

LANDMARKS
IN
ENGLISH INDUSTRIAL
HISTORY

BY
GEORGE TOWNSEND WARNER, M.A.

Sometime Fellow of Jesus College, Cambridge
Late Master of the ~~Modern Side in Harrow School~~

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PREFACE

The intention of this book is to bring before the reader the salient features of England's industrial and commercial progress in the past. Progress is not uniform in all branches at all times; in one period we may find expansion in commerce, in another new developments in agricultural life and methods, in a third a growth of a maritime spirit, in a fourth a succession of mechanical inventions. The facts about these events have been related before, although owing to the preference that is generally bestowed on political and constitutional history, they are apt to be regarded as of secondary importance. I make no claim to originality so far as the matter of this book goes; yet as each historical event is important, not only by itself but also in its bearing on other events, I have tried by a new arrangement to bring out these connections more fully. I have chosen what appears to me to be the chief Landmark of each age, and grouped round it the events which led up to it, and the consequences which came from it.

This has involved the sacrifice of any attempt at a strict adherence to a chronological order, and the omission of much that is in itself important and interesting; but the compensation will be found, I believe, in an increased simplicity of treatment, and

a clearer impression of the main outlines of our country's economic development.

As the novelty of my book lies merely in selection and arrangement, I have not thought it necessary to burden the text with numerous foot-notes of reference to authorities. To two books in particular I owe much, and it is right that I should make special mention of them. They are Cunningham's *Growth of English Industry and Commerce* and Ashley's *Economic History*.

It only remains for me to express my thanks to those who have helped me; and especially to the Rev. W. Cunningham, D.D., who has assisted me with numerous suggestions and criticisms.

NOTE TO THE ELEVENTH EDITION.

In issuing another edition opportunity has been taken to make a complete revision. The last chapter stands as it was written in 1898 before the present controversy began; but in the rest of the book, some mistakes in detail have been corrected, and considerable alterations have been made in Chapters III., VI., and X. in order to include some of the results of recent investigation. For these improvements I am indebted to Mr. F. R. Salter of Magdalene College, Cambridge, who has gone over the whole book in detail. Mr. R. Vere Laurence has also been kind enough to make some valuable suggestions. To him and Mr. Salter my best thanks are due.

G. T. W.

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LANDMARKS IN INDUSTRIAL HISTORY

INTRODUCTION.

History is opening out so vast a field that by common agreement we have come to recognize certain divisions in it. We speak of Ancient History and Modern History, Political History, Constitutional History, Ecclesiastical History, Military History, Economic or Social History, and so on. But although these divisions are convenient, we must not draw a dividing line too rigidly; we cannot take each fact of history and label it as belonging to one subject or to another, however tempting this may be for the sake of clearness, because there are many events which are important, not only in one, but in several branches of history. With some this multiple importance is evident: no one would dream of assigning Magna Carta to the constitutional historian and forbidding the political historian to mention it; events like the Reformation, or the Model Parliament, or the colonization of Ulster, or the Union with Scotland are plainly many-sided. But there is another class of events which, though they appear to belong very definitely to one division of history,

yet on a closer scrutiny reveal influences, at first not suspected, reaching into other divisions. Philip II.'s and Louis XIV.'s persecutions of their subjects seem at first sight events to be classified as political or religious, yet they turned out to be of great economic importance in English history, for the immigration of alien craftsmen into England stimulated our industries at the expense of those of the Netherlands and France. When, as the story goes, an Indian pursuing some deer along a steep mountain side in Peru, slipped, caught hold of a shrub to save himself, dragged it up by the roots and saw revealed a mass of silver—a discovery which led to the working of the Potosi mines and the bringing of immense quantities of silver to Europe—we are tempted to say that this is an event purely economic. Yet it had far-reaching political consequences, not only in Spain, but in our own country, for the rise in prices which the new silver caused had no slight share in making it impossible for the Stuart kings to live on the revenue which had been enough for Elizabeth, and eventually brought Charles I. into violent collision with his parliaments. No doubt there were other and graver reasons, but money difficulties were the beginning of the disagreements between King and Parliament, which led to rebellion. Again, as we shall have occasion to notice more in detail, commercial needs or ideas have often led to prolonged wars, in which, amid the clash of arms and the rejoicings over victories, the original causes are apt to be obscured. For example, we find it easy enough to recognize Clive at Arcot and Wolfe at

Quebec as makers of the empire, but we may not discern at first sight that the British regiments at Minden were doing their share in the same work.

