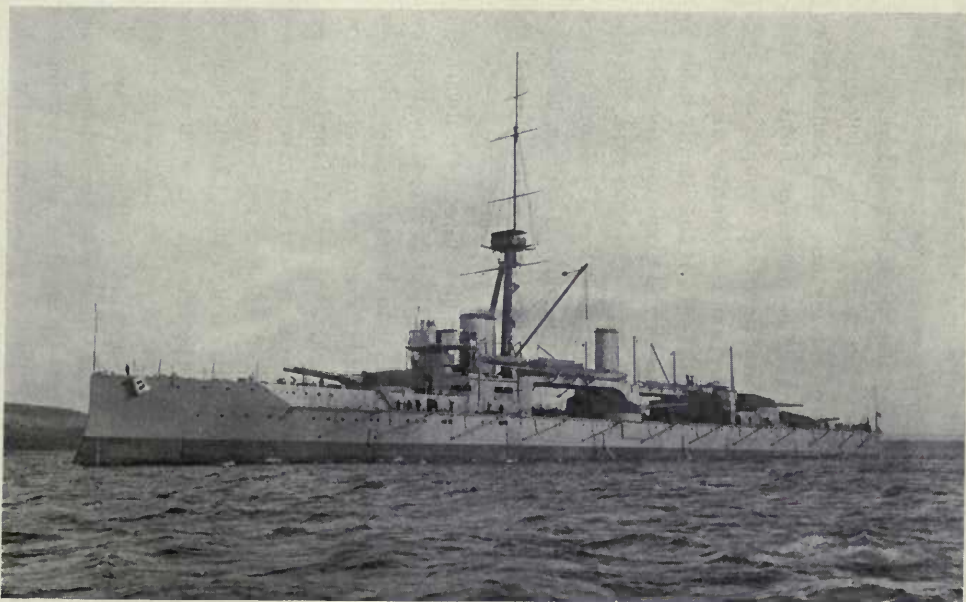
necessary material can be obtained without costly transport. The human element, too, has been just as important, for the river was originally quite unsuited for ship-building. The geographical factor again is well seen in one of the sub-divisions of the industry. The beautiful estuary of the Clyde holds out so many attractions to town dwellers that it made a fleet of fast pleasure steamers an imperative

necessity. Therefore it is not surprising to find that Clyde-built boats, with few exceptions, monopolise all the river and cross-channel traffic of the British Isles.

In 1910 there were built on the Clyde nearly 400,000 tons of shipping, and of this gigantic total Renfrewshire claims one-half. Among the first seven firms of that year there were four Renfrewshire companies. Port Glasgow is the chief centre, and the record yearly tonnage of the river for an individual yard is consistently made by a Port Glasgow firm, Russell and Company, the total in 1910 being almost twice that of the next yard. In the building of huge men-of-war Scotts of Greenock takes a very eminent position, a single super-Dreadnought battleship in 1910, a *Colossus* in more than name, lifting them into seventh place among the Clyde yards.

Although Port Glasgow and Greenock dwarf the other towns, yet a respectable total is shown by Renfrew and even by Paisley. In one branch in fact Renfrew leads the world. She builds dredgers to excavate anything from sand to solid rock. Practically all the important harbour and dock authorities in Britain have been her customers; and hoppers and dredgers are sent out from the royal burgh to all parts of the globe. Even Gourrock, not to be behind, has its speciality in the form of motor boats. Lastly, it must not be forgotten that one of the greatest events in the history of ship-building was the launching in 1812 at Port Glasgow of the famous *Comet*, the first passenger steamer that ever sailed in Britain.

In Renfrewshire, as elsewhere, spinning and weaving have been carried on for centuries, but the yarn and the



H. M. S. Colossus

(A battleship of the super-Dreadnought class)

cloth were for local consumption only. In the seventeenth century the textile industry, as we know it, began in Paisley. There were 66 weavers in the town at the end of that century. Cotton was not yet worked, linen and woollen goods alone being produced. In the eighteenth century the cultivation of a patch of flax and the preparation of the fibre were recognised parts of farm work. It was spun and bleached by the women, and sold to the Paisley merchants, who retailed it to the weavers of the surrounding districts. Nannie, the witch in Burns's *Tam o' Shanter*, wore a shirt of coarse linen—a "cutty sark o' Paisley harn." There was no concentration into factories. The whir of the spinning-wheel and the clack of the loom were heard in every village of the shire, far away from the stir of any town. The invention of the spinning-jenny, the mule, and the power-loom sounded the death-knell of the hand-worker, though at first the abundance of machine-spun yarn greatly stimulated the hand-weavers. Even yet, however, in a few places in the county, as at Kilbarchan, one or two hand-loom workers may still be seen.

