

The coal-fields of England.

commercial centre of Britain that does not lie in the midst of or quite adjacent to a rich coal and other mineral region. But London is within easy distance, not only by rail, but also by canal and by coastwise sailing, of every coal-field and mineral deposit of Britain. London, however, is an importing and exporting centre rather than a manufacturing centre.

## LONDON'S SPECIAL TRADE FEATURES

The commercial supremacy attained by many of the large cities of Britain is not wholly due to natural causes, or even to ordinary causes. Much of it is due to extraordinary enterprise and forethought on the part of their citizens. London, for example, is the centre of the wool trade of Britain. The woollen manufacturers of Britain use about 250,000 tons of wool annually, and three fourths of this is imported. Other cities that lie near the seats of the great woollen manufactures—Liverpool, for example—have tried to secure a share of this vast importation of wool, but London, because of the special attention it gives to this trade, manages to keep almost the whole of the trade in its own hands. Similarly, London almost wholly monopolises the trade of England with Arabia, India, the East Indies, China, and Japan. It is therefore the great emporium for tea, coffee, sugar, spices, indigo, and raw silk. It also enjoys the bulk of Britain's trade in fruits (oranges, lemons, currants, raisins, figs, dates, etc.) and in wines, olive oil, and madder, with the countries that lie about the Mediterranean. By virtue partly of its situation, but largely because of the enterprise of its merchants, it absorbs nearly the whole of Britain's French trade, and of England's trade with Germany, Belgium, Holland, and Denmark. This includes principally wines (from France), and butter,

eggs, and vegetables. Another great branch of its trade is that with the ports of the Baltic, including those of Russia, the imports comprising, besides wheat and wool, tallow, timber, hemp, and linseed. The tobacco imported from Virginia into England goes almost wholly to London; so does almost the whole of the Central American and South American trade in fine woods, dye-stuffs, drugs, sugar, hides, india-rubber, coffee, and diamonds. Quite a large share of the trade of Britain with Canada is concentrated in London; also, more than one half of the trade of England with the West Indies, the imports from the latter country comprising principally sugar, molasses, fruit, rum, coffee, cocoa, fine woods, and ginger.

#### THE SPECIAL TRADE FEATURES OF GLASGOW, LIVERPOOL, AND MANCHESTER

The great commercial centres of Britain after London are GLASGOW (800,000), LIVERPOOL (700,000) and MANCHESTER (640,000, including SALFORD). All these cities have derived the greater portion of their size from the progress they have made during the present century. All, of course, owe their progress and their prosperity largely to their natural advantages of situation, etc. LIVERPOOL stands on the margin of the Atlantic, "the Mediterranean of the modern world," and thus enjoys the principal share of the trade with America, especially that with the United States. Great Britain's imports from the United States amount to over \$500,000,000 per annum, and her exports to the United States (exclusive of bullion, etc.) to over \$100,000,000. (Formerly the exports to the United States were twice this amount.) Of this vast trade, amounting to one fifth of Britain's total trade with the world, Liverpool enjoys the lion's share. Nearly all the cotton, not merely of the United States but of the

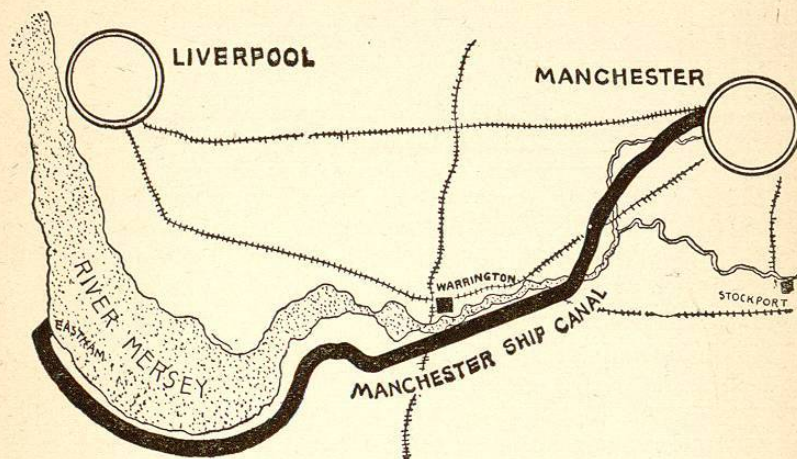
world, that is used in Europe is sent to Liverpool for distribution. Similarly, GLASGOW, situated with its aspect directed toward the same maritime routes, enjoys also an immense transatlantic trade both north and south. And MANCHESTER, situated in the very heart of the richest coal districts of the kingdom, and within easy reach of the great cotton port, Liverpool, has built up a cotton-manufacturing industry surpassing that of all the rest of the world.

