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TILLAGE, TRADE
AND INVENTION

TILLAGE, TRADE AND INVENTION

AN OUTLINE OF INDUSTRIAL
HISTORY

BY

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PREFACE.

One striking feature of Great Britain of to-day is the number of its busy industrial and commercial towns, thronged with inhabitants, and occupied with the manufacture of goods for home and abroad. Another feature—perhaps no less striking—is the vast ramification of the British Empire, with its possessions scattered in every continent, yet constantly linked to the little island by that mysterious force which is called patriotism. History tells us how that Empire has grown out of the sum of the efforts and sacrifices, the successes, and sometimes the failures which Britons have made. For so is a great state built up; it is won by work and not bought by wealth. Yet though money cannot buy greatness for a state any more than for a man, it can give a wider opportunity whether it be for good or for ill. It is the fashion to study much the political framework of our country: our Throne, our Parliament, our Constitution have been the models for many European states. Rightly also we study the lives of great men, who have guided the people in emergency, or saved the state in the storms of war. But there is another side to our history, less striking, but with an importance of its own—the story of the development of our land, the revealing and using of its material resources, the way in which one occupation has followed another in bringing prosperity to our people.

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For behind the industrial and commercial activities of to-day lie the inventions; behind the colonist lie the dead explorers and sailors of earlier times; behind the Empire lies Britain; behind the world-wide trade lie the simple beginnings of our home industries; and at the back of all lies the land, with its sheep and its corn, which for so many centuries occupied the bulk of our people.

It is the simple story of how these things grew into greatness, or changed, or declined; of how men of the past worked to make a living, or to win wealth; of new commercial opportunities and increasing industrial knowledge, that this book endeavours to tell.

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TILLAGE, TRADE AND INVENTION

CHAPTER I

The Romans in Britain

It is traditional to begin the story of Britain, whether we look at it from the political standpoint or the industrial, with the Roman occupation, and it is perhaps a little surprising that from that far-away period we have so vivid a picture of what the rather mad Emperor Claudius did in Britain in 43 A.D. When the Britons in the east of England had been beaten and the town of Colchester besieged, he set out from Rome with a stately escort of officers, troops, and elephants, progressed across Gaul, took command of the army and captured Colchester, where he is said to have enjoyed the oysters for which the town is still famous; then, returning to Rome after a fortnight's stay in Britain, he took the name *Britannicus* and celebrated his exploits by the usual triumph, which he made still more remarkable by climbing the steps of the Capitol on his knees.

For a period of 350 years the Romans were masters of the island and introduced a vast amount of civilization and commerce. Cities and seaports were built,

strong fortresses defended the country, walls¹ from sea to sea kept back the Northern barbarians. A steady trade went on between Britain and Rome; tin from Cornwall and lead from Derbyshire, copper from Anglesey, and lead from the Forest of Dean, but above all, quantities of grain to feed the Roman populace and soldiery. For we must picture Rome and much of Italy under the Empire as incessantly hungry. Much of the land had gone out of cultivation, and Rome itself was full of a mass of idle people, too lazy to work, expecting to get their food very cheap or even given to them by the emperors for nothing. "*Panem et circenses*" ("free food and free theatres²") was what the mob shouted for, and every new province which Rome acquired was valued according to the supply of corn which it could supply: corn for Rome, corn for the garrisons of soldiers all over the Empire, corn for the officials.

Britain was so well suited to grow corn that it was called the "granary of the North".

We may fancy then vast loads of corn coming from the interior of the country to London and Dover, numbers of vessels shipping cargoes of corn across the straits, and the land of Britain divided into great farms, where the Britons, often reduced to slavery, ploughed and sowed and reaped and threshed and carted, that their conquerors might eat.

From Rome came in return luxuries: fine cloth, rock salt (for the only salt known in Britain was the coarse salt procured by evaporating sea water), kegs and jars of wine, glass and tessellated pavements for

¹ The chief one ran from Solway to Tyne. The name given to the best Northumbrian coal commemorates it—Wallsend.

² The "theatres", of course, were the contests of gladiators, or wild beasts fighting in the arena.

the villas and baths which the Roman colonists made for themselves.

Yet we cannot regard all this as in any way a beginning of British industrial history. For when the Romans were compelled to withdraw their garrison from Britain in order to defend the Empire at home, almost every vestige of the civilization and commerce of the Romanized Britons disappeared beneath the flood of Saxon invasion. Their walls were broken down, their cities sacked and burnt; the luckless inhabitants were either massacred, or kept as slaves by the Saxons, or driven into the mountains of Wales, Cornwall, and Cumberland; even the Latin tongue, which had been common all over the country, disappeared without leaving a trace save in names marking here and there the site of a deserted camp or a ruined city.

That is one of the great differences between France and England. Both were once peopled by men speaking a Celtic language; to both the Romans came and imposed their Latin language in place of the old tongue. But while in France the Latin language remained, to be changed gradually into French, our language became Saxon and only acquired its Latin additions at a much later date—when the Norman invaders came.

But though the Romans vanished from Britain they left behind them things more lasting than walls and towns, or the fine stone houses which they had raised amid the wattled clay-plastered huts of the Britons, more lasting even than speech; they left us the wonderful Roman roads. No one has ever made such roads as the Romans. Wherever they went they made them. Up and down the length of Italy, through the Alps, across France, down the Rhine,

over the Balkan peninsula, through Asia Minor, march these majestic roads, straight, plain, solid, businesslike and enduring. They seem to express some of the best qualities of the Roman character. They were made first of all to move troops on, but then also for commerce, for the vast supplies of food which as we have said Rome was always drawing from her provinces, and for opening up and civilizing the new countries. And in England these roads, indelibly stamped on the soil, are now the only remains of the Roman Empire in Britain.

The lines of these roads are worth notice. The greatest of all, the Watling Street, ran from Dover to the Thames, crossing the river just where the marshes on the southern side are smallest, and so the river could be most easily bridged, while hilly rising ground on the north side gave an easy place to land merchandise and a sure foundation for the bridge. That bridge is London Bridge; so was settled the site of the city of London.

From London the Watling Street ran on through Rugby northwards to Chester. The Ermine Street also started from London and ran to Lincoln, thence to Tadcaster and York; near there it branched, one fork going to Newcastle, the other to Carlisle. A third road ran from London to Bath, joining there the Icknield Way, which cut across the country from Norwich, and the Fosseway, that came southwards across England from Lincoln. From Bath the road ran on to Exeter and Falmouth. These were the chief ones: there were many others.

It is worth while to note that the same lines have, in four cases, been followed by our railways. The South-Eastern joins Dover and London; the North-Western carries on the line of the old Watling

Street to Chester; the Ermine Street is roughly followed by the Great Northern; the London-Bath Exeter-Falmouth road is the Great Western. Clearly the Romans had a good eye for the needs of commerce.

Yet even here we must not make too much of the Romans' work in Britain. They laid down great trade routes, they founded their cities often in the best places, and brought in order and the "Roman peace". But the cities and roads of to-day are not always of Roman origin, nor have their trade routes been constantly used even in places where they continued to exist. The storm of Saxon invaders who swept over the country, fierce barbarous heathens, were haters of towns, and seemed in many cases to have formed their settlements purposely out of the way of roads and traffic. So most of what the Romans had made either perished or fell into disuse. When men dig deep in parts of London now sunk in the clay, under Norman work and Saxon work, they find remains of Roman work. They even find the blackened and burnt timbers which mark the sack of London by Boadicea. But in London these Roman roads often do not run under existing streets; they run across or to the side of them. And this is the best possible proof that in London these roads fell out of use and were practically lost. When London grew up again no one would have troubled to make new roads if the old ones had still been in use.

CHAPTER II

The Saxon Invaders—Country Life—the
Land and the Villagers

The Saxons, Jutes, and Angles who came over from the coasts of the North Sea and overran England in the course of the fifth and sixth centuries were, as we have seen, very terrible people to the old inhabitants. They were of course of a different race. They were "Teutonic"—fair, yellow-haired people, much bigger and stronger than the black-haired "Celtic" Britons. They spoke "Saxon"—the basis of our English of to-day—and their tongue was of course unintelligible to the Britons. Further, while the Britons had been converted to Christianity, since the Roman emperors and the Romans generally had become Christian, these Saxons were still heathen, worshippers of Woden and Thor¹ and other Scandinavian gods. Yet though they were fierce heathen savages, they had some estimable points in their character. They were brave, and very enduring in their bravery: with a fondness for homes and wives and children; a great respect for women; simple folk who knew nothing of life in towns, and wished to live in the country and gain their living by the only way they could, namely by tilling the ground. True that when they could, they ate huge meals and drank quantities of home-brewed beer. But as a rule luxuries were few and food was scanty, and they must not be altogether blamed if they were sometimes gluttonous and drunken when they did get a feast.

Of course there was plenty of fighting to be done,

¹ Wednesday; Thursday.

but men cannot live on fighting. Thus the conquest of England was done bit by bit. A band of warriors, generally united by kindred, overran a piece of land, bundled out the Britons, since they wanted the land for themselves, and settled down to till it. The next band went farther and did the same; and so on and so on. The process was like the tide coming in over the sands: froth and waves and commotion of struggle at the edge of the invading waves; then as the tide flowed in, a calm over the submerged land.

What is to be described in this chapter is, then, the ordinary Saxon settlement after the fighting was all over: the simple country life led by the simple country people. It will leave on one side the king and the court and the great men who came to it. They, of course, were, as they always are, more civilized and refined, with finer clothing and good houses and richer food; better educated; accustomed to roam from place to place; in a word, more advanced. But these people are the exceptions, not the rule. What we seek is the homely country life lived by our Saxon forefathers.

To begin with, then, each small tribe of invaders, generally more or less related by blood, and united under the leader who had brought them, settled in a district and started to put up their houses in little villages. Very small, these villages; probably not more than ten or fifteen families in each village, because, as we shall see, each household needed a great deal of land. Their houses were of the simplest kind, built of wood with thatched roofs, the walls often made of wattle—close-plaited hurdles that is to say, plastered with mud to make them fairly water-tight. They had no glass, of course, and they did with as few windows as possible: doubtless there was plenty

of ventilation through the cracks in the wall. They had no chimneys: a hole in the middle of the roof let out the smoke of the wood fire that burnt on the hearth in the middle of the hut. The floor was made of hard trampled earth; if you were luxurious, you strewed rushes on the floor, which proved to be a fine harbour for dirt, old bones cast away when thoroughly gnawed, and fleas. There were no beds and no bedclothes. Skins served for blankets, and you lay on the floor. Early hours were kept, as even rushlight candles were scarce—and they give out more smell than light. For food there was bread, generally rye bread, and butter, cheese, and eggs if you kept a few fowls. Meat (pork mostly) was a rarity and a luxury: generally eaten salted, for it had to last a long time. For drink, beer at all meals—if you could get it: milk sometimes, butter-milk in summer; water when the family was economizing: fish, generally eels, in Lent and on Fridays, in Christian households, as soon as the Saxons had been converted. Cookery was simple: roasting on a spit or boiling in earthenware or metal vessels; the latter were rare and much prized—like the housewife's copper stewing-pans nowadays. There was no sugar, but honey instead of it; salt was hard to come by; other relishes unknown. Beans and peas, leeks and kale, with some of the savoury herbs, were the whole stock of the garden: no root vegetables were known till much later.

If we compare the lot of the Saxon peasant with the countryman of to-day, in some ways he does not suffer in the comparison. Of course he was without many things that the man of to-day has, but then he did not know of them or want them. He had no anxiety about employment. His house let in water,

but it let in air, and it was his *own* house. In winter he doubtless lived too much on salt meat and salt fish, which made him ill; but in summer he had wholesome food and a tolerable variety of it. He had his own produce to eat, because he could not sell it and buy tinned meat and preserved milk in its place. His beer was copious, but weak and pure. He never sat up late, because there was no light to sit up by. He had a garden; he worked for himself and not for wages; in fact in the main he did as he liked, and probably seldom washed.

His methods of cultivating his land next call for notice. Perhaps we ought not to say *his* land, because it was not his. If it belonged to anyone it belonged to the village, or to the whole tribe. He occupied bits of it, his fellow villagers had bits of it, any leader or important man had more bits of it, and the king or chief had a great number of bits of it. But the question as to who *owned* it was not settled or perhaps even thought of, for there was land for everyone and plenty over. The villager had his share of the village land: and a very curious share it was, as will be seen.

We must put out of our heads all ideas of modern farming, or only use them as contrasts. Notions of manuring, of varieties of crops, of private ownership of land, were unknown; there were no "farms" and no "farmers" with labourers working for "wages"; no root-crops nor clovers; no pasture farming; no markets; no sale for produce. All that was to be done was to grow corn, wheat, or rye for bread, barley for beer. The only scientific fact known in agriculture was that you could not grow the same crop in the same field year after year. The land had to have a rest; to lie "fallow", one year in every

three. Thus the whole arable¹ land of the village was divided into three huge fields: in any one year one of these would be under corn, the second under barley, the third lying fallow. Next year they would be fallow, corn, barley; the next year barley, fallow, corn. So things went round.

Clearly every villager will have to have a holding in each field, or in the first year he and his family will have food and no beer, which would be vexatious; in the second, beer and no food, which would be bad for him; and in the third, neither food nor beer, which would be worse. But the land will need a deal more subdivision still. Huge fields like these—we may assume in advance that if there are ten households in the village, each field will be some 400 acres in size²—will vary much in quality. Parts of each will be more, parts less fertile: parts stony, shady, too dry, too wet. No one will be content to have all his holding in a bad place, and see his neighbour occupy the best plot. Accordingly the land was parcelled up into half-acre strips, and everyone's holding scattered impartially over each of the three fields in order to arrive at a rough kind of equality. To mark off one man's holdings from his neighbours a narrow strip or "balk" of land was left unploughed.

"A strangely complex plan", we feel inclined to say, "for so primitive and simple people: can we be sure it was so?" We *can* be quite sure, for the system—known as the "three-field system"—lasted on in England late enough for estate maps to be made

¹ arable = to be ploughed, i.e. land under crop.