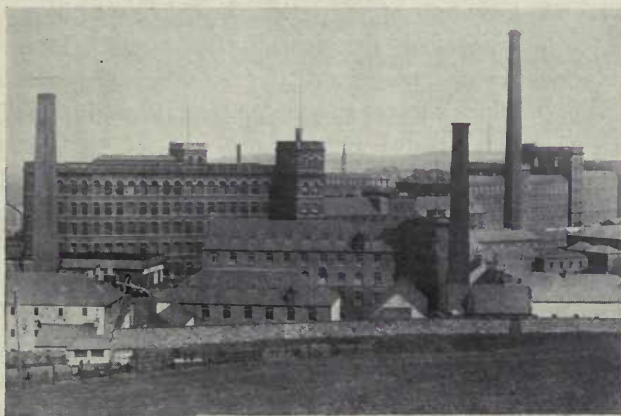
The story of the Paisley shawl forms one of the most interesting episodes in the industrial history of Renfrewshire. The industry was born, reached a marvellous zenith of prosperity, declined, and became extinct, within the space of 80 years. Its introduction was the result of Napoleon's expedition to Egypt. Beautiful Indian shawls were sent home by the officers both of the English and the French army. The Cashmere shawls were decorated with the most amazingly elaborate patterns worked by

hand, many of them taking years of labour to produce. The object of the Paisley workers was to produce in the loom the effects obtained in the Indian shawl by means of the needle. The resulting success was the reward of patience, skill, taste, and delicacy of touch, carried to a point that has probably never been equalled before or since. It is not surprising to find therefore that the Paisley weavers of this time were an altogether exceptional class of men. They were noted for their industry, their intellectual strength, their cultured taste, and their love of beauty. Their characteristic independence of judgment was fostered by the fact that they were their own masters, and worked when and how they liked. Radicals to a man, they took a prominent part in the struggles for electoral freedom in the nineteenth century.

Some of the shawls were sold for £20; and in a single year shawls to the value of a million sterling were made in Paisley. Then the mysterious decrees of fashion declared that the Paisley shawl should no longer be the mode, and its doom was sealed. Queen Victoria galvanized the dying industry into temporary life by purchasing 17 shawls and using one at the baptism of the infant Prince of Wales, the late King Edward. But even the will of a queen is powerless to control economic conditions for long, and by 1880 the industry had ceased to exist.

Paisley thread is found in every corner of the globe. An army of people in that town are employed in the great thread mills, and the parent factories have giant offspring in many parts of the world. The industry was founded by Christian Shaw, daughter of the laird of

Bargarran, who when a young girl was the chief actor in a tragedy that sent six poor creatures to the flames on Gallow Green in 1697. This hysterical girl, plagued by witches in her youth, grew up a shrewd and capable business woman. Till this time yarn in this country could not be twisted into a thread suitable for the needle, and the thread in use was imported from Holland.



Clark's Thread Mills, Paisley

Christian Shaw, now the wife of the minister of Johnstone, procured a hand-twisting mill from Holland, and produced a linen thread equal or superior to the Dutch article. It was soon in great demand among lace-makers, and Bargarran thread became famous. Competitors in Renfrewshire were not slow to spring up, and by 1784, 120 machines were twisting thread in Paisley. Linen thread

exclusively was made at first, but the production of a fine cotton yarn by Lancashire machinery led to the evolution of cotton thread, which was smoother and much cheaper, although not so strong. In the nineteenth century two factors contributed powerfully to cause the thread industry to remain settled in Paisley. One of these was the abundant supply of cheap labour due to the decay of the shawl trade and other branches of weaving. The other was the invention of the sewing-machine, which marvellously stimulated the demand for thread. It is a coincidence worth noting that the factories of the greatest sewing-machine makers and the greatest thread makers in the world are situated within a few miles of each other, on opposite banks of the Clyde.

Cotton textiles have now completely displaced linens in the west of Scotland. The first cotton-mill in this country was erected at Penicuik in 1778. The second was built at Rothesay, and then Renfrewshire took a prominent position when mills were placed at Barrhead and Johnstone. The selection of these places seems strange, but it must be remembered that the coalfields were not then the all-powerful controllers of manufacturing industries that they have since become. A good supply of water was the essential requisite. By 1787 there were 19 cotton-spinning mills in Scotland, and of these Renfrewshire had more than her share with four. Sixty years later there were over 50 in the county.