#### THE BUSINESS ENTERPRISE OF GLASGOW, LIVERPOOL, AND MANCHESTER

But the natural advantages of situation possessed by these great cities have been grandly supplemented by the enterprise of their inhabitants. GLASGOW is only a river port. For twenty miles below its site the Clyde is naturally narrow, shallow, and shoal-encumbered. In places it is naturally not more than fifteen inches deep. By the expenditure of no less a sum than \$60,000,000 this shallow stream has been converted into a continuous harbour, lined on either side for miles with wharves and docks, and easily capable of accommodating the largest and finest merchant ships afloat. As a consequence of this enterprise Glasgow has become the greatest ship-building port in the world. No less than twenty shipyards — in efficiency and magnitude of the very highest class — are to be found along the banks of the once shallow, impassable Clyde, between Glasgow proper and the river's mouth.

Similarly, the enterprise of the ship merchants of LIVERPOOL has converted a port, that high tides and impassable bars would naturally render unfit for modern ships, into the greatest shipping port in the world. One hundred million dollars were spent in making the im-

provement, but \$5,000,000 is the annual revenue derived therefrom in dock dues alone. And because of this enterprise Liverpool can now boast of controlling one fourth of all the imports of the kingdom, and two fifths of all



The Manchester ship canal.

the exports, and of handling three fourths of all the grain and provision trade of the kingdom, and of having the largest grain warehouses in the world.

But MANCHESTER, a wholly inland city, forty miles distant from Liverpool, its nearest port, has outdone even Glasgow and Liverpool in its endeavour to bring the sea to its own doors. It also has spent \$100,000,000 — not, however, in amounts spread over a number of years, and as occasion seemed to demand, but all at once, in one lump sum, in one huge enterprise. It has built a canal to the Mersey where it is navigable, thirty-five and one half miles in length, and sufficiently deep and wide, so that the whole of its vast importation of cotton, and the whole of its vast manufacture of cotton and other

textile fabrics, and as much else as may be desired, may be brought in from the sea or taken to the sea in merchant vessels of the very largest size now afloat. And it has done this in the face of engineering difficulties, and of obstacles raised against it by jealous competing interests that were almost insurmountable.

#### GREAT BRITAIN'S SPECIALISATION OF HER INDUSTRIES IN DEFINITE CENTRES

In no part of the world are manufacture and trade carried on with such strict regard to the conditions of economic production and the economic handling of goods as in the British Isles. The free-trade policy of the empire permits everywhere within its borders not merely national but world-wide competition; and yet it is but truth to say that wherever Great Britain attempts to sell her goods abroad every nation and every community in the world rises against her. Even her colonies are against her. Her markets are open to every one's trade, and yet in almost every market in the world which she does not absolutely control barriers are raised against her trade. She is able to sell goods in foreign markets only because, despite these barriers, she is able to undersell all competitors in them, or to give better value for the same money than they. Even when she obtains the control of new markets, as she has in India, China, Egypt, West Africa, etc., she allows every nation to trade in these markets on precisely the same terms as she herself trades in them. In the face of this world-wide competition, therefore, the industries of Britain would cease to exist if every condition conducive to economy of production — climatic suitability, availability of cheap motive power, accessibility to cheap raw material, and accessibility to natural and cheap means of transportation —

were not taken advantage of to the utmost. But this is just what Britain does. She does take advantage to the utmost of conditions conducive to economy of production; and this is why, to a degree nowhere else attempted in the world, she has specialised her industries in definite favouring localities.