² Since the cultivation was so bad the yield per acre was very small; so each household required a large number of acres to give corn enough for its members to live on.

of such holdings. We have in many cases these maps of actual holdings. Besides, it is a mistake to think that primitive people have simple plans: it is often exactly the contrary: they have extraordinarily confused and elaborate methods. One of the chief forms of progress is to simplify what seem to us to be ancestral muddles.

Doubtless there was a deal of quarrelling. The right time to begin ploughing would be a fine question to settle, and all the villagers took a voice in that, because ploughing had to be done all together. Obviously all these scattered strips could not be ploughed separately. The *field* had to be ploughed. Then it took eight oxen to drag the heavy wooden plough, with the nose of its ploughshare tipped with iron, and no one villager probably had eight oxen of his own. Each had one, or two, so the villagers clubbed together to do their ploughing. Then there was the temptation to overwork your neighbour's ox while driving the plough, or to cut a bit off the baulk and include it in your strip, at the expense of your neighbour, and display other bits of rustic smartness. There were many quarrels no doubt, but the villagers had to work together, and they did.

So the year went round: a long job of spring ploughing of the barley field, for barley was sown in the spring—then haymaking—then harvesting: another enormous business, for they cut corn with a sickle—handfuls at a time, gathering the ears with the left hand and shearing them off short, leaving a long stubble, since no one wanted straw in those days; then threshing with a hand flail, going on all winter at odd times; finally another long job of autumn ploughing for the wheat crop. There were all sorts of other things too: wood to be fetched in for winter

firing; beasts to be killed when fat at the end of summer and their flesh salted down for winter; beer to be brewed: no lack of occupation.

These last, however, call for more explanation. Cattle and beasts need grazing ground, and that brings us to another side of the village life. Besides the arable ground, each village had—and needed—a great mass of untilled ground, called the village “waste”. It was no doubt of all sorts: rough grass-land, furze and thistle-strewn commons, forest and scrub. But it was all used. The villagers’ oxen, some sheep and droves of pigs (the Saxons kept these in vast hordes), roamed over this “waste” and picked up what they could. The pigs did well on acorns and beech mast if there was plenty of woodland, but the cattle and sheep were gaunt, half-starved beasts, with much bone and little meat. From the waste the villager got his firewood and turf for fuel: from it, too, came the honey which served for sugar. The best of it was fenced off for meadow, and hay grown there in spring and summer, to be shared among the villagers, each again having his strip or strips: there was some winter feed for the cattle, but not much, so that when summer was ended, most that were eatable were killed and salted down for winter. From the hides the villagers shaped their rough skin shoes and their harness and their leather drinking jugs: the sheep’s wool was brought into the houses, washed and carded by the women and spun with the hand-wheel and distaff. The rough yarn was then woven on the hand loom into the coarsest of cloth, used for everyone’s wear. Men usually did the weaving by the firelight in the long winter afternoons when there was little to be done outside. The slow clatter of the loom and the whirr of the spinning

wheel was a common cottage sound in rural England right on till the eighteenth century.

Village life was then full of work and doubtless monotonous; free from much anxiety but with few excitements: and almost entirely what is called *self-sufficing*. That is to say the villagers lived on what they produced, and made the clothes and implements they wanted: someone in the village or in its neighbourhood would have the needful skill to tip a plough-share, or mend a wheel; clothes were spun, woven, and made at home. Money was almost unknown; even if you ran up a score at the village alehouse—if there was one—you probably paid *in kind*: that is to say with corn or meat or something of the sort. The only thing that villagers wanted steadily was salt. There must always have been a trade in that; and then, too, the packman or pedlar came round at times with his bundles of small fineries, and excited all the women with gay coloured scraps of cloth, needles, ornaments, and small trifles. He told tales and collected gossip. Sometimes a wandering minstrel passed, and sometimes a cavalcade of *thegns* or men from the Court and their followers; sometimes men from the village would be called out to go and fight. But in the main, men lived, worked, and jested, married and had children, grew old and died, without travelling far from home.

CHAPTER III

Danes; and Commerce and Trade

From a little before the year 800 down to the Norman Conquest in 1066, England was deeply influenced by the invaders from the shores of the North Sea and Scandinavia, whom we call the Danes. For more than 250 years Saxon kings fought with them, subdued them for a time, and ruled them; then came a fresh set of invasions which ended in a Danish king, Canute, seizing the throne (1017). In this long period it is necessary to have some subdivisions in our mind. We may accordingly think first of the Danes as raiders, careering over the country, plundering and burning. That was ended by Alfred and his son Edward the Elder, who managed to subdue them (871-925). Then came the middle period, when the Danes, having settled in England, almost united with the Saxons and taught them some of their ways and habits. Finally came the third period of renewed invasion, which began with the reign of Ethelred the Unready (979), and ended with the death of Canute's sons in 1042; in this, England became, for a time, part of the great Danish empire of the north.

Clearly the first period of plunder could not help much to develop England. It entailed endless fighting. All the seacoast towns on the east were taken and pillaged; even the centre of the country was overrun; and we realize how all-pervading the Danes were, when we remember that they chased Alfred down to the shores of the Bristol Channel, and made him take refuge in the marshes of Athelney near Bridgewater, before he finally beat and tamed them.

Even then he had to surrender to them the eastern and northern half of England. Yet two good things came out of evil. To begin with, it was the danger of the Danes that made England unite under one king: till the Danes came, kings of Kent, Northumbria, Mercia, and Wessex had each ruled in their own dominions. But with the Danes came the union of England. The kings of Wessex became kings of the English; and the country never broke up again. Certainly the fact that, before the Danes came, all England had become Christian and so had been united under one Church, helped to make the union under one crown. But probably the Church alone could not have knit England together into one: for example, it never united Ireland.

The other important thing was that to keep off the Danes Alfred had to make a fleet. He copied the Danish ships, but built his swifter and longer. At first he had to hire sea rovers from Frisia to man them, but his Englishmen soon learnt to man their ships themselves. Thus from the Danes—partly in imitation, partly as a precaution—came the English fleet. And men, learning seafaring in time of war, went on with it in time of peace. So came our first fleet and our first commerce; and since Alfred's day the fleet and sea-borne commerce have always been marks of the English race.

When the Danes had once been beaten into order, and had become Christians, they were not ill neighbours, and England got a good deal from them. Neither in speech nor in ways nor in race were they very different from the Saxons—not nearly so different as the Normans were when they came over with Duke William in 1066. Thus the Saxons found it easy to unite with them in marriage and to learn from

them. There were, however, some differences, and by these the Saxons profited. The Danes were more hardy, more venturesome, more enterprising, and the parts of England which they overran, thus had as it were a tonic of vigorous life poured into it. The effect was extraordinarily permanent. It is doubtless partly due to the Danish blood that the Yorkshireman is still so alert and quick-witted compared to the slow south and east, which are more purely Saxon. And as a result of the hardihood of the Danes they were great traders.

They must have been magnificently brave. It took courage to sail over to England across the North Sea in their low, undecked, open ships, driven partly by oars and partly by a single square-rigged sail set on a mast in the forepart of the ship. But they did not content themselves with England and the Narrow Seas. They went through the Bay of Biscay and past the coast of Spain into the Mediterranean. They dared the stormy seas of the west of Scotland and Ireland—seas that demolished the Armada many hundreds of years later. They pushed out into the open Atlantic and reached Iceland; ventured on from there to Greenland, and, not even yet satisfied, sailed on westward and found a new land which they called Vineland—the eastern coasts of North America—centuries before Columbus. Perhaps that great outburst of exploring and adventuring into the New World which marks Elizabeth's time was only a revival of the spirit of the dead Danish vikings.

They were thus the great traders of the time, and they taught Englishmen to trade overseas too. Merchants grew rich and respected. Three voyages across the sea at a man's own cost made him of the same rank as a "thegn"—a noble. A brisk trade sprang

up across the Channel and the North Sea and even to the Garonne mouth—wine, fish, fine cloth such as we could not weave in England, oil, vinegar, glass, furs, skins, ropes, masts, all came from France or Flanders or North Germany. More costly things came too, such as silks, gems, gold and silver, ivories; these mostly from the East, being landed at Venice and Marseilles and coming thence overland to the Channel ports. Pepper, too, was imported and much valued. It was so rare that the habit was not to use it as a seasoning, but to eat a little by itself as dessert—a strange taste, but tastes vary in different ages: our forefathers liked fish high, and used to hang it as we hang game. In return for all this import trade, we exported copper, tin, lead, and much wool. English wool was from early days of very good quality. But the chief of all our export trades was a disreputable one in modern eyes—the trade in slaves. Everyone remembers those slave boys in the market at Rome—“non Angli sed Angeli”, as good Pope Gregory said. And though the Church did its best to suppress the trade, it lasted long. Men became slaves owing to being taken prisoners in war, or from debt, or from gambling. Saxons were fierce gamblers, and would even stake their freedom. In spite of the churchmen’s exhortations, men did not see any great wickedness in slavery. True, laws were made that slaves “were not to be sold out of the country, especially into a heathen nation”, but the laws were ill kept. Even in the eleventh century Bishop Wulfstan was trying hard to stop the slave trade from Bristol over to the Irish ports—“men not being ashamed to sell into slavery their nearest kin—nay, even their own children”.

All this trade meant a growth of towns, especially

ports. But the Saxon and Danish "port" differed much from ours. Ours are on the seacoast or the mouths of rivers. But their ships, being so small, could sail far up the rivers, especially the flat rivers of the east coast. Thus York was a port, and Ely, Norwich, Ipswich, and Exeter: in fact the farther inland the better. It was safer from pirates, and goods were taken far into the interior by the easy water road without "breaking bulk".¹ Other well-known Saxon ports were the Cinque ports, of which Dover remains the only one in use now. Winchelsey, Rye, and Sandwich are all far inland. Dunwich, on the coast of Suffolk, has had a different fate: it now lies under the sea. London, of course, was the chief port; Bristol, Chester, and Southampton came next. Oxford, Nottingham, Winchester, Lewes, Wareham, Hastings, Chichester, Lincoln, were all centres of trade. But they were small. *Domesday Book*² mentions eighty towns, but the population of all put together does not reach 200,000. There are twenty towns, each larger than that in the United Kingdom nowadays.

What fixed the sites of mere towns, if they were not ports, is not always easy to say. Most are by a river; many where an old Roman road crossed a river. Stratford (the "ford" of the "street") is one example. Others grew up near pilgrims' shrines, or where an old Roman town could be used as a quarry, (e.g. St. Albans). Some have survived; some, like Shaftesbury, have almost disappeared. Great monasteries such as Bury St. Edmunds and Glastonbury encouraged men to settle by them, for they employed men—smiths, carpenters, millers, masons, fishers,

¹ Transshipping or unloading cargo.

² See p. 19.

huntsmen, and tillers of the soil. The monks themselves mostly learned a handicraft. St. Dunstan, Archbishop of Canterbury, could work as a mason, a carpenter, and as the legend tells us, as a smith. He could draw, paint, design, sing, compose music, and make musical instruments. Such was the example the Church set.

CHAPTER IV

The Norman Conquest—Domesday—The Manor and the Serfs

We have already taken one survey of rural England, and of the men who lived in it and tilled the land. But in early days the land was almost the only means of livelihood for everyone; and we shall have to return to it again and again. Accordingly we will now take another look at it, as it is revealed to us under the Norman kings in the pages of the great Survey of the land which William the Conqueror caused to be drawn up and written down, namely the *Domesday Book*.

Take a typical entry—from Devonshire: translated from its abbreviated Latin.

“Aylward holds from the Count (Robert of Mortain) the manor of Bickley. He himself held it in the time of King Edward the Confessor, and it was rated at one hide. There is land there for eight plough-teams (carucates). In the lord's domain is land for two plough-teams and six slaves and eleven villeins and eighteen bordars (boors), with six plough-teams and sixty sheep and eight pigs. There is a mill, bringing in five shillings, and thirteen acres of meadow and twenty acres of pasture and fifty-nine acres

of woodland. It is worth (in tax) three pounds, and formerly was worth forty shillings."¹

Here at once is revealed a striking change. We are no longer speaking of a village but of a *Manor*—that is to say, an estate. We have a *Lord of the Manor*, who is the *tenant* from a Count who owns many manors. More remarkable still, the tillers of the Manor lands are described as *villeins*, *bordars*, and so on—that is to say, they are no longer free, but *serfs*. How they have lost their freedom, and how the Lord of the Manor has managed to make them his serfs, are questions which obviously demand an answer.

The first impulse is to set down this fall from freedom to serfdom as a result of the Norman Conquest. The death of Edward the Confessor (1042-66) left England with no obvious heir to the throne. He had made a sort of promise of the crown to his cousin Duke William of Normandy, the leader of those Danes, Northmen or "Normans", who had settled in the north of France and given Normandy its name; but when Edward died Harold was chosen by the Witan. William had therefore resolved to conquer England, and he had brought with him not merely his Norman followers, but a mass of adventurous knights from France, Flanders, and some even from Italy and the Empire. They looked forward to the excitement of some stiff fighting, for fighting was in those days the diversion of a gentleman; but they, just as much as Duke William, intended to make something out of the enterprise. He sought a kingdom, and they expected the reward of lands. And when in the fierce battle of Hastings Harold was

¹ The extract is partly drawn from *Domesday*, partly from the enlarged copy in the Exon *Domesday*.

slain and the Saxons routed, England became the prize of war. The estates of those who had fought against the Duke were declared forfeit; and as every Saxon rebellion was followed by more forfeitures, all the land soon came into the Duke's hands. He kept much for himself and granted the rest to his followers. They came in at the top, and the Saxons¹ found themselves pushed downwards. Many who had been rich became poor; many who had been poor, but still free, lost their freedom and became serfs.