While it is thus necessary to pay attention not only to the immediate results of any event or course of policy, but also to the remote and sometimes unexpected consequences, we must not neglect beginnings, even if they are very small and silent. Anything which acts cumulatively, which, with ever so trifling a beginning, goes on attaining a wider and wider importance as it spreads further and further, is likely to turn out to be of greater consequence than many things which make a great stir and commotion at first, but with the lapse of time become of less account. Compare, for example, the importance of the Great Fire in London in 1666 with the foundation of the Bank of England about thirty years later.¹ The first left the trade of London paralysed, but only for a very short time; the second, intended to be nothing more than a temporary financial expedient, has ended by influencing profoundly the whole commercial system of the country, because its effects have been cumulative. A modern writer on economic history would dismiss the first in a few sentences, and deal fully with the other. Yet to a London merchant who had witnessed both, the immediate impression of the Fire would be far greater, far more dramatic; he would rate the immediate consequences high, and fail to see those which were more remote. Time, however, reveals the two events in their true proportions.

¹In 1694.

Since events are so intertwined and draw with them such ramifying threads of after-events, and since in this tangle we cannot use a knife to cut one piece apart from the rest, the whole may well seem too vast to deal with satisfactorily. But, after all, the impression that will be gathered must depend upon the point of view. Just as in looking at a jagged mountain from different standpoints we get different pictures, one face looking smooth and steep when seen from the front, yet revealing its actual slope from the side, a tower of rock standing out against the sky from one place, being lost when we move to another, while fresh crests and shoulders come in sight; so it is with history. The political, the constitutional, the economic historian, each looks from his own point of view; the great features of history will be visible alike to all of them, but the minor ones which they pick out will be different; each writer deals with what has an appreciable concern with his part of the subject and omits the rest.

The task of selection, then, is of necessity one of the main difficulties; it is perhaps greater in economic history than in any other branch, for economic history is by its very nature barren of incident and somewhat destitute of great landmarks. The ordinary reader would be able to mention ten political or constitutional events to one economic one. Economic history is the history of causes and tendencies and policies, and most of these act very slowly. The movement is so gradual that it is only when comparison is made over considerable periods that we can be sure that move-

ment is going on at all. Economic history is not often influenced by human personality or character; there are none of the flashes of interest which biography gives; what it has of dramatic interest is not gained from the rapid succession of incident, or from the varying turns of fortune, but from the slow intensity and resistlessness of the causes which it reveals at work. From a mass of events, few of them at first sight standing out as of much greater importance than the rest, selection has to be made. And if by the nature of things we cannot select much that is in itself striking, we must be careful to choose what has far-reaching connections. Isolated facts may be neglected, if we make sure that they are isolated; the links in the long chains of social progress or industrial development or commercial policy are what should be sought out and fitted together. We may omit what leads backward and what leads nowhere; our concern is with the "low beginnings" from which our country's wealth has grown up. Institutions, policies, ideas rise and flourish and fade again, and there are few of them that leave no mark behind them on the history and development of a nation. What England to-day has either to be proud of, or to regret, is the fruit of the past; how this fruit has been ripened or been blighted in the course of the ages is what history alone can teach us. And it is such a continuity in the social and economic development of England that we must endeavour to trace.

It is a newspaper commonplace of our time to marvel at the speed with which we are progressing. Discovery has succeeded discovery with bewildering

rapidity, and inventions have become antiquated almost as soon as they are complete. Politics have shared with trade and commerce the same restless activity. But from this attitude of mind there is a danger of condemning the past unheard, or pushing aside with contemptuous tolerance what it has to tell us. With a pitying smile we are tempted to say that such facts are interesting, of course, from an antiquarian point of view, but quite out of date, and that it is best to try and understand modern conditions without wasting time over what is past and gone. Or else, self-contentedly applying modern considerations and modern standards to old motives and old conditions, we are prone to dismiss the past as hopelessly benighted, carelessly wondering how our ancestors could have been so foolish, and thanking Heaven that we manage things better nowadays. Such attitudes of mind are thoroughly wrong-headed: to condemn the past because it is the past is only to invite the condemnation of the future upon ourselves; the amount of commercial and industrial wisdom may indeed vary from age to age, but there is no reason for supposing that the latter part of the nineteenth century possesses a monopoly of it, and we cannot hope to understand the policy of the past if we obstinately refuse to regard it from the point of view of the past. Further, to disregard the past is both unscientific and ungrateful; unscientific, because the whole course of modern scientific progress has of late laid more and more stress upon observation, tabulation, and comparison, upon the importance of tracing things step by step from their

origin, instead of beginning with theory and selecting facts to fit the theory; and ungrateful, because England of to-day is what Englishmen of the past have made her. If modern conditions are all that we need attend to, are we then prepared to say that our own is the only epoch in which England has been great? Was not England great in the eighteenth century, and in Elizabeth's day, and under Edward III.? Was not the vigour of the country at home and abroad at least as conspicuous as it is now? Nay, further, England and Englishmen of those days were tried and not found wanting, while our age has been happy in escaping trials and knowing little of enemies in the gate.