It has been shown above that the origin of the textile industry in Renfrewshire was due to causes that may be called personal or historical, that is, the human factor was

the dominant one. But the persistence of cotton manufactures in the county affords a good illustration of purely geographical control. Consider the distribution of the cotton industry of Britain. In Scotland cotton goods are made chiefly in west Lanarkshire, in west Renfrewshire, and in Ayrshire. In England, of course, the industry is concentrated in Lancashire. The point in common to the situation of these centres is that they are all on the west coast. What is the cause of this peculiar distribution? It is sometimes stated that the reason is to be sought in the fact that the raw cotton comes from the west. But this reason is inadequate, for the raw wool comes into Britain from the west also, yet most of it goes to the east. The cause is undoubtedly a climatic one. A moist atmosphere is necessary for the manufacture of high-grade cotton goods, otherwise the material becomes brittle and difficult to work. Now the average rainfall of many parts of the west coast is double that of the east coast. Thus the west coast possesses the valuable attributes (at least for the cotton worker) of a high rainfall and a humid atmosphere, and therefore the industry, by a process of the survival of the fittest, has come to be localised entirely in the west. A climatic control working in exactly the opposite direction is seen in the fact that very dry conditions are desirable for glue-making. Therefore a chemical work in Greenock engaged in making glue had to surmount this difficulty by the erection of very costly drying and cooling apparatus. Obviously, other things being equal, the east coast could compete successfully in the making of this commodity.

The textiles of Renfrewshire have always comprised the more delicate fabrics, and those requiring unusual skill in making. In the linen-weaving days fine lawns and cambrics were made, so that when cotton-weaving was introduced it was natural that the special bent of the craftsmen should lead them to the making chiefly of muslins. In the manufacture of fine silk goods too, Renfrewshire has always taken a prominent position. Paisley was the first town in Scotland to engage in the making of silk. The weaving of silk gauze became a thriving industry for a time, but in recent years the silk trade has not increased. As with the other textiles the chief materials made are the lighter fabrics such as chiffons, ties, gauzes, and handkerchiefs, and in spite even of French competition the industry succeeds in holding its own.

In the last fifty years Renfrewshire has become an engineering centre of the first importance. Practically all the larger burghs are engaged in various branches of engineering; but Paisley, Greenock, and Johnstone are the chief centres. Greenock naturally devotes itself largely to marine engineering, while Paisley and Johnstone may be said to specialise in machine tools. Every possible kind of tool is made, from the huge planing-machines for armour plates, to the half-human automatic contrivances for turning out penholders by the gross. There are machines for punching, for shearing, for rolling, for drilling, for tapping, for bending, for cutting, for flanging, for sawing—in fine for every conceivable process known to the man in the street, and many more known only to the engineer. There are foundries capable of producing the

largest castings needed for marine work, sugar-machinery of all kinds is made, plant for breweries and distilleries is erected; and in Greenock there is a huge business in pumps, steam and hand steering-gears, capstans, winches, and all kinds of deck machinery and engines.

There are neither blast furnaces nor steel works in the county. The industrial centres are situated some little distance from rich coalfields, and therefore they are at a slight disadvantage in the cruder processes of metal-working, where large quantities must be turned out at a small cost. This is a geographical law of universal application. Wherever the source of power is not in the immediate neighbourhood, we find that the amount of skill and labour expended on the articles produced is large compared with the cost of the raw material, and therefore slightly increased transport rates are insignificant in comparison with the value of the finished product. Exactly the same thing holds when the manufacturing centre is some distance from its market or from a sea-port. In this country Birmingham is perhaps the best example of the second aspect of the principle, while in Renfrewshire the specialisation in costly machine tools is an excellent illustration of the first. The market of the county, however, is close at hand in the great ship-building yards that line the Clyde.

It is impossible to enumerate all the other branches of industry carried on in the county. Only a very few of the more important can be mentioned. At Renfrew are the largest water-tube boiler works in Britain; and it has now been decided that the Clyde Trust's new dry dock,

the largest in the world, shall be constructed at Renfrew, so that the rapid development of this town as an industrial centre seems assured. Sugar-refining was commenced at Greenock in 1765, and this town is still the headquarters of the trade. The industry is but a shadow of its former self, however, not owing to any lack of enterprise or skill on the part of the manufacturers, but because of the com-



Torpedo Factory, Greenock

petition of continental beet-sugar produced under an artificial, bounty-fed system. At Greenock and Port Glasgow, saw-mills, roperies, and works for sailcloth and similar things naturally bulk largely. At Paisley, starch, corn-flour, pottery, soap, and paper are made, and Barrhead contains one of the largest sanitary engineering works in the country. An industry unique in Scotland

INDUSTRIES AND MANUFACTURES 85

has recently been installed at Greenock by the Admiralty, namely, the manufacture of torpedoes. The fact is interesting for it furnishes another excellent example of geographical control. The town is a convenient, industrial centre, and it lies exactly opposite the mouth of Loch Long, part of which forms an ideal stretch for testing the torpedoes.