This is part of the truth, but not the whole. The Norman Conquest certainly did result in a great fall in the status of the Saxons generally. The Normans became their masters, and hard, exacting masters too. But long before the Conquest, the old freedom had been declining: the peasants (if they may be called so) had come much more under the power of some lord who "owned" the estate on which they lived; they had increasing duties to perform for him. In a word, they were less free.

How precisely this came about is not certainly known, but it is not hard to see things which led to it. To begin with, beside the village land and mixed up with it, there was always land belonging to the king or chief leader of the tribe. This land he would give to one of his thegns at the Court. This thegn would be bound to fight for him in war and bring fighting men. Being on the spot, he gradually gained power over the village. The villagers paid to him the dues which they had used to pay to the king. They had had to do the ploughing,

¹ It will be seen that the manor of Bickley was in the hands of Aylward before the Conquest, and remained in his hands after it. But he held it from Robert of Mortain, a Norman baron. In most cases the old Saxon owners were ejected altogether.

sowing, and reaping of the king's land; now they did it for the thègn, and he, being always there, took good care that they did do it. He made some go with him to fight when fighting was needed, and those who did not go would pay some gift of corn, or eggs, or produce, or extra work in return for being let off. He would break up part of the common and enclose a fresh field for himself; he would claim the strips of any of the villagers who happened to die without leaving an heir, as his; and so the idea would grow up that all was held from him. The villagers would look to him for protection, and he would call himself their "lord", and the whole of the villagers his "tenants". So by slow degrees, as custom became more binding, the "freedom" of the villager would dwindle. Then came the Norman Conquest, and it perished altogether.

The result of the Norman Conquest, then, was to set up in England what was called the *Feudal System*. The essential point to remember about this is that it was a *state of society depending on the holding of land*. The king was the supreme landholder; in theory all the land was his. He "granted" big estates to his chief men, who, holding direct from the king, were called tenants-in-chief. They in their turn granted portions to lesser men, who were called "mesne" (or intermediate) tenants; and they might in their turn regrant portions, and so on. But everyone owed certain "dues" to his "feudal superior" as a condition of holding his land from him. The "dues" might be of many kinds—service in war, the payment of money or beasts or produce, the performing of certain duties, and so on, but they all hinged on being someone's "tenant". Such feudal tenants, however, were *free*. Beneath them were a mass of *unfree*

tenants—serfs—who did the work on each estate or *Manor*. It is, then, with the typical Manor that we are now concerned.

Take, then, this Manor of Bickley which *Domesday* tells us is held by Aylward from his feudal superior, Robert de Mortain. This Robert was an enormously wealthy man—a tenant-in-chief, of course. *Domesday* records that he owned close on 800 manors. He has a mass of tenants, and Aylward is one of these. The Manor of Bickley is not altogether unlike the “village” which has been already described. The land is divided into strips in the same way; the same “three-field” system of crops prevails; there is the “meadow land” and the “waste” as before. But now there is a great mass of land which in a particular sense “belongs” to Aylward, the Lord of the Manor, for it is cultivated for him; the crops on it are his. This land may be in strips mixed up with the tenants’ land, or it may lie all in a piece; but any way it is called Aylward’s *dominium*, his “domain” or “demesne”. Then he will have his share—the lion’s share—of the meadow land, and perhaps his own bit of “waste” as distinct from the tenants. Aylward is very much monarch of all he surveys, for the villagers have now become his serfs. They are not his *slaves*, for slaves have to do whatever their master bids them, and these serfs have very definite duties; but they have got to perform them. Mostly they will owe Aylward two days’ work each on his demesne, and of course they get no pay for it. Those who are very lowly may even have to give three days a week. These “days” are called *week-work*. Besides this, there will be extra “days” required at specially busy seasons—in ploughing, sowing, reaping, and hay-making. These extra days were grimly called *boon-*

work—anything but a boon to the serfs, who would be hauled off to work on Aylward's land just when they wished to be busiest on their own. They made Aylward's hay when the sun shone. Then, too, they had small dues to pay—eggs and fowls, days' carting, eels for Aylward to eat on fast days, and so on. In return for all this each had his own scattered strips—probably about thirty acres in all—in the open fields, his bit of meadow, his privilege of pasturing animals on the waste, his cottage, and perhaps a bit of garden round it. We cannot say that the serfs had any *rights* to these, or that they *held their possessions on account of performing their services*, because as serfs it is doubtful if they had any *rights* at all. But so long as they behaved well they were practically secure in their tenure, for as the value of an estate lay mainly in its being well furnished with serfs to till it, it was extremely unlikely that the Lord of the Manor would turn them out. Later on, when we come to the fourteenth century, we shall find these servile tenants beginning to talk of their "rights", and the lords busy in disputing them. But under the Norman kings they were too much downtrodden to think about much except keeping in tolerably good favour with their lord.

Thus they were very definitely serfs; and they were, in technical phrase, "bound to the land". If Aylward handed over the Manor to anyone else, they went with the Manor. They could not leave it and go elsewhere. If they ran away they could be brought back; if they were fortunate enough to escape and live in a town for a year and a day they were free—perhaps; or if they could get taken into the Church they were free. Otherwise they lived and

died serfs: they could not marry their daughters to anyone on another Manor without the lord's leave, for the girls were his serfs; they could not sell their oxen or horses, if they had any, for these also were in a way Aylward's—they were useful to plough his demesne. They had to grind their corn in his mill, and pay for the privilege. The revenue so brought in is recorded in the *Domesday* entry. If they got into trouble they were dealt with in the Court of the Manor, where Aylward, or his steward, presided. If they died and left no children, their land and possessions went back to the Manor. In fact, save for the days on which they were at liberty to work for themselves, they were very much Aylward's property.

The chief business in managing a manor will then lie in making the serfs do their week-work and boon-work, and pay their dues. Their obligations are all written down in what is called the *Extent* or *Manor Roll*: the steward keeps a careful record of them, enters the services, the deaths, the transference of a holding to a son, the dues received, the boon-work done. He also keeps account of the corn reaped, the meat salted, the beer brewed. Outside, a *bailiff* looks after the serfs, who elect from their own number a *reeve* to help him, and a fine business it must have been. Doubtless they had a thousand excuses which he tore to shreds; they did as little as they could; came late and left early if they dared; idled and slept, in place of working on the demesne. He equally certainly kept a stick for the lazy ones. Chaucer describes his Reeve as "a slender choleric man"—no wonder he was often out of temper—and adds, "they were a-dread of him as of the death". There was a good deal of rough-and-ready justice—and injustice also. But men in those days had the habit of taking

blows as part of the ordinary run of life. It was little use to complain to the Manorial Court against the manorial officers.

Aylward meantime lived the life of his kind. Probably he had several manors, and went round from one to the other with his friends and followers. When he was arriving there was great bustle of preparation: killing, fish-catching, baking, and brewing. He stayed hunting and feasting till the cupboard was bare; then moved on to another estate. This explains the curious restlessness of the great men and the Court in these early days; it was easier to go to their food than to have it sent to them.

To sum up this long chapter: we have seen the fall in status from freedom to serfdom; the manor and its demesne land put in on top of the old village; the old system of cultivation now carried on by unfree tenants, called by many different names, villeins, cotters, boors.¹ The village is still mainly self-sufficing; only the great men wander. We have said nothing of money and nothing of rights. Both these are to come. As soon as money gets common, it will be to the lord's interest to let his serfs pay him a small sum per week, with which he can hire labourers and so be quit of those lazy rascals, as he calls his serfs. Again, by and by, that Court Roll and its record of services will be a help to the serfs. They will urge that so long as they pay their services—or money instead—they have a *title* to their bit of land. They will get a "copy" of the bit of the Court Roll that concerns them, and they will become "*copyholders*"

¹ These were not in origin terms of abuse; but as the unfree tenants were naturally often looked down upon, villain and boor, which meant originally only the dweller in a "vill", or hamlet, and a peasant (German *Bauer*), have come to acquire worse meanings.

of the manor. So custom hardens by degrees into law.

CHAPTER V

Money—Royal Revenue and Coinage—The Practice of Commutation

Money is, as Robinson Crusoe sagely reflected, vile dross, of no use unless you can spend it. But an immense step forward is made in the commercial condition of a country when money comes into common use. Trade of a sort—buying and selling—is possible without money. Goods may be exchanged for goods or for work. Such was the early condition of rural England, where among the villagers money was practically unknown. If a man wanted salt he gave, say, corn for it; if his plough needed repair he promised the smith a day's work on his fields. This system, which is called "barter", prevails now in many backward parts of the earth. Among the South Sea Islands all trade is still "barter", since the islanders have no use for money. But it is very cumbrous and inconvenient: one man may have corn and want cloth; another may have cloth to part with, but want in exchange beer. No bargain is possible unless the two are lucky enough to light on a third who has beer and wants corn. Money would simplify the trouble at once. Again, it is not only a *medium of exchange*, but it serves as a *measure of value*. An ox is worth so many silver pennies; wheat fetches so much a bushel. We can equate the two and say how many bushels of wheat should be given for an ox.

Observe that this is done without money passing at all. It is only a *term of account*.

A country, then, makes a great advance when it passes from what is called a *natural economy* (barter and payment in kind) to a *money economy*. But the process is a slow one. Some persons and some businesses will use money, while others use barter. In Norman England traders and townsmen were well acquainted with money: the rural population hardly used it at all. Midway between the two came the king. Much of his revenue came in money, but much was still paid in kind. Fitz-Nigel, Bishop of London, in a book about the Exchequer, says that he can remember old men having talked about the herds of cattle and wagons loaded with produce that used to crowd the roads which led to the King's residence in Henry I's day: these things were paid into the King's account and valued in money (though money did not pass over them). As Fitz-Nigel, writing in Henry II's day, records these ancient memories as being something strange, we can see that between Henry I (1100) and Henry II (1154) the royal revenue passed from being partly under a natural economy into being under a money economy.

Modern industry and commerce, and modern domestic life, are so much affected by rates and taxation—that is to say, the gathering of money necessary to carry on the government of the country either local or national—that it is worth while to see how things have changed since the twelfth century. Practically everyone pays some taxes nowadays; even the poor man when he smokes or drinks beer; the woman who drinks tea; the children who buy sweets; anyone who pays rent; all pay, indirectly, taxes or rates. That is to say, they pay a little more for these things

because the Government puts a duty on them; and the house rent is a little higher because the landlord has to pay rates, and he adds a little to the weekly rent. Richer people pay direct taxes and rates as well—income tax, poor rates, district rates, and so on. Taxation, then, is wide-embracing, and it is tolerably steady. Changes, of course, are made now and then, but not very violent or sudden ones. With the money got from taxation the public services are run, public servants paid, the country defended, towns paved and lighted, children taught, and a thousand other things.

Taxation in the twelfth century was very different. To begin with, kings were possessed of huge estates of their own, just like the barons, only much larger. And on the produce of this *royal demesne* the king and his household were expected to live. They moved round from one royal manor to another, just as the barons did. Apart from this, the king had other permanent sources of revenue, paid in money. Such were the profits of jurisdiction, fines for breaches of the peace and different offences. A third source was the feudal revenue, the payments made when a feudal tenant died and an estate changed hands. Then, too, the regulation of foreign commerce lay in the king's hands, and he received a "tunnage" (one or two tuns from each cargo) of wine, and often a tax on wool, while foreign merchants paid for a licence to trade in the country. By the thirteenth century these were all ordinary sources of revenue. For special occasions, however, such as the expense of a war, direct taxation was levied, but it was seldom laid on all classes at once. *Scutage* was paid by those who avoided going out to fight for the king; a *carucage* (the *carucate* was a measure of land) would be

levied on the barons—perhaps next year on church property; a *tallage* imposed on the towns, and so on. These taxes, however, were exceptional; one set of persons would be taxed one year, another the next, and perhaps then no tax imposed for some time. Thus taxation was much more irregular than it is now, and much more special. The poorest paid no taxes; that was a gain. On the other hand nothing whatever was done for them, and the loss much outweighed the gain.

All this taxation implied a good deal of money. Kings had some trouble to keep up a pure supply of it. Henry I is said to have caused the right hand of every moneyer in the kingdom to be struck off, as a punishment for their dishonest dealings; and in King Stephen's reign many barons minted their own coin, so that Henry II had to recover his royal privileges. Money was struck at no less than fifteen different cities in the thirteenth century; this shows an attempt to get it well dispersed. But it was very roughly made: the coins were hammered in wood moulds, and were, of course, different in shape and size. They had no milled edge, and swindlers clipped them; knaves issued base coin, if they dared; and altogether it was hard to be sure of the value of your money when you got it.

One thing at any rate was simple: there was only one kind of coin. It was all silver, and all pennies. Children nowadays learning those bewildering tables of weights glibly recite: "Troy weight: 24 grains make one pennyweight, 20 pennyweights one ounce, 12 ounces one pound. Troy weight is used to weigh precious metals." Few ask themselves, "Why *pennyweight*?" $20 \times 12 = 240$; 240 dwt. (pennyweights) make one pound of silver. So do 240 pence

make one £, only the multiplication is the other way— 12×20 . The pennyweight is called so because it is the weight of a silver penny, and the £ is the pound Troy of silver. Other terms of account, the merk (13s. 4d.), the shilling, the groat (4d.), the pound, were used, but in the twelfth century those coins were not made—or at any rate were so rare that they were not in use, except in accounts. The only coins were silver pennies, and sometimes silver halfpence and farthings, made by the rough and ready halving or quartering of a penny with a knife, if you wanted change.¹ This seems to put a different aspect on the “largesse” of the chivalrous knight. “The heralds”, we read in historical romances, “rode forward, and in reply to the cry ‘Largesse! Largesse!’ scattered silver among the rude populace.” They were only scrambling pennies. But a penny was worth a great deal more then than it is now: 2d. was the worth of a day’s labour. So they were after all fairly liberal.