We owe our empire to those who have gone before us: they made it for us by the way they fought and worked and ruled themselves, and brought up children to carry on the work on their lines. If we were to draw a contrast between ourselves and other nations, it might well be found in the fact that Englishmen have not in past times rested content at home, but have embarked on wide schemes of expansion, and have spread their dominion over the face of the world; and that then the State and those who stayed at home have stepped in with the resources of arms and an almost unbounded supply of wealth to maintain what the vigour and enterprise of individuals had begun. Other nations have had great colonies; some are still struggling to get them. England stands alone in having in the main retained her colonies, and this she has been able to do principally by her unequalled material resources. The

development of these resources, the growth of her industry and commerce, first at home and afterwards abroad, is a subject which ought not to be neglected. The story may seem dull, destitute of the glamour which attaches to the deeds of soldiers and sailors; commissariat work is unromantic when compared with the fighting in the front, but it is on the unromantic commissariat that the army depends. Piece by piece has been raised the stately pile which is called the British Empire; who thinks of the national industry, thrift, enterprise, and material resources which form the foundations of it? Not very many; the majority stare at the pinnacles which crown the whole. But if the pile is to endure it is well to consider these foundations.

CHAPTER I.

BEFORE THE NORMAN CONQUEST.

When, in the month of August B.C. 55, Julius Cæsar made his landing on the coast of Kent, the Britons came for the first time into direct contact with a power which was to influence them for a time as profoundly as it did the rest of Western Europe; but with this difference, that while in Western Europe the Roman civilization lasted long and left many traces behind, in Britain it crumbled away under the hands of the Saxons with surprising rapidity. In most respects the history of Roman Britain is an episode in our

history, almost complete by itself, and having few threads of connection with what came after.

Neither Cæsar's first expedition, nor the second in the following year, led to much. He crossed the Thames and defeated Cassivellaunus at St. Albans, but no Roman garrison was left, and for nearly one hundred years nothing further was done. The real work of conquest began with Aulus Plautius and Vespasian in A.D. 43. The south of England and the basin of the Thames were subdued. Scapula carried the troops into Lincolnshire and Shropshire, and Suetonius Paullinus pushed into North Wales. The consolidation and pacification of the country began with Agricola (78-89 A.D.). It was in his time that the Britons first copied Roman habits, built temples, houses and baths in the Roman style, assumed Roman clothes, learned the tongue of their conquerors, and settled down into the life of the Roman provincial. Roman roads, elaborately constructed with successive layers of concrete, stones, lime and gravel, took the place of the imperfect British tracks. Villas in the Roman style arose to astonish the Britons, whose dwellings had hitherto been of roughly squared timbers or wattles, with the interstices filled with clay. These villas were solid edifices of stone or brick, or of wood on stone foundations, sometimes extending 200 feet in length, surrounded by an arcade, and paved with marble and mosaic. The development of agriculture was on the same scale. Even before the coming of the Romans, Britain had the reputation of a fertile country in which corn grew well, and there appears to have been some

export trade to Gaul and Ireland. But, as a rule, communication being imperfect, enough corn was grown for food and little more. Under the Romans the corn growing was systematized, and the trade enlarged. To get plenty of corn, and get it cheap, was always an object of Roman administration; it was needed for the troops in the island, for the Roman camps on the German frontier, and for the free gifts of corn made to the population of Rome. Accordingly, as the land was allotted on the Roman principle to soldiers and settlers, under whom the old inhabitants were employed to cultivate the soil, which had once been their own, the amount of corn raised increased vastly. Zosimus speaks on one occasion of 800 vessels being sent to fetch corn from Britain for the Roman cities on the Continent, and though the number is probably exaggerated, there is no doubt that Britain was regarded as a land of exceptional fertility. Eumenius speaks of it as "a land wealthy from its heavy crops, its rich pastures, its veins of metals, its revenues, and its many harbours". He says, too, that Nature had dowered it with all the advantages of soil and climate, that it neither suffered under extreme winter cold nor summer heat, while the fertility of the land was sufficient either for corn or vines. This again is a panegyric; experience convinced the settlers that if it was not snowy, it was often rainy and foggy, while the cultivation of the vine never was really successful. But for corn-growing the island was indeed admirably suited; besides what was taken as *annona*, a tribute of a fixed supply of corn for