THE NATURAL APTITUDES OF COMMUNITIES IN GREAT  
BRITAIN FOR SPECIAL INDUSTRIES

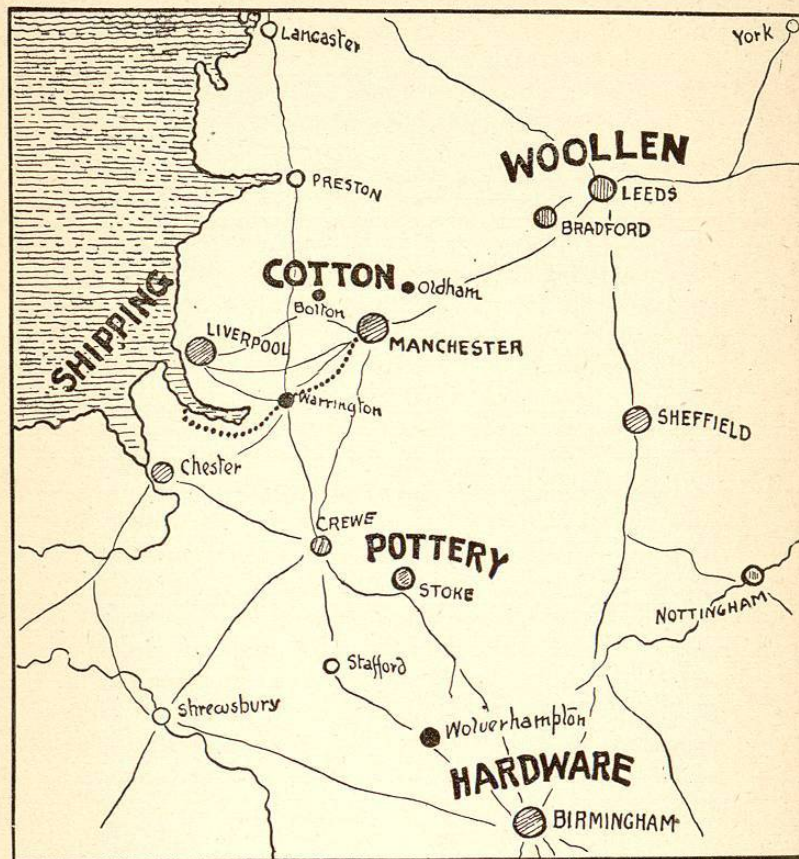
A result of this specialisation of industries in definite centres is that a natural aptitude for the industry specialised in a locality is developed among the inhabitants of the locality, and this, being stimulated by association, is transmitted from generation to generation with ever-increasing efficiency. Again, this inherited aptitude of the community for the industry historically associated with it is a prime element in the economic prosecution of the industry. Also, in turn, it acts as an important influence in continuing the industry in the locality where once it has been successfully specialised. In no country in the world, outside of Asia, have great industries had such long-continued successful existence in definite localities as in Britain. And therefore in no country in the world do the natural aptitudes of communities for special industries constitute such an important element of economic industrial production. A community of efficient "smiths," for example, has existed in and about Birmingham since the fifteenth century. As a consequence of this the Birmingham country has for several centuries been the greatest seat of the metal or hardware industries in the world. Again, the manufacture of woollen cloths has been an industry successfully specialised in West Yorkshire from the fourteenth century. It results that nowhere in the world is the woollen manufacture car-

ried on more prosperously than in West Yorkshire to-day. The potteries of Staffordshire have been in existence time out of mind, and in the eighteenth century they took a pre-eminent place among the industries of the world. They hold that place of pre-eminence now, even though since then the methods of manufacture have been several times revolutionised.