To return to the pennies; there is much that might be said about checking the value of them. When the sheriffs, who were the royal officials who looked after the revenue from the shires, had to make their payments to the Royal Exchequer, all sorts of precautions had to be taken. The pennies might be light weight: therefore they were not merely counted but weighed. Short weight was made up by the sheriff adding more pennies. This did not guard against bad coinage. The weight might be right, but the coinage made of debased metal. So a sample pound or two would be picked out and “assayed”—melted down and the dross skimmed off till nothing but pure silver was left. If this was short of the proper weight, again

¹ They must have been singularly inconvenient for rustic fingers and thumbs.

the sheriff had to make up the deficiency. We can imagine that he was careful what coin he received, and that he watched the skimming of the melting-pot with some anxiety. Then when his account was quit he was given a receipt. As often he could not read, written receipts were not used. What he got was a "tally", that is, a hazel stick with the amount marked on it in notches—a big bit cut out for each hundred pounds, smaller bits for the scores, lesser jags for the pounds, quite small ones for the shillings, mere cuts for the pence. Then the stick was split lengthwise through the marks, and the Exchequer kept one half and the sheriff the other. It was a perfect form of receipt, for if either side tried to falsify it, the two halves would not correspond when put together—and the stick showed which party had been cheating. Make a tally for yourself, and try to alter one half and you will see the fraud is at once revealed.

So the use of money spread from among the traders to the royal revenue, and thence into the country districts. Here it opened up new possibilities to the lord of the manor and his *customary*¹ tenants. "Serfs", said the lord, "were lazy and inefficient." "The lord's bailiff", said the serfs, "was harsh and exacting, and work on the lord's demesne always came at the most vexatious times." Money would offer to both sides a solution of the trouble. If the lord would only accept the *worth of a day's work* instead of the work itself, the serf who could pay would be willing to pay it; if the lord could hire someone with this money to do the work, he would get an efficient man, and be able to dismiss him if he were not efficient. Sometimes he hired men from outside, but of course he

¹ i.e. bound by custom to certain duties.

often hired some of his own serfs. Some men, richer than others, would prefer to pay and escape their services; others, less well off, would do their own services, and work on other days for pay. This *commutation* of service (that is, changing it for money) was an immense step forward. The man who pays is on the way to becoming free; he is still a serf in name, but he will soon come to think that he holds his cottage and his strips on the manor *by right of his payment*. He pays a "rent" for them; true it is a "*quit-rent*"—a rent paid in order to be quit of services—and not a competitive rent, that is to say a rent settled by the value of the land. He is the dim beginning of the small yeoman farmer. Again, the man who works for wages is also the type of a new class—the farm labourer. True in the main he, too, is still a serf, but in part he is free—free to work for wages or not, as he pleases.

This practice of commuting service grew rapidly in the thirteenth and fourteenth centuries, since it was convenient to both sides. Some services were still paid in labour, but the practice was decaying and serfdom with it. Nothing, however, was settled by law: the serf could not claim *the right* to pay instead of working. It was a custom which had grown up. The custom had, however, lasted long, and was becoming more and more general when a catastrophe came to interrupt it. But before pursuing this subject we must turn from country life to that of the towns.

CHAPTER VI

Towns and their Freedom—Merchant and
Craft Gilds

Of the eighty-two towns mentioned in *Domesday* many were no more than what we should call large villages. The inhabitants of these large villages were still mainly living on the land, cultivating strips for themselves and owing services to some lord or to the king, whichever of the two held the land on which the town was. London, York, Winchester, Bristol, Norwich, Southampton, Chester, and Lincoln had passed beyond the village state. Others again were betwixt and between, half urban and half rural. How universal the practice was of doing some agricultural work among almost all classes, is revealed by the long vacations of the universities and the law courts which set students and lawyers free in the summer, because work on the fields was then at its busiest and they were wanted at home.

As trade and commerce grew, the towns became more distinctly towns, where men worked at some business other than agriculture for a living. As they grew richer and more populous, the desire to be free from outside control, whether of some lord or of the king, became greater. They were, of course, much hampered by such restrictions. Apart from the work on the manor, the "lord" of the town could regulate trade, grant or refuse leave to hold markets or fairs, deal with fraudulent townfolk in the Court of the Manor, take tolls of various kinds, and generally make the town a source of revenue. As, however, money was well known in the towns, it was not

difficult to come to an arrangement with the lord. He would be willing to forgo his various rights, if he were paid enough. The only questions were, what would tempt him to come to a bargain, and who would be wealthy enough to guarantee the money. We need not suppose the lord would be exacting, but the revenue from a town represented a good round sum.

No doubt the expense of castle building, and the desire to keep up a fine household, tempted many to come to a bargain with their townsmen. A regular annual sum would save a great deal of trouble in the collection of the scattered dues. But what most gave the towns their chance was the Crusades. In William II and Henry I's reign many joined the Crusades; again, nearly a century later, Richard I took off a mass of English barons to the Holy Land. Everyone wanted money to fit himself out; those who came back had spent much, and would be anxious again to sell something to raise fresh supplies. Richard himself sold almost everything that was saleable. He declared he would have sold London itself if he could have found a bidder.¹ John was always in want of money, and so was Henry III, who was thriftless and unlucky in embarking on expensive and scatter-brained schemes for his brother Richard of Cornwall.² So, while barons and kings were sellers, towns had the chance to buy their freedom outright, and most of them took it. In return either for a sum down or a yearly payment they would get a charter declaring the town to be a *liber burgus*

¹ He did sell the Scottish homage.

² The Pope having quarrelled with the Emperor, promised the Empire to Richard of Cornwall. "I give you the moon: go and take it" was the comment of the time.

—a “free town”—and the townsmen who bore their share of the payment became the “free burgesses” of it.

They would strive, of course, to use their new freedom for the good of the town, but they had ideas and methods differing widely from those of to-day. They had no notions of the busy municipal enterprises which town councils undertake nowadays, such as lighting, paving, draining, housing, and general improving of conditions under which the inhabitants live. These they left practically untouched. On the other hand, they did try to regulate what town authorities of to-day never dream of touching: they set to work to *regulate trade*, and thereby to bring profit to the burgesses, those who were “free of the town”.

Usually the first step was the setting up of a *Merchant Guild* in the town, and the traders in the town would become members of it. The name “merchant” must not mislead us; it did not mean, as it does now, wholesale traders. It embraced anyone who bought materials and worked them up for sale: glovers, butchers, bakers, tanners, weavers, dyers, and so forth, were all merchants. This guild, which chose its own officers, made rules for the regulation of trade in the town. Some of these were framed to secure neighbourly behaviour among gildsmen, the helping of the sick, the keeping of peace, the management of gild meetings, and so on. A few laid down rules for the conduct of trade in a wholesome way. “Fresh fish” was only to be “cried” by the catcher, and not sold after sundown. Meat and fish markets were to be supervised by gild officers; butchers were not to smoke pork in the streets, nor to throw their offal into them—rudimentary sanitary rules which show what butchers of the time would

have done had they been allowed. But the great mass of rules were intended to secure advantages for the gildsmen against the "stranger" or "foreigner"—that is to say anyone who was not a gildsman.

Take, for example, the rules of the Merchant Guild of Southampton, and this exclusiveness becomes at once clear. No stranger could be a partner with a gildsman, nor could he buy anything a gildsman wished to buy. Retail trade was generally forbidden to a stranger. At Southampton he could not buy honey, salt herring, oil, millstones, leather or hides; nor could he sell wine save on days of fairs; nor could he buy more than five quarters of corn to sell by retail. The practice of "regrating", that is to say, buying in order to sell again in the same market of corn, meat, butter, and eggs, and most food, was always forbidden, at any rate till a late hour in the day, in order that the townsmen should have the first chance to buy what they required in open market. The breach of these rules might be punished by heavy fines, and in the case of a gildsman by "loss of the gild"—that is to say, expulsion—which would reduce him to the level of a "stranger".

Two or three points are worth further notice as illustrating the commercial ideas of the time.

Merchant guilds provided a way of collecting debts from distant and evasive traders. If a gildsman of, say, Exeter, owed money to a gildsman of Southampton and would not pay, formal notice would be sent to the defaulter's gild merchant. If that produced no effect, the Southampton gild merchant would proceed to seize the goods, or even the persons, of any Exeter gildsmen who might come into their city, to make good the debt. The same proceeding was used with "foreigners" in our sense of the

word, men from Bruges, Ghent, or Calais, who were defaulters. As all traders practically were in some gild or other—the individual having no rights and no position at all—this sense of *corporate unity* was used and developed in the most vigorous way. And no man could disregard it. We might suppose that a man from Flanders might snap his fingers at his creditors in England—till he returned there. Not at all; his own gild would be down on him at once, if by his dishonesty he got his brother guildsmen and his town discredited.

Another noteworthy point is the standard of commercial *morality*. People did not think of the rights of the individual, or dream that trade should be free. They were of opinion—and of their own time they were probably the best judges—that if the individual were left to himself he would indulge in tricks or sharp practice which might be to his profit, but which would damage everyone else. Nowadays in many respects it is *Caveat emptor*—"Let the buyer look out for himself". True there are laws against adulteration and false description of goods; you may not add water to milk or sell margarine as butter. But there is very little done to stop speculation which may raise the price to the consumer. There is nothing in the law to prevent a man or a trust "cornering" wheat, or meat, or bacon, or tea, or salt—that is to say, buying them up in order to create an artificial scarcity, in order to sell again at a higher price. We merely hope that with a universal free-trade system this would be impossible. But in the Middle Ages, where communication was so slow, it was very easy. Consequently every merchant gild was strong against "regrating", which was their name for speculative buying in order to make a profit

on resale. Opinion of the time held that no one had a right to profit by his brother's distresses: certainly not to create them.

The same idea comes out in the notions of the time about what we call *interest*, but what they called *usury*. There was at the time no field for investment; if you had money you could hoard it, or spend it, or buy goods to trade with it, but you could not invest it. There were no companies anxious to borrow money, and no banks to lend it. Hence the only borrower was a man in temporary distress, and it was held to be unchristian to ask for *usury* on what you lent him. You suffered no loss in lending; and if you got your money back you should not get a profit from his necessity. Hence a clear distinction was drawn between *partnership risks*, where you joined your money in a venture, and then could fairly take a profit if one was made, because you ran the risk of losing it if the venture failed; and *usury*, where you demanded interest *whether any profit had been made or not*. This was asking what Shakespeare calls "a breed for barren metal". Hence till much later all interest was regarded as *usury* and forbidden by law. Jews, of course, took it, but then they were not bound by Christian maxims: this was one of the reasons of their unpopularity, which was so great that they were all compelled to wear a special dress, and to live apart in a quarter of their own in each town. In the end Edward I expelled them all from the kingdom, and they were not permitted to return to England till Oliver Cromwell's time.

We may be tempted to think that these Merchant Gilds, which grew up in most towns in England¹ were narrow, cramping to trade, and therefore un-

¹ There was none in London.

popular. True they did cramp trade in that they looked to the *town* and not to the *nation*. But till Edward III's day the idea of *national* commerce as a whole was hardly grasped. It was every town for itself; hence the more oppressive the rules against strangers the better in the gildsman's eyes, so long as they did not keep him away altogether. If they excluded him from meddling in retail trade so much the better; townsmen could do that for themselves. If they so hampered him that he felt he must join the Gild himself, so much the better. He would join. It was not necessary generally to live in a town in order to belong to its Merchant Gild. But he would have to pay heavy fees on joining, and he would be under the Gild rules. Thus each town supported and favoured its Merchant Gild.

The Merchant Gilds have been sometimes described as if they were unions of wealthy men—capitalists—who tried to keep everything in their own hands and oppressed the artisans of the day; and it is added that the artisans formed "Craft Gilds" in their own defence. This is not historically true, at any rate of early days. The practice of union certainly went below the wide-embracing Merchant Gilds, and led the men of each craft or industry in each town to set up their own Craft Gild. But there was little quarrelling between these and the Merchant Gilds. Craftsmen would be, as a rule, members of the Merchant Gild as well as members of their own Craft Gild. These Craft Gilds only carried out more minutely, each for its own craft, the ideas of the Merchant Gild. Thus they too were exclusive; they prevented "strangers" from intruding on a craft unless they joined the Gild; they insisted on apprenticeship of seven years, so that anyone entering a craft should

know it thoroughly. They stopped trades from encroaching on each other: one craft made arrows and another bows; the leather work of a bridle was made by the saddlers, the metal work by the lorimers; cordwainers made shoes but might not patch, cobblers could cobble but not make. The Gilds had ideas of morality. They tried to prevent bad work, which would bring the Craft into disrepute: men might not work at night when "they came home drunk and frantick"; nor might smiths disturb their neighbours with "great fires" and noise; cloth was to be measured and certified; stretching it was forbidden, or weighting it with gums. Good material was to be used by skilful men, and the price was to be "fair"—fair, that is to say, to both worker and buyer.

It is interesting to contrast them with trade unions. Trade unions embrace artisans only, and in general regard employers as antagonists; the craftsman was both workman and (so far as he had apprentices or journeymen¹) employer. The trade unionist lives on wages and does not engage in retail trade; the craftsman had no wages and sold his own manufactures. Both hate "blacklegs", but the Craft Gild was of its own town and the Union is usually much wider. Both, of course, wish to do the best they can for their members; both provide in case of sickness, and act as friendly societies. But the trade unionist does not care for the quality of the work (so long as bad workmen do not lower the standard of wages), nor does he mind if the consumer suffers; the craftsman insisted on skilled honest work and a fair price. The trade unionist commonly strives to increase wages and shorten hours: the craftsman had hours in his own

¹ Working by the day (*journee*); apprentices who were out of their indentures and yet not set up for themselves as master craftsmen.

power; he could take it easy if he liked, but less work would mean less profit.