the maintenance of Roman soldiers and officials, enough corn was exported in actual commerce to justify the title bestowed on Britain—"The Granary of the North". The introduction of fowls, geese, and hornless sheep, and some fruit-trees, such as the pear and cherry, are the chief agricultural novelties credited to the Romans.

The same stimulating effect of Roman control is to be observed in industry. Before the invasions we know that the Britons had attained a certain amount of skill in weaving, dyeing, metal-working, pottery, and enamel work. The cloth made was coarse and thick enough to be some protection against a sword. Stripes and chequers in bright colours, of which the favourite was red, were used for coats and cloaks; dyes were obtained from various barks and lichens; rings, circlets, pins, brooches and beads of amber and jet were worn. Though the first iron swords and spears were brought from Gaul, the Britons speedily learnt to make them for themselves, ornamenting the handles and the bronze sheaths with gold and enamelled work. Coins copied from the Greek had been made since the visit of Pytheas (330 B.C.), and before the Roman conquest coins were lettered in the Roman style, *e.g.* "Cunobelinos Rex". Although iron came mostly from abroad, some iron ore was worked in the Severn valley before the Romans came, and the mining of tin and lead in Cornwall is very ancient, dating from the days when Phœnician commerce was prosperous. Posidonius¹, Cicero's tutor, visited Cornwall and describes the method of tin

¹ Born B.C. 135, died B.C. 51.

work; the tin was found in earthy veins, ground down, melted, purified, and made into slabs for exportation. It was shipped off by merchants from the Tin Island (generally supposed to be St. Michael's Mount). From his description it appears that the tin was got by "streaming", that is, washing out alluvial tin; in this form it is purest, and needs little refining. Other native arts were the building of chariots, coracles, and ships. The chariots were armed with iron scythe-blades, also of native make; the coracles of basket-work and hides were used on the rivers. The western Britons made frequent voyages to Ireland in ships with flat bottoms, so as to draw little water, but high in bows and stern, built of oak, secured with iron spikes, fitted with anchors with iron chains, and equipped with sails made of hides, painted blue to avoid observation at a distance.

All these rudimentary industries made progress during the Roman occupation. The invaders were not themselves to any great extent planters of new trades, but they understood well enough how to foster existing ones. Mines, for example, were mostly in Roman hands; the output of tin in Cornwall increased; lead from Derby and the Mendips was so abundant that the output was limited by law; iron works existed in the Forest of Dean, Hereford, and Monmouth; copper was mined in Anglesey and Shropshire; the practice of stamping bars of metal with the date was apparently common; coal was dug and burnt in Northumberland. The houses of the new masters called for stone-cutting, slates, and bricks; while their tastes demanded glass and

pottery, of which the best was made at Castor, near Peterborough, and rougher kinds in Lincolnshire, Somerset, Worcestershire, Northamptonshire, and Essex. Even at this early date beer was a national product. Care for commerce is shown by a Roman lighthouse in Dover Castle, and it is possible that the Romans began reclaiming and protecting low-lying ground by embankments. Luxuries, such as keys, steelyards, hair-pins, glass bottles, spoons, statues, and bells, were all due to Roman civilization.

The export trade in corn, cattle, hides, metal, British dogs, furs, and slaves, involved some imports. Salt, an article of prime necessity if meat was to keep through the winter, came mostly from abroad, although some was got by evaporation on the sea-coasts. Wine, too, was imported in considerable quantities, as well as some amber and ivory, used for decorative purposes, though the quantity was small. The finer kinds of cloth could not be made in the island, and were imported, as was also the best ironwork. Generally speaking, the exports were raw materials, while the imports were either luxuries or necessities unattainable at home, or manufactured articles. Imports and exports were, as elsewhere throughout the Roman Empire, subject to duties (*portoria*).

Another effect of the Roman occupation may be seen in the growth of towns. The most important of these were London, on which so many roads converged, and York (*Eboracum*), the military centre of the north. Bath (*Aquæ Sulis*) was frequented for the sake of the waters. Colchester