THE COTTON MANUFACTURES OF GREAT BRITAIN

But the influence which more than anything else has determined the specialisation of industries in certain places in Britain rather than in others has been the presence of coal-fields. In only a very few instances have great industries been maintained in districts that are not coal-producing. The busiest industrial centre in all Britain is, perhaps, South Lancashire, the great seat of the COTTON MANUFACTURE. South Lancashire is one great coal-field. LIVERPOOL, the great cotton port of the world, is at one edge of this field. MANCHESTER, the cotton metropolis of the world, is at the other edge. Between and near these two chief towns is a whole nest of large towns and cities — PRESTON, BURNLEY, BLACKBURN, ROCHDALE, BOLTON, BURY, ASHTON, STOCKPORT, OLDHAM, etc. — every one of which is wholly devoted to the cotton interest. From their position all these towns obtain both their motive power and their raw material at the lowest possible cost. But, in addition to its advantages of cheap coal and cheap raw material, South Lancashire has one other great advantage in favour of its special industry — its climate is eminently suited to the industry. Its atmosphere is moist, and not too moist, and its temperature is not too cold. Cotton thread can be spun and woven in Lancashire which elsewhere would break. In scarcely any other place in England has cotton-weaving

or cotton-spinning ever proved a success. The cotton industry of Scotland is not so localised as it is in England,



The great manufacturing districts of England.

but PAISLEY (65,000) is famous all the world over for its identification with the manufacture of cotton thread. Ireland has no important cotton manufactures except in

BELFAST. One third of the cotton manufactured in the world is manufactured in the United Kingdom. The total product is about 14,000 miles of cloth daily. The number of separate mills is over 2500. The annual product is \$500,000,000, which is one hundred times what it was one hundred years ago. The quantity of raw cotton imported annually to sustain this immense production is 1,750,000 pounds.

#### THE WOOLLEN MANUFACTURES OF GREAT BRITAIN

A second great industry of Great Britain is its WOOLLEN MANUFACTURE. This industry is specialised in England, principally in West Yorkshire, a district which is as well supplied with coal as is South Lancashire. LEEDS (410,000) and BRADFORD (232,000) are the two principal seats of the industry, but HUDDERSFIELD and HALIFAX are also important "cloth towns," and many other communities are identified with the manufacture of woollens. The noted "West of England" cloths are made principally in Gloucestershire, where their manufacture in the town of STROUD is a survival of an ancient industry once general throughout the whole county. In Scotland there are two centres of the woollen industry. The first and most important is in southeast Scotland, where, in the valley of the Tweed (in GALASHIELS, HAWICK, JEDBURGH, etc.), the celebrated "Scotch tweeds" are manufactured. The second is in the valley of the Teith (STIRLING, BANNOCKBURN, etc.). At one time the sheep that were pastured on the wolds of Yorkshire were the chief supply of the raw material for this industry in the whole of Britain, but that time is now long past. The total annual import of wool into the United Kingdom is about 750,000 pounds, of which about one half is retained for home manufacture. Two thirds of this import comes from

Australia. The number of wool and worsted factories in the kingdom aggregates over 2750. The value of the woollen goods produced annually is about \$250,000,000, which is about one fourth of the total product of the world.

#### THE LINEN MANUFACTURES OF GREAT BRITAIN

The third great textile manufacture of the United Kingdom is that of LINENS. This is the one manufacture in which Ireland surpasses her sister kingdoms, England and Scotland. The cultivation of flax and the spinning of linen yarn have been domestic industries throughout all Ireland from time immemorial. But at the present time the linen-manufacturing industry of Ireland is almost wholly concentrated in BELFAST. In Scotland, which now almost rivals Ireland in the extent and perfection of her linen manufactures, the industry is principally located in Fifeshire and Forfarshire, especially in the towns of DUNDEE and DUNFERMLINE, the latter town being greatly famed for its napery and table linens. Linen, like cotton, requires a peculiar atmospheric condition of temperature and moisture for its manufacture, and only in few localities has the linen industry been successfully established. The total value of the annual linen manufacture of the United Kingdom is \$100,000,000.