Such, then, are the characteristics of the beginnings of towns in England. Each bought its freedom by combination, protected its interests by combination, regulated its general trade by combination (in the Merchant Guild), and its special crafts by combination (in the Craft Guilds). The individual was no one; to become someone he had to join the brotherhood of townsmen or gildsmen; and this union secured him liberty to trade; not entire liberty it is true, but such liberty as the ideas of the time held to be wholesome.¹

CHAPTER VII

National Commercial Policy of the Fourteenth Century

So far we have spoken of commercial policy which was local. Each town had managed its commerce for itself, and the royal concern in it had only been shown in providing a coinage, in taxing—somewhat fitfully—trade at the ports, and in trying (without great success) to enforce a common standard of weights and measures. Towards the end of the thirteenth century, however, a step forward was taken. National commercial policy began.

Several things contributed to this. The growing influence of London began to affect all the other ports with the idea of doing as was done in London.

¹ It must not be assumed that the account given here is true of every town. But it represents the ordinary course of things in most towns.

London merchants could easily make their ideas heard at the Court, and kings found it wise sometimes to listen to what their London merchants said. Parliament had come into being; Simon de Montfort's plan of the Commons (1265) representing not only knights of the shire (landowners) but also the burgesses and citizens from borough and city, had been taken up by Edward I (1272-1307), who made it the established custom. These "Commons" particularly concerned themselves with trade and commerce. It was their chief care; in fact, sometimes later it seemed to be their only care, when to our ideas they might have been more usefully employed: for example, the Commons were busy tinkering with the "making of worsted", the prohibition of "barrelling rotten fish", and the discouraging of games such as "cloish, kayles, half-bowl and quekeboard" because they prevented men practising archery,—and this at the time when England was being torn in twain by the Wars of the Roses.

Yet more even than Parliament, Edward I himself was the inventor of a national commercial policy. He was a wide-minded man, with great ideas. He united Wales to England, and strove to join Scotland also, though Wallace and Bruce thwarted him. He cared much for English law; in fact, in a sense he is the father of it. And he could not put up with the petty complex regulations by which each town of the day sought to secure its own advantages.

Edward I gave us the beginning of national commercial policy at home by regulating and in some cases overriding the Merchant Gilds—reducing them more or less to one pattern. His grandson Edward III (1327-1377) carried on his work by setting up a national commercial policy as applied to *foreign*

commerce. Before this is described, perhaps it is as well to see what national commercial policy undertakes nowadays.

In a sense it is true to say that our national commercial policy is to have no such policy. We have Free Trade; it is in the main the policy of doing nothing. But this is not entirely true. A great deal is done to make the channels in which trade flows easy and clear. We have a good coinage, an excellent postal system, effective commercial law, uniform weights and measures, and good roads. Railways and canals we do not owe to the Government, but it regulates the rates which they charge for carriage. There is a mass of legislation, factory acts and the like, which aim at improving the condition of the worker. Outside the kingdom the Navy has cleared the seas of pirates, and the coastguard stops smuggling, shoals are buoyed and marked, lighthouses shine on the coast, "rules of the road" at sea enforced. In every foreign port we have British Consuls; a Briton who is oppressed abroad can be sure of help from his Government. We are willing to make by treaties what bargains we can with other nations to admit our goods; only, as we already admit other nations' goods without distinction, we have not any advantages further to offer them in return, and so cannot do much for our own merchants. The taxation that we have is intended to provide a revenue, and does not aim at fostering one industry or discouraging another.¹ In fact no preference is given to one kind of trade over another.

¹ Some trades are taxed from other considerations than the need of providing a revenue: e.g. it would not be for the good of the nation if spirits were cheap, though the increased consumption might bring in just as large a revenue with a lower duty.

To some extent we have the rudiments of this under the Edwards. Edward I was the founder of the Mint, putting an end to the local minting of money. He issued a new coinage to replace the old coinage which had got worn, and, as native coiners were unskilled, he employed men from Flanders—Easterlings—whose name we still recall when we speak of a pound “sterling”.¹ He took some pains to enforce a standard of weights and measures. The Statute of Winchester provided for the better keeping of the roads and the clearing away of the bands of robbers who infested them; where robbery and murder occurred and the criminal was not brought to justice, the whole district was liable to a fine; towns were to be walled, gates closed at sundown, and none allowed out o’ nights without a surety. The Statute of Acton Burnel provided a simpler means of collecting debts than through the Merchant Gilds. The royal tolls and dues at the ports were regulated and fixed at 2s. the tun on wine and 6*d.* in the pound on other goods (“tunnage and poundage”). The sovereignty of the *Narrow Seas* (the seas between England and the Continent) was claimed by England and tolerably enforced. Of course there was still a deal of piracy and disorder: a private fight among English, Gascon, Norman, and French seamen in 1293 led to a war between England and France. But the English claim to rule the Narrow Seas was admitted upon the whole by foreigners, and the fleet of the Cinque Ports was employed by the king against piratical raiders from the Netherlands and Norway. Edward III won our first great sea fight at Sluys (1340), and announced the news to his ten-

¹ Edward III began a gold coinage: nobles (6*s.* 8*d.*) and half-nobles were coined.

years-old son, the Black Prince, thus: "We would have you know that the number of ships, galleys, and great barges of our enemies amounted to 190, which were all taken except 24". The Admiralty was founded, and rules made for pay of all ranks, the conduct of the fleet, and so on. The relative consequence of the ports of the day may be judged from the ships provided for the Calais expedition: Fowey, 47; Yarmouth, 43; Dartmouth, 31; Plymouth, 26; London, 25; Bristol, 24; Sandwich, 22; Southampton, Dover, and Winchelsea, 21 apiece; Weymouth and Looe, 20; Lynn, 19; Newcastle, 17; Boston, 17; Hull, 16; the others 15 or less; Portsmouth only 5, and Cardiff and the Mersey 1 each.

But there were far wider efforts to create a national commercial policy than these—activities of all sorts which modern-day governments would never undertake. For instance, in 1314, provisions being dear, a Parliament held at Westminster dealt with the matter thus:—

"Because they say that oxen, cows, muttons, hogs, geese, hens, capons, chickens, pigeons and eggs were excessive dear: that the best oxen not fed with corn should be sold for 16s. and no more; and if he was fed with corn then 24s. at most: the best live cow for 12s.; a fat hog of two years old for 3s. 4d.; a fat wether or mutton unshorn for 20d., or shorn for 14d.¹; a fat goose for 2½d.; a fat capon for 2d.; a fat hen for 1d.; two chickens for 1d.; four pigeons for 1d., and 24 eggs for 1d. *And those that would not sell the things for these rates were to forfeit them to the king.*"²

But there was a great scarcity in this and the two

¹ The average weight of a fleece at the time was 2 oz.: wool, therefore, uncarded was worth 4s. the lb.

² The value of money was, as may be judged from these prices, much greater than it is now. It is interesting to compare relative prices then with prices now: e.g. is a live cow now worth more than ten shorn fat sheep; or less? and so on.

following years, and wheat rose to 30s.¹ a quarter: an order was made by Government that no wheat should be used for ale-making, which somewhat relieved the distress. Here is an illustration—by no means a rare one—of Parliament interfering to regulate the price of food, a thing never contemplated nowadays. We are told that these things are governed by the laws of supply and demand, and that Government interference would be simply mischievous. That was not the view of the fourteenth century; and certainly their regulations produced some effect, though it does not follow that the result was always what they expected.

Again, Edward III's reign displays a connected commercial policy with regard to *aliens*. The English trader of the time had no wish to exclude aliens altogether. It was aliens who brought wines and spices, furs, fine cloth, silver, and most of the luxuries of the day: if aliens did not bring them, probably they would not be brought at all; and besides, then there would be no buyers for English wool. Aliens were welcome then—if they were kept to their proper place. They were expected to stay not more than forty days in the country, not to engage in retail trade at all, and to spend the money they received for their goods in purchasing English wool or other goods for export. If they went back without spending the money they received, the country would soon be drained of silver and that would be disastrous. Here was an intelligible policy which was in force at the beginning of Edward III's reign.

Edward, however, did not take quite the same view as his English subjects. For two reasons he was more friendly to aliens than they. He was in a sense

¹ An almost incredible price; perhaps as much as £20 a quarter in our money. The price nowadays is about 34s.

the first of English free traders, in that *he wished to increase the volume of trade* and did not care much who carried it on. Further, he had a great mass of alien subjects. It was he who began the Hundred Years War with France, wherein we won the great battles of Crécy (1346) and Poitiers (1356), and so humbled France that in the Treaty of Bretigny (1360) she ceded us the Duchy of Aquitaine—a great mass of South-western France stretching from the Pyrenees almost to the Loire. Edward's war began with a claim on the French Crown, but he gave that up. Observe, however, what he gave it up for: for Aquitaine, which was the great wine-growing district of France; and for Calais and Ponthieu, which gave him an open door into Flanders, the seat of the wool industry. It was not empty glory: there were substantial commercial gains. War was one of the old ways of opening new markets.

Thus Edward III had a great mass of aliens who were his subjects; and even before the French War began, he granted complete liberty of buying and selling to all strangers, in spite of local charters. Provided they paid the ordinary taxes, they could stay as long as they pleased, live where they liked, deal as they pleased. This was distasteful to the English merchants, but they had to put up with it so long as the free-trading king was alive. When his grandson Richard II came to the throne they persuaded him to go back to the old system of restriction.

Again, in his dealings with the "staple", Edward sought to increase the volume of trade, without caring greatly into whose hands it fell. *Staple commodities* were the chief exports—wool, hides, leather, and tin. Wool, however, was so much the most important, since at the time England was by far the greatest

producer of wool in Europe, that *The Staple* generally means the wool trade and nothing besides. Englishmen could only weave the coarsest of cloth, so that a mass of wool to be made up into fine cloth and to be dyed bright colours went to Flanders. Till Edward I's day this trade in wool had been entirely in alien hands, but in his reign arose the English *Merchants of the Staple* who carried it overseas. It was obviously convenient that it should go to some settled place; there was less risk of piracy when there was only one route; and buyers would gather where the wool was known to be coming. Hence it was the practice to fix a *Staple* town—generally in Flanders—where merchants would go.

Edward III, however, again tried some original ideas. First he tried complete free trade: abolished the Staple altogether and let merchants go where they wished. This did not give satisfaction, so he next fixed the Staple at Bruges. The townsmen there tried to make a ring and exclude other buyers, so Edward then moved the Staple to England, setting up ten Staple towns in England, and encouraging alien merchants to come. Thus there would be plenty of buyers, the price would be good, and the alien would have the risk of transporting the goods overseas. This apparently was not satisfactory either, perhaps because it transferred the carrying trade to the alien; and so the Staple was once more sent oversea to Calais—an English town—where it remained for the last fourteen years of the reign.

Certainly there is nothing very consistent here; everything is tried in turn. But there is a distinct striving after a commercial policy. Something, the king thinks, must be best; it is not the highest wisdom merely to leave things alone; and in spite

of the protests of the local English merchants he made a number of experiments.

Another side of Edward III's commercial alertness is also connected with the wool trade. Troubles which arose between the Flemings and their Count led to the banishment of numbers of weavers from Ghent and Bruges. Edward brought over to England many of these refugees—weavers, fullers and dyers—protecting them against the jealousy of the native weavers and guildsmen, who tried to maltreat them. So the business of making fine cloth and of dyeing cloth was planted in England and flourished steadily.

Two familiar names may recall these aliens. The story goes that it was a Fleming, Thomas Blanket, who in 1340 started at Bristol the making of the blankets we call after him. Whether this be true or not, there is no doubt about the other instance. The traveller by rail from Norwich to Cromer passes a wayside station with the name, Worsted. Perhaps he may not know that here alien weavers first taught the making of worsteds¹, and the village gave its name to the material. He sees also a mass of huge churches all over Norfolk, absurdly too big for the present population: many of them were built when Norfolk was the great clothmaking district of England. This prosperity was begun by Edward III's immigrant Flemings. In these things Edward III—whom we are apt to regard merely as a warrior—interested himself in the commercial wellbeing of England. In more than one way he was a free trader, caring more for the volume of trade than the hands it was in, aiming at plenty and cheapness. These seem to many the best aims now. But England of the time

¹ Made of the hard yarn with the long slivers instead of the soft short-slivered "wool".

did not think so, and we shall see Edward's plans completely abandoned by his successors. Nor have we come to the end of disputes over commercial policy even to-day.

CHAPTER VIII

The Black Death

On 1 January, 1349, King Edward III wrote to the Bishop of Winchester informing him that the meeting of Parliament fixed for 19 January would be put off till the end of April because a pestilence had broken out at Westminster. Epidemics were not rare in those days, but there was good cause for anxiety, since, in the year before, all the Mediterranean coasts had been ravaged by a mysterious plague which had spread from China westwards to Russia, thence to Constantinople, and so along the trade routes to Genoa. It had reached the west of England in August 1348, and spread to Bristol and Gloucester within a month. By Christmas it had gone as far west as Bodmin, and had reached London eastwards. In March, 1349, the king wrote again, putting off the meeting of Parliament indefinitely, because the "deadly pestilence in Westminster and in the City of London" was increasing with extraordinary severity. Through the summer of 1349 it raged and spread, particularly in East Anglia. It was all over England by Michaelmas; Wales and Ireland were attacked; Scotland was devastated in 1350; no part of our islands escaped.

It is always difficult to realize statistics; and of course in the fourteenth century figures were often

guesses. But we have some means of knowing accurately how deadly the plague was. The chroniclers who speak of it all agree in the main about the disease itself. It was amazingly sudden; victims often died within twenty-four hours. It was as the king described it, "deadly"; even when the virulence of it was declining, half the cases ended fatally. In the first onrush of it few cases recovered. The symptoms—the swollen glands, the blotches, the livid spots on breast and back, the vomiting and spitting blood, the delirium of fever—identify it as "bubonic plague", still common at times in India and the East. But in comment on the chroniclers' statements of the numbers who perished, so that the living could scarce bury the dead, we are at first inclined to say "incredible". Yet when the evidence is examined their words are found to be true.

Take an instance: the manor of Hunstanton in Norfolk. You might walk round it in two or three hours; it was not very big nor very populous. It probably covered some 2000 acres, and the average number of tenants on the manor who died on it in an ordinary year would be four or five. *Tenants on the manor*, observe, as those are the only persons we know about, for the records of the Manor Court, held generally once a month, are careful to record the deaths of *tenants*; when a tenant died, his land and his services would pass to his heir; a fine would be paid by the heir, on receiving the little parcel of land. So the Court Rolls of the Manor note accurately the death of each tenant. Giles, son of William, has a wife and a family of fair-haired cheerful brats running round his cottage, but with wife and children the Court Rolls have no concern so long as Giles, tenant of the manor, is alive. See what happened in

Hunstanton in the year of dread 1349. Doubtless men's hearts were failing them for fear in the spring, but the plague had not yet reached East Anglia. In March, one death on the manor appears in the Court Rolls; it may have been the first plague case. Between 20 March and 25 April, when the next Court was held, five disputes were put down for hearing, involving 16 men as principals or witnesses. When the day of the Court came, *11 of the 16 were dead*. Death quits all scores. In the next month, out of 6 suitors 4 were dead. By October, 63 men and 15 women had been carried off; in eight months 172 tenants of the manor perished. Were there 172 tenants on this manor? Probably not. How, then, could 172 tenants die? Very simply indeed. Giles died and his son succeeded, and died; and his brother, and died. We soon reach the apparent impossibility that more tenants died than were on the manor.

Yet in some cases this explanation will not apply. Of the 172, 74 left no male heir, and 19 left *no blood relation at all* behind them. The whole household was mown down by the Black Death, and the land *escheated*—that is to say, went back to the lord of the manor. "Let their houses be desolate and no man to dwell in their tents."

Here is one example, but it is not an exception: what happened at Hunstanton happened elsewhere. At Croxton, since the last Court, 17 tenants dead, 8 without heirs; at Raynham, on the same date, but at the other end of the county, 18 tenants, 8 without heirs; at Hadeston, near Norwich, 70 in six months, 24 leaving no living soul to inherit. In that one year of 1349, 800 parishes in the diocese of Norwich lost their priests—83 of them twice, 10 of them three times. At the monastery of Heveringland,

prior and canons died to a man; not one escaped. At Hickling one canon survived. We have no *records* of the towns; only what the historians of the time tell us. But they relate the same tale—the churchyards choked with the dead, hastily buried in huge pits, the pile of corpses accumulating till the very level of the soil was raised feet above the ground outside; the shuddering victims gathered up in the streets, Death busy everywhere amid high and lowly, rich and poor. Everywhere the same story. In the London Gilds the officers die and their places are filled, and the successors die. The stewards of the estates die, and their work is often taken up by persons who can scarce write, and who are ignorant of the methods of the Manor Courts, as the ill-scrawled, clumsy entries show. The whole land was ravaged, town and country alike. Perhaps the plague fell hardest on the men; women, children, and old people seem to have had more chance of escape; but it was a puny chance. England emerged from the Black Death with the loss of certainly one-half, perhaps two-thirds, of her people; she was not to be as populous again till Elizabeth's day.

Into the terror and heartrending sorrow of the time no man may pry. But though there was fear there was no widespread panic or cowardice. Men died at their posts, and others took their places—and hoped—that the night would soon pass.

And after—when the dead were buried, the harvest that had been in many cases left to rot in the fields ploughed in, the seed sown, the empty cottages filled by strangers, the wandering cattle gathered, and the round of work begun again for a new lord—what then? Then were revealed the changes that the Black Death had wrought; and they were many.

CHAPTER IX

The Effects of the Black Death

Mention has already been made of the process called *commutation*, whereby the serfs on the manors began to exchange the services which they owed to their lords, for a payment of money. In the thirteenth and fourteenth centuries this had become general all over England. It would be untrue to say that no serfs still paid services, but there were certainly very few. Most had come to pay money instead, and they had paid it for so long that they had come to look upon it as a settled custom—almost as a right. This meant, of course, the growth of a class of wage-earners. The lords used the money to hire labourers to do the work the serfs had done. Often, as has been explained, they hired their own serfs; but often also they hired men who were not servile tenants of the manor. This meant the growth of a mass of free labourers who were dependent on wages. How far their freedom went is often not clear. Serfs who had commuted were “free” (perhaps) from services, but not free from the obligation of paying; others would be quite free—could come and go as they pleased, and take service with one master or another.

It is obvious enough at what rate the commutation fees would be fixed. Those who owed most services would pay most: a “three-day man” half as much again as a “two-day man”. Clearly the lord would not accept per day *less money than the worth of a day's labour*: equally clearly the serf would not pay much more; he might pay a little more in order to get his freedom (such as it was). But we shall not

be far wrong if we say that as a rule a day's work was commuted at the rate which the lord would have to pay a day labourer. Clearly, then, *if wages rise*, the lord will have made a bad bargain. What he has got in the past will no longer be enough to pay the increased wage. The Black Death stripped the men from the fields and paralysed the country. Seed was not sown; crops rotted ungathered; cattle were left untended. Famine always dogs the steps of pestilence; so in this case. Corn became scarce and prices went up. The poor man could no longer live at the same cost as before; he must get higher wages or starve.

Another cause besides the rise of prices helped this rise of wages. Labour was exceedingly scarce. So many men had died that every manor was denuded of "hands"; everywhere there was an outcry for labourers, and there were very few to be had. These few were then in a position to make good terms—to ask higher wages and to get them. No lords wished to pay higher wages, but if they refused, there would be no one to till the demesne land. Better pay what the labourer asked than lose everything. So up went wages.

A short time, however, was enough to show the lords that this rise in wages was likely to be ruinous if it lasted. At first sight we should suppose that, of all classes, the lords would lose least by the Black Death. The land, we argue, will remain, and its fertility; a harvest of grain has been lost while the Reaper Death has been busy, but next year's corn will grow again. Besides, have not the lords often gained? Have not many holdings *escheated* to the demesne through the deaths of tenants without heirs? Cannot the lords, then, afford to pay the higher

wages? This is partly reasonable, yet it loses sight of the prime fact that the wealth of an estate in those days lay not merely in its size and fertility, but in the *men and labour* available to work it. From the tenants dead without heirs neither labour nor money payments could come. Here was one great loss. Further, those who survived paid commutation fees that had been worth a day's labour, before the Black Death and famine brought the rise in wages. Hitherto a lord had commuted labour dues, *because with what he got in commutation fees he could hire the same amount of labour*. This was no longer possible. Wages had doubled and more. Women who had hitherto worked at *1d.* a day or less were asking *2d.*; men were getting *3d.* or more. Imagine the case of a man like the lord of Great Tew in Essex, whose tenants had formerly owed him 2000 days' service in winter and 580 in autumn—days which he had commuted at the old rates of $\frac{1}{2}d.$ and *1d.* Probably near half his tenants were dead or fled; and with what he got from the rest he would have to hire labourers now asking for *3d.* a day or more.¹ He

¹ Frame the budget of a lord of an imaginary manor before and after the Black Death, assuming that all his serfs were "two-day men" who had commuted at *1d.* per day.

<i>Before</i>	<i>After</i>
200 men owing 2 days per week commuted at <i>1d.</i> per day.	20 per cent of serfs dead without heirs: loss, therefore, of <i>4160d.</i> in week-work fees and of <i>400d.</i> in boon-work fees. = <i>4560d.</i>
200 × 2 × 52 ... 20800 <i>d.</i>	10 per cent of serfs fled: ∴ loss of <i>2280d.</i> Total direct loss, <i>6840d.</i> : nearly one-third of his income.
Each man owed say 10 boon days per year.	Remainder pay <i>17960d.</i> Labourer now, however, asks for <i>3d.</i> a day: consequently with it the lord can only hire 20 labourers for the year.
10 × 200 ... 4000 <i>d.</i>	Total loss, direct and indirect, amounts therefore to three-fourths of the value of his income from the commutation fees.
24800 <i>d.</i>	
This (assuming 300 days work to the year) will hire say 80 labourers for the year at <i>1d.</i> a day.	

would naturally say in despair, "Can nothing be done?"

From one lord to another the question echoed: and indeed one answer had been given in the Royal Proclamation of 1349, intended to remedy the troubles of the time: "whereas many, seeing the necessity of Masters and the great scarcity of servants, will not serve save for excessive wages, and are willing to begin idleness rather than by labour to get their living" . . . therefore every man *bond or free* under sixty "not having livelihood nor land of his own" should be bound to serve the employer who should require him to do so, at the rate of wages current in 1347; any who refused should be imprisoned, and any lord offering more should be fined treble. In our eyes this seems harsh and unreasonable. But it was not intended to be so. In the eyes of the time, the labourer who was asking for more wages was taking advantage of a calamity, turning other men's misfortunes to his own profit, like the usurer. Of course *if prices rose*, wages must rise too. But the Government did not intend prices to rise. Both in the Proclamation, and in the "Statute of Labourers", 1351, in which Parliament repeated and enlarged the Proclamation, rules were added to keep down prices—"all sellers of all manner of victuals shall sell for *a reasonable price*"; if they do not, they shall pay the double to the person overcharged. The argument was, if the greedy trader be kept back from asking too much, there is no need for wages to rise. It may be remembered that this regulation of price was nothing new: every Craft Gild habitually did it; the Government had repeatedly done it in the "Assizes of Bread and Ale", when it laid down prices for these two commodities.

But the whole scheme failed. It was too big; too difficult to get rules kept all over the country, especially at a time when all law and order was relaxed. Besides, too many people were interested in breaking it. Of course the labourers were; in fact, unless prices fell again—and they did not—obedience was impossible. Set men to choose between starvation and law-breaking, and there is no doubt what the choice will be. But the lords would not keep the Statute either. Of course they approved of it and would have liked it kept—but if the labourer would not work at the old wage the land would be untilled. Besides, to cut down prices of victuals did not much please the lords, who seldom bought them, but often sold corn or beasts. So there were always people tempted to break the Statute of Labourers, if they could, on the sly. And, doubtless, there were many honest, reasonable lords, who did not want to oppress their men. There always have been.

Parliament, however, and a mass of lords were obstinate and stuck to their guns. Fierce penalties were added to the Statute. The fines were given to the lords, to make them active in enforcing them. Runaways were imprisoned and branded with a hot iron; towns sheltering them were heavily fined. So the struggle developed into a fierce contest between “we cannot” and “we will make you”.

After 1350, then, begins for the time an active enmity between peasant and lord. The lord would like to enforce the Statute; he catches, fines and imprisons a few wretches; not many, for labour is scarce enough as it is. By and by he finds a remedy in turning his arable land over to sheep-farming, which only needs about one-sixth of the labour, and so gets the better of the labourer that

way. For sheep-farming he will want his land all in big pieces, so he drives off the customary tenants of the manor from their old bits of manor land. Employment gets scarce: the peasants who thought they had the game in their hands find they are no longer needed. A few particularly pig-headed lords try to exact the old services again, but men will not stand losing such freedom as they have won. The land is full of runaways, "sturdy beggars"—equally sturdy thieves too at times—and the whole of the old order begins to go by the board. Sullen hate pervades the countryside.

This was the combustible stuff to which Richard II's poll taxes set alight. The Government was unsuccessful and unpopular. The war with France, at first so prosperous, had turned to disaster; there were constant demands for money, and to all appearance nothing to show for it. Finally came poll taxes—taxes per head, and so badly graduated that the poor man was taxed proportionately much more than the rich. The labourer paid what was near a week's wages. So rebellion broke out in the home counties, in the East, the West, and the North. Masses of peasants gathered, burnt the manor houses to destroy the Court Rolls which held the records of the old serfdom, murdered unpopular lords, and moved on London. Wat Tyler and John Ball led the Kentish rioters with the maxim:

"When Adam dived and Eve span
Who was then the gentle man".

They stormed into London, murdered the Archbishop of Canterbury and the Treasurer, and sacked their houses. Richard got rid of the Essex rebels by fair promises, but wellnigh lost his life at Smithfield,

where he met the Kentishmen. Wat Tyler crowded in on the king; Walworth, Mayor of London, struck him down with his dagger; the rioters bent their bows to avenge their leader, when Richard saved the day by riding forward to them, crying: "Tyler was a traitor; I will be your leader." They believed his promises and dispersed peaceably. In the end, order was restored and the rioters got a sharp lesson, especially in the East, where a number were hanged.

So the "Peasant Revolt" ended without doing much. It did not destroy villeinage, for that had practically gone before; the peasants got some promises, but few of them were kept; it frightened the lords for the time; it led to a deal of wanton damage. In a sense it is the first struggle between Capital and Labour, but these modern terms are very misleading if we carry them back into old disputes. Really it was much more a struggle between *Custom* and *Cash*. The lords represented, and in some cases misrepresented, "Custom"—the old services, the old commutation fees, the old agrarian system, the established plan of regulating prices. The peasants represented "Cash"—the principle that a day's labour is worth what it will fetch; and from this point of view the victory was with the peasants, though they profited by it less than they expected.

CHAPTER X

Sheep and Wool

If a streamlet is dammed and turned from its accustomed channel, it is a little time before the water settles down to a new course. Some runs this way and some that; some filters back into the old bed. By degrees a new channel will be worn in the ground and the old one left dry.

This is what happened after the Black Death. Some of the peasants got back into their old work on the manors, paying their commutation fees, working on their own holdings part of the week, and doing hired service for the lord at other times. Some few even remained serfs; even so late as Elizabeth's day there were royal serfs whom she set free. Others of the peasants found by degrees new occupations and settled down in them. It is these new channels that we have next to trace.

After the Black Death the lords found themselves with more land and less labour; even had they been willing to pay the new rate of wages it is not clear that there was labour enough to go round. The problem for them was to do with less labour. Two solutions were found, both of great consequence in the history of rural England.