#### OTHER TEXTILE MANUFACTURES OF GREAT BRITAIN

The annual value of the total manufacture of textile fabrics in the British Isles is about \$1,000,000,000 — not far short, indeed, of one fourth of the total manufacture of textile fabrics in all the world. Great Britain has over \$1,000,000,000 invested in her textile industry, and one half of her total exports consists of

textile manufactures. Cotton, woollen, and linen cloths are the chief staples of this industry, but there are many other branches of it and many other localities in which it is specialised besides the ones already mentioned. LEICESTER (204,000), which, like so many other manufacturing cities of England, lies at the centre of a coal-field, is the chief seat of the WOOLLEN HOSIERY manufacture. DUMFRIES is the chief seat of the woollen hosiery manufacture in Scotland. KIDDERMINSTER, in Worcestershire, is the chief seat of the "Brussels" carpet industry; WILTON, in Wiltshire, of the Wilton carpet industry. KILMARNOCK, in Ayrshire, is the chief seat of the carpet manufacture in Scotland. NOTTINGHAM (233,000) is the metropolis of the cotton hosiery and lace manufacture of England. NORWICH (110,000), in eastern England, has a noted manufacture of muslins and fine dress-goods. The Norwich textile manufacture is an instance of the continuance of an industry in a community historically associated with it, although its seat is far removed from a coal-field. The SILK manufacture of Great Britain is almost entirely confined to the county of Derby and adjacent districts in England. MACCLESFIELD, in Cheshire, is the chief centre. COVENTRY is noted for its silk ribbons and gauzes. But the manufacture of silk in Britain is not prospering like that of her other textile fabrics. In fact, in forty years it has depreciated three fourths. British silk manufacturers are not as adept in weighting their products with dyes as their French competitors are, and in consequence English silks, though intrinsically better than French silks, look inferior and therefore cannot be sold at profitable prices. But, on the other hand, the JUTE manufacture of Great Britain is increasing by leaps and bounds. Established only sixty years ago, the value of its annual output is now twice that of the whole manufacture of silk, and in

twenty-five years has tripled. The chief seat of this industry is DUNDEE (160,000), in Scotland.

#### THE HARDWARE MANUFACTURES OF GREAT BRITAIN

The textile manufactures of Great Britain are in the aggregate first in importance, but the HARDWARE manufactures come a close second. The total amount of Great Britain's hardware products is about \$750,000,000, or one fourth of the total product of the world, and of this about one third is exported. Even more than her textile fabrics, the hardware manufactures of Great Britain are associated with her coal-fields. The most distinctive "hardware centre" is that one which is identified with the great coal-field in the middle of England known as the "Black Country." BIRMINGHAM (506,000), the chief place in this centre, is unrivalled in the world for the multifariousness and extent of its metal manufactures. It is literally true that everything from a "needle to an anchor" is made within its limits. But though its industries comprise principally those of iron and steel, its manufactures in gold, silver, copper, zinc, lead, and aluminium are also very important. Birmingham, too, is unrivalled in the world in the application of art to metal work. Its manufacture of jewellery, and gold and silver ornaments, is enormous. Its manufacture of small wares is also enormous. For example, it turns out 15,000,000 pens weekly. Its manufacture of buttons runs into the hundreds of thousands of millions. WOLVERHAMPTON (88,000), also in the Black Country, is noted for its manufacture of heavy hardware and machinery. So also in OLDHAM, in the Lancashire district. So also in LEEDS, in the West Yorkshire district. SHEFFIELD (352,000), also in Yorkshire, is historically identified with its celebrated cutlery manufacture, an industry that first began there because of the quality and

abundance of the grindstones found near by. With the coal-beds of Durham and Cumberland are identified the great ship-building and locomotive-building industries of NEWCASTLE (218,000), SUNDERLAND (142,000), and DARLINGTON, on the northeast side of England, and the great steel manufactures (the largest in the kingdom) and ship-building industries of BARROW-ON-FURNESS, on the northwest side. With the coal-fields of South Wales (noted for its smokeless coal) are identified the smelting industries of SWANSEA (70,000). Ores of copper especially, but also of silver, zinc, and lead, are brought from all over the world to Swansea to be smelted. These South Wales coal-fields also account for the fact that in respect to amount of tonnage CARDIFF (160,000) is one of the chief ports for exports in the world, ranking in this respect next after New York. The exports of coal from Cardiff are now 12,000,000 tons annually.