The first was the practice of letting land on what was called the "Stock-and-Land" leases; that is to say, a lord would let a bit of land with the stock on it as a *going concern* to a tenant. Working it was then the tenant's business. He had to find the labour. Most of these tenants were poor—"small men" as we say, who could not afford the money

to stock their farm. Hence the lord supplied the beasts, horses, oxen, pigs, sheep, and the ploughs and implements, and the tenant paid a rent for them. Very often if the beasts died—especially when through some cattle plague the deaths were heavy—the lord undertook to replace them. Ordinary losses the tenant made up for himself. The plan suited the lords because they got rid of land lying idle, and had not the tiresome task of finding labour to till it. The tenant, having a small holding, did the work himself with aid from his family. Working for himself he took pains; and the crops were heavier, the stock better cared for, and the yield larger, the profits greater. By and by when labour gets more profitable he may take more land and employ a man or two to work for him. But he works himself also, and prospers.

Here we have the beginnings of two important things. We have the triple division into landlord (who takes rent), farmer (who pays rent and takes profit), and labourer (who takes wages). This is the modern system. But notice further that the farmer is the beginning of the kind we call the *yeoman farmer*; a “small man”, working much himself, and giving his own care to everything. Later he may buy the land if he grows rich enough, or at any rate he and his heirs will have been so long “on the manor” that they will be in some sense considered owners of their property. Their names are inscribed on the Manor Roll, and a copy of it becomes their title; they are “copyholders”. The yeoman farmers were a sturdy and prosperous class, and were for long the backbone of England. Politicians are trying to revive them again, but it is harder to create than to destroy. Observe, again, the “rent”: a payment

made, and land let in return for payment, but quite different from the old rents. The serfs who had commuted, paid and held land, but their payment was a *quit-rent*; it was a payment to be "quit" of service. It had nothing to do with the value of the land. It depended on the amount of the service that had been due. A very degraded serf would likely have a very small holding and owe a lot of labour—three days a week perhaps. His *quit-rent* will be high though the land he has is worth very little. But this new rent which the stock-and-land man pays depends on the value of the *stock* and *land*. By and by as the stock is bought, or replaced by the tenant's own, it will depend on the *land only*. Here we get the modern "competitive" rent, where what the tenant pays for is the relative fertility of his piece of land compared with other land in the neighbourhood.

Still, as has been seen, this plan was not the general one. Most lords preferred to turn to sheep-farming, because pasture land takes much less labour than arable. That had far-reaching effects too.

Put yourself in the position of a lord walking round an estate with his bailiff to see what may be done to start a sheep-farm. He has before him an extent of almost hedgeless arable land. The big village fields have hedges, and perhaps he has cut a big field for himself out of the "waste", but many of the different patches belonging to him and the tenants lie all jumbled together, only separated by little baulks of unploughed land. Some of the strips are cultivated; others, from shortage of labour, lying untilled. What is to be done? Well, if his demesne land lie all in a piece, that can be turned over to pasture: but strips here and patches there are no good; it would cost a fortune to fence them. If only the tenants could be

moved, then all the rest could be used. Accordingly he goes to Noakes, and Stoakes, and Stiles, and Brown, &c., tenants on the manor, and suggests that he will give them holdings all in a piece, compact, in exchange for their scattered ones. If they agree, as they probably will, he can enclose the rest, put a hedge round it, and keep sheep thereon.

So he does, and as the price of wool is high he makes a good thing of it; he keeps a few shepherds, whom he gets easily, and all seems well. Noakes and the rest benefit too in one way: they need not waste so much time walking from one plot to another, and there will be fewer quarrels about attempting to steal a yard or two of land by running a plough at night. Having their land in one piece they can till it better and manure it better and get heavier crops. But as the lord now hardly wants their labour they will miss the wages he used to pay when his manor fields were in corn, and they will drop a curse or two about this new-fangled sheep-farming, which brings *them* no money.

Sheep-farming, however, is so profitable that the lord will soon want more land. He will cast an eye on the open "waste" of the manor, where the tenants' cattle and his wander. Some of that would make admirable pasture, and he "encloses" a bit, or if he is greedy, the whole. There is nothing to stop him. True, these customary tenants have been used to pasture cattle there for centuries, but they have no *right* to it; at any rate the law courts do not recognize any right. So away go the village beasts, or anyhow are driven off the best of the pasture; and that goes under sheep too. But there is a further temptation, at any rate to the bad lord. Why, he asks himself, keep Noakes & Co. at all? They pay these wretched com-

mutation fees, now less than half what he thinks they ought to pay. If they were pushed out, all the manor could be in pasture, and a clean sweep made. So in the end he makes a clean sweep. When Noakes dies he refuses to regrant the holding to young Noakes; so with the rest, and off they go, grumbling, no doubt, furiously.

Here, then, is the process of "depopulation" and "enclosure" which went on over many parts of England¹ during the fifteenth and sixteenth centuries. It produced a great deal of wool, and the sheep-farmers grew rich. On the other hand there were many peasants turned out to find other employment, and there was much hardship. The country houses "decayed" too. There was no longer inducement to live on a remote sheep-farm, for there was nothing to eat, and the money profit could be sent to the lord if he wished to live elsewhere. That meant more loss of employment: there is always a lot of work round a big house in the garden, the kitchen, the fishponds, the woods, and the stables. When the great house lay empty, that vanished. So the versifier who wrote in Elizabeth's reign was not far wrong when he said:

"Sheep have eat up our meadows and our downes
 Our corn, our wood, whole villages and townes
 Yea, they have eat up many wealthy men
 Besides widowes and orphan childeren
 Besides our statutes and our iron lawes
 Which they have swallowed down into their maws
 Till now I thought the proverb did but jeste
 Which said a black sheep was a biting beast."

We may be tempted to say of this depopulation

¹ Suffolk, Essex, Hertford, Kent, Worcester, were mainly "enclosed"; Shropshire, Leicester, Northants, Norfolk, mostly. York, Derby, Lincoln, Hereford, Gloucester, Oxford, Berkshire, Bucks, and Bedfordshire hardly touched. In the rest more or less enclosing was done, but not to a very marked extent.

that it was hard, unjust, and bad. But let us think before we apply epithets. *Hard* it may be, yet notice it is exactly in accord with our modern principle of Free Trade. It is using the land for the purpose for which it is best suited—if we judge by money. We do not protect our corn-growers now from competition abroad, and presumably we should not protect them from sheep-farmers at home. It was not *unjust*, in the eyes of the law at any rate, if we take our ideas of justice from that. Perhaps we may say that there was a custom between lord and tenant which ought to have been binding, even if it was not. But notice again that neither side had kept it fully. The serf had owed labour, and the lord had given land in return. Both parties had agreed to the bargain from year to year of commutation. But if the bargain was off, it was off for both sides. *Bad*, that a country should lose employment and destroy its rural population, the best and strongest of its men? It would seem so; but hesitate again before you say “yes”, for this is the very thing that has happened, and is happening in Britain to-day. The people from the country are getting steadily drained away, some to the towns, some to the colonies. And it is often accepted as inevitable.¹

But Parliament of the fifteenth and sixteenth century did not so accept it. To lose the men who were the backbone of England, her nursery of soldiers; to have the country growing desolate; to have corn, the food of the people, needlessly dear; to have people thrown out of work, “so discouraged with misery and

¹ It has been the habit even to accept Emigration—often of our best men—as a remedy (!) for social distress, much as physicians at one time prescribed bleeding for their patients. Opinion is changing in politics, however, as it has long since changed in medicine.

poverty that they fall daily to thefts and robbery or pitifully die for hunger or cold"¹: all this seemed disastrous. So Parliament tried to check the depopulation. The holding of many farms in one hand was forbidden; houses "decayed" were to be rebuilt; no one was to keep more than 2000 sheep; where land was "depopulated", one half was to be forfeit to the king; new owners of estates (and there were many of these when in Henry VIII's reign the monasteries were broken up and their land given to friends of the king) were to keep as much land under plough as formerly, and to build good houses. Doubtless these laws which come often in the fifteenth and early sixteenth century did something, but they were not very effective; perhaps the Justices of the Peace, living in the country and themselves interested in sheep-farming, did not enforce them very actively.

So the sheep-farming led often to the driving off of the customary tenant—descendant of the old serfs—because he was no longer wanted. He got complete freedom but he lost his land, and often his occupation. What became of him we shall see in the next chapter.

CHAPTER XI

New Methods and New Industries—The Cloth Trade—The Breaking-up of the Gilds

When work is short in the countryside, men drift into the towns; so it was with those who were turned out by the sheep-farming. The usual town employments would absorb some of them, though they would

¹ Preamble to a Statute of 1534.

find difficulties in entering some trades. They were not members of the Craft Gilds, nor had they served an apprenticeship. They would not be welcome in places where an exclusive policy was still followed. Luckily, however, one trade in England at this time was expanding rapidly, and could absorb more labour, without being hampered by the Gild system. This was the business of manufacturing wool into cloth.

How Edward III encouraged the immigrant weavers from Flanders has been already told. They continued to come, and taught the mysteries of the manufacture of fine cloth with different processes of carding, spinning, weaving, fulling, and dyeing. As immigrants they were not popular, but the Crown steadily protected them from the native townsmen, and they were exempt from Gild rules. Thus the clothmaking business developed on new lines. It generally avoided the old towns where restrictions were in force, and settled in villages; it was not managed by Craft Gilds; the weavers did not usually sell their products straight to the consumer, but to a middleman, a "clothier". This clothier became the pivot of the industry. Sometimes he supplied the wool, which was spun; mostly by women folk¹ in the cottages; the weaver wove at his loom in his cottage; when the cloth was woven the clothier bought it, and sent it on to its other processes. Thus he became a sort of employer, and in a short time a *wages system* began. Instead of buying the product from the combers, carders, spinners, weavers, fullers and dyers, the clothier paid them wages, and generally they were paid by the piece. Each worked at home, at such hours as suited him, getting no

¹ Hence the term "spinster" in its modern sense, though the word is by origin masculine: compare "webster" (a weaver).

doubt a deal of help from his womenkind, but having regular work, and not taking any of the risks of the market. To find a purchaser was the clothier's business.

Into this wool manufacture went many of those who had lost their land or could find no work in the country. It is plain that the trade was expanding rapidly. The export of cloth rose from 5000 pieces a year in 1354 to 80,000 pieces in 1509, and 120,000 pieces forty years later; while the export of wool declined. The duties on exported wool fell from £68,000 in Edward III's reign to £12,000 in Henry VI's. The Drapers Company, who had a monopoly of the sale of cloth in London, became very rich and powerful. The Merchant Adventurers were incorporated in order to trade in English cloth with the Continent. In 1496 Henry VII obtained leave by treaty to export cloth to Flanders, the old home of the industry, good evidence that by his reign we could make cloth at least as well as the foreigner. All this shows how vigorous the trade was, and the Government took pains to encourage it. Import of foreign cloth was checked; a very high duty placed on the export of wool (the raw material), while the duty on cloth (the finished product) was kept low. The trade was finding work for men in England when work would otherwise have been scarce, and the Government wished it to grow, and find more work. So it gave what help it could.

It is probably true to say that upon the whole the artisan in the fifteenth¹ and early sixteenth century was well off. Certainly wages were pretty steadily rising,¹ and the *standard of comfort* was rising too.

¹ Carpenters' wages, for example, rose from 4½d. a day in 1405 to 6d. a day in 1485; say from 24s. to 30s. the week in our money.

Men lived better, were better fed, and had more comforts. But even allowing for that, the current rates of wages were enough to leave a fair margin of saving. We cannot, however, be very sure, because we do not know for certain how constant employment was, nor even how many days in the year men worked. Besides Sundays, all Saints' days and feasts of the Church were days on which work was forbidden, and on the eve of these holy days only half a day's work was done. Very likely the working man's year was not more than 260 days; perhaps even less. So even if wages were good, he often was earning nothing. Those who did piece-work in their homes—weavers and the rest—could probably do fairly well if they were industrious; but this system of working in cottages—generally known as the domestic system—has certain evils about it. The weaver pleased himself, but as weaving was a faster process than spinning and preparing the yarn, he would tend to press the spinners to work very long hours. Clothiers, too, would be in a position to beat down those that they employed in the matter of wages, since the workers were not combined in a guild, and had little power to bargain. Here we get the beginning of a trade left more or less unregulated save by competition. In one thing the Government did interfere. They tried to prevent clothiers employing a mass of weavers in one building; one clothier at Newbury had 100 looms at work in his house, and another bought Malmesbury Abbey after the monks had been ejected, and filled part of it with looms. But the "Weavers Act" of 1555 forbade these *factories*, at the request of the weavers.

It is likewise difficult to estimate the conditions in which the workers lived. As the weaving business

was widely scattered through the country,¹ men at any rate had fresh air round them, though their houses were often what we should call insanitary. Often they would have a garden, or a bit of land to grow a little corn. In the towns a better type of house was being built. The old timber-framed houses were being replaced by stone and even by brick, though brick was still dear in the middle of the fifteenth century.² Upper chambers called *solars*, and used for sleeping rooms, had been added to the old single-roomed type: these were reached by an outside staircase. Goods were displayed in a booth outside, and stored by night in the cellar. In the fifteenth century richer men began to have *parlours*—rooms where the merchant might talk business with customers. Glass was getting common, but chimneys were still the luxury of the rich, especially where stone was scarce. It was not till bricks became reasonably cheap that chimneys became common. Wood was the usual fuel, coal being burnt in the North and in some ports (“sea-coal”). The streets were narrow, usually overhung by the old timbered houses which always suggest to our minds the idea that they must topple forward, until we remember that they overhung as much at the back as in front, and so were balanced. Huge creaking signboards swung 9 feet up,³ and in windy weather often fell with a crash. There were no footpaths, but the road sloped down on either side to the *kennels* (canals) which drained off the rain and filth. Up to

¹ The Eastern counties, Norfolk in particular, had most. But there was a good deal in Yorkshire, in the Midlands round Coventry, in Surrey, and in the West round Gloucester, Bristol, and Stroud.

² The best-known brick building of the time is Henry VI's foundation of Eton College.

³ To leave space for a man to ride.

the fourteenth century, pigs wandered in the streets of London, scavenging, but were now forbidden. Anyone finding a pig loose in the street could kill it, but the owner had the right to buy the carcass at 4*d.*

Besides the activity in clothmaking, there was much employment for all connected with building: many of the best parish churches were built or rebuilt about this time, and the earliest of the great country houses; the fighting men kept the harness-makers and the armourers at work; and the catalogue¹ of things of which the import was forbidden by Edward IV "because artificers cannot live by their mysteries as of old" shows what England was making. But three big industries of to-day were hardly, so to speak, in their cradles. Besides brickmaking, where our backwardness has already been mentioned, we did not use our iron, or our salt, or to any great extent our coal. Iron mostly came from Northern Spain² or Sweden, and cost in the fourteenth century £9³ a ton: our native product was scanty and bad, and the dearness of iron meant among other things shallow ploughing and poor crops. The rock salt of Cheshire, well known to the Romans, was not worked, salt being chiefly got from evaporation of sea water or salt springs, or imported from France. Coal was dug where it cropped out, but there was not much use of it, save close to the seams: it could not be burned in houses which had no chimneys.

A word or two may be added about the towns in

¹ Among others woollen caps, woollen cloth, laces, ribbands, fringes of silk thread, silk twined, silk embroidered, saddles, stirrups, saddlery, spurs, grid-irons, locks, tongs, dice, tennis balls, gloves, girdles, latten steel, anything wrought of tanned leather, shoes, razors, sheaths, cards, pins, needles, candlesticks, ladles, skimmers, ewers, hats, brushes, white wire.

² From Bilbao. Hence the name "bilbo" for a sword blade.

³ £90 a ton at least in modern prices.

the fifteenth century. We have two facts apparently contradictory. There is the "depopulation" of the country, following on the sheep-farming, that is to say a decline in the rural population. At the same time there is complaint that the towns are decaying: repeatedly "poor towns desolate, wasted or destroyed or greatly overcharged in taxes", are permitted by Parliament to pay only half of the tax. Plainly there must have been good cause: they would not be excused merely because they prayed to be. Perhaps in some towns there were special reasons: some of the ports had been raided by the French; the port of Yarmouth had been ruined by a heavy storm, and so on. But the exempted are so widely scattered that there must have been some general cause. Yet it seems odd that both towns and country are said to be decaying at the same time.

The fact appears to be that in most cases it was the older towns which were decaying and new ones springing up in their place; and the men from the country went to the new towns, because they were less hampered by restrictions. The day of the Gilds was beginning to pass away. They became more narrow; there was some quarrelling between the master craftsmen, who did not like competition, and the "journeymen",¹ who wanted to rise to be master craftsmen. Other Gilds were falling more and more into the hands of the wealthier men, men who were dealers and not producers. To be "*of the craft and in the clothing*" was expensive; entrance fees, and the livery itself cost money. So the poorer craftsmen were tempted to leave the towns. After the Wars of the Roses were over, the Tudor kings kept good order in the country, and it was no longer so needful

¹ Workers by the day (*journde*).

to live behind a stout town wall. So the newer unwalled villages grew into towns, and the older walled towns felt the competition and began to decay. Manchester, Birmingham, and Sheffield began to grow about this time, types of the new industrial cities.

So the Gilds became less useful and less vigorous, and as they were still rich they offered a tempting prize to plunder. After Henry VIII's Reformation an excuse was not difficult to find. A good deal of the property which the Gilds held was devoted to religious or half-religious purposes. Money or land had been left by pious gildsmen to found a charity in their memory, or to pay a priest to say mass for their souls; there were bequests for alms and charities; most Gilds had a patron saint, and celebrated his day with a procession, a religious play, or something of the sort. After the monasteries had been forfeited, the Gilds and Chantries were next attacked, and their property (so far as it was devoted to religious purposes) confiscated.¹ This helped their decline; they were less wanted, and they became much less rich, so they faded gradually into obscurity. Nowadays they are picturesque survivals of old days, dignified, charitable, and often convivial, but they have long ceased to influence trade. Yet, as will be shown in a later chapter, their decay was much felt at the time, and helped to increase the distress and disorder which Elizabeth had to remedy.

¹ Except the London Gilds: too powerful for the Government to touch.

CHAPTER XII

The Tudors and the Policy of Power

So far it has been possible to tell the story of the land and the industries of England without much reference to its political history. We have only traced what are called the economic results of political events, such as the consequence of the Norman Conquest upon the cultivators of the soil, and the friendliness between English and Flemish traders which came from the Hundred Years War. Events like Edward I's wars with Scotland, or the deposing of Richard II, or the Wars of the Roses, we have not touched, because they did not much affect the industry and trade of the country. But in Tudor times we come upon a mass of things which cannot be so set aside. They are important economically as well as politically; that is to say, they touch the people as much as Court, King, and Parliament.

Briefly we must notice:—

First, that with the Tudors came the beginnings of *peace at home*. The storm of the Wars of the Roses was over; the barons were tamed, and for the future gunpowder and cannon would keep them tame. The old castles were useless against artillery, and their place was taken by great unfortified country houses. People no longer needed to dwell in walled towns; life became safer, and consequently trade and industry grew less fettered. There were, indeed, rebellious and disturbed districts. War and plundering still went on on the Marches of England and Scotland till Elizabeth's day; and Henry VIII, Edward VI, Mary, and Elizabeth had rebellions to deal with.

But these were brief and increasingly hopeless. There were no more of the hideous years of disorder of the Wars of the Roses.

Secondly, the new factors, new conditions of history, which began with the Tudors were extremely important. To begin with, Columbus sailed to the New World of America in 1492, and in 1498 the way round the Cape of Good Hope, found by the Portuguese Vasco da Gama, began to open the sea route to the East. The share England took in exploration will be told later; now we only have to notice the effect of the discoveries. They opened *the New World* for all, but especially to those countries *situated on the Atlantic*.¹ Hitherto, trade with the East had come overland or by the inland seas. The Mediterranean had been the highway, and the Mediterranean ports busy and rich. Now, however, things began to change. England, for so long, as it were, up a back street, was now on the front. Mediterranean ports began to decline, Atlantic and Channel ports to flourish; and England has the best of these.²

So England became a sea power. Men from Plymouth, Dartmouth, Bideford, and Bristol imbibed that knowledge of the sea that was to foil the Armada and to found Great Britain. And just as she was having her eyes turned oversea, her old enmity with France came—for a time—to an end.³

¹ The Greeks called an inland sea *Thalassa* and an ocean *Oceanus*. Hence historians describe this change by saying "commerce passed from the *Thalassic* stage into the *Oceanic*".

² Spain has no really good port on the Atlantic, and Portugal only Lisbon, which is not very good. France had no good ports on the west or on the Channel, and those that she has made the best of cannot be compared to the English ports. "The sea hates France," said an eminent Frenchman: it certainly has not been kind to her.

³ Calais, our last town in France, was taken from us in Mary's reign.

England no longer tried to conquer French territory, and in the main under the Tudors there was an alliance between England and France. We were ceasing to be a military nation just while we were becoming a maritime nation. That was valuable; we had not too many irons in the fire.

Thirdly, with the Tudors came the *Reformation in religion*. At first sight that does not seem likely to touch trade at all; but it did indirectly. When we ended our enmity with France we soon began a new enmity with Spain; and the beginnings of this enmity came from a quarrel over religion. Henry VIII divorced his Spanish wife, and in so doing began the Reformation. Spain was the great Catholic nation; thus the two powers found themselves on opposite sides. The easiest way to attack Spain was to plunder her settlements in the New World. So went out Hawkins and Drake, half for plunder, half for faith, partly slave traders, partly sailors of the queen, with a dash of the pirate mingled with a dash of the Crusader; and they began the British Empire.

Leaving these things to a later chapter, our business now is to grasp the Tudor ideas on commercial policy. They were very definite, and they lasted a long time; so they had great influence. Even till the coming of free trade in the nineteenth century England was in some degrees swayed by these Tudor ideas.

What the Tudors and their statesmen looked for was that the nation should be strong. They did not aim at wealth, or size, or a great volume of trade, or at cheapness, but at *power*: they did not care for the interests of any man if they felt that his interests were against the national interest; and the first national interest—in their eyes—was to be strong.

All their policy was shaped to this end. It is true

that the Tudor kings did not invent it. The beginnings of it are found under the Lancastrian kings and even in Richard II's day. It may be taken as the national reaction against that policy of Edward III which encouraged the alien and aimed at cheapness. But the Tudors framed the policy and made it consistent. We will study it under four aspects—the Navy, the Land, Trade, and Money.

The Navy.—All Englishmen, nowadays, recognize the worth of a navy. The Tudor method of securing one was to encourage shipping. Thus there would be plenty of sailors and plenty of merchant ships, which could be armed and used for fighting if necessary. So they not only built some royal ships, larger and better than the old,¹ but they took pains to foster shipping by *Navigation Acts*.² These laid down that none but English ships were to be used for our foreign trade, that goods coming to England or leaving the realm were to be shipped in English bottoms. Pilots were given a charter and the Trinity House established, piers built, ports restored, buoys and sea marks erected. Government was not afraid to do the thing thoroughly: oaks were to be planted, flax and hemp to be grown, so that material should not be scarce. Fishermen were encouraged; and when, after the Reformation, people no longer kept fasts and there was danger that the fishing should suffer, people were still bidden by law to eat fish on Fridays, "so that the Fishers should be set on work". Here was the nursery for the Navy.

So, too, with the *Land*. The labourers and farmers

¹ Henry VII's *Grace à Dieu* was the *Dreadnought* of the day: 1000 tons burthen, with 70 guns and 700 crew.

² The most renowned act is that of 1651, sometimes mistakenly described as *the Navigation Act*. But such acts are far older: the first dates from 1381.

were the backbone of the country and made the best soldiers. Besides, it would be disastrous if in time of war we had to depend on corn from abroad. Hence Parliament encouraged the growing of plenty of corn. Foreign corn was taxed, unless the price at home was high; and if the price at home was very low, corn might be exported. This plan, of course, kept the price of corn up, but it did not drive it very high. It encouraged the home grower to grow plenty, because the price was generally good, and if it fell low he could send it abroad. If corn-growing were profitable, there would be a vigorous and prosperous country population; and this, it was felt, was a greater benefit to the country than mere cheapness at the risk of danger.

So with *Trade* also. The object here was to keep the alien from doing things which the Englishman could do; hence protective statutes such as that of 1463.¹ Observe that the articles excluded are all manufactured articles: if they were made at home, they would give work at home. Raw materials were not taxed but encouraged, because they meant work. The importing of raw silk was favoured because we could not produce raw silk; but the export of raw wool was discouraged because we could make that up into cloth. Parliament looked at trades from this point of view: they were *good* if they meant more work in the country, and *bad* if they lessened the amount of work. Nowadays we say that trade is good if there is a great volume of it, without regarding its nature. But Tudor statesmen did not agree with this. Some trades might be harmful to the country, and if so they were bad, even though they were profitable to the individual traders. So again

¹ See p. 73, note.

they strove to plant new trades, and though generally they disliked aliens, they favoured those who came bringing a new trade with them. Most trades in those days depended on skill of the workers and knowledge of processes—"trade secrets"—and aliens brought this skill and knowledge. Again, the statesmen tried to distinguish between what they called "thrifty goods" and what they called "unthrifty goods"—roughly between useful things and pure luxuries—and they discouraged the latter. Luxuries, unsubstantial things, things you could easily do without, were described as "half-pennie cockhorses", and the Government tried to discourage them, and encourage "thrifty goods"—things you really needed.¹

Finally, with regard to *Money*, they wished to keep a good supply in the country, for gold and silver was, in their eyes, the readiest and easiest source of power. At first they tried to prevent the sending out of gold and silver, and to lay down that aliens who came to sell should also buy, and not take their gains with them in coin or bullion. They thought that, so, money would come in, and if they checked it going out, the amount in the country would be always growing. But this plan was found not to work well. It was easy to smuggle money out, and hard to catch the smugglers. Besides, some trades could not do without exporting gold or silver, for example, trade to the East, where we had little to sell that the natives wanted to buy.² So a new way of getting the old object was hit upon. It was to attend to what was called the Balance of Trade. It was argued that if

¹ Even games were disliked by Parliament because they diverted people from archery, which was useful. The Tudors would have legislated against Football Leagues in favour of the Territorials, and certainly have prohibited illustrated papers and magazines as unthrifty.

² It is no use sending warm cloth to the dwellers in hot countries.

a man sold more than he bought he grew rich, and that a nation would do the same. Therefore all that was necessary, they said, was to encourage exports and discourage imports. The balance would have to be paid in *money*, and so the country would grow rich.¹

Here, then, we get a rough principle in the ideas of the time, that the *exporter was a friend to his country and the importer an enemy*, but one or two exceptions were made. Import of raw material was good; we could not produce it at home, and the finished goods could be exported for more than the raw material had cost, so there would be a net gain. Again, though export generally was laudable, yet export of raw material was bad, because it might have been made up at home, and so there was a loss. Further, export of money to the Eastern trade was not bad, because the merchants could sell much of their Eastern merchandise again to the foreigner *for more than they paid for it*, and so the money would be replaced.

This idea about the Balance of Trade is later than the Tudors. It belongs to the seventeenth and even the eighteenth centuries, but it came logically from the Tudor ideas. It is the key of what is called the *Mercantile System*, which governed English policy for so long. A fairly full account of the policy has been given, because it is an example of a *logical* system of Protection. Men knew what they wanted, took means to get it, and thought their means were successful. They wished to make Englishmen vigorous and England strong. Whether they did so or not, or whether

¹ The political economist of to-day would add that if the quantity of money in the country increased, prices would rise: people would so be encouraged to come and *sell* more here, but to buy less, and so the Balance of Trade would be turned the other way again, for imports would rise and exports decline. This was hardly perceived by the men of the day.

what occurred was in any way a result of what they did, is another question. Certainly the history of the sixteenth, seventeenth, and eighteenth centuries go to show that England was strong: the beating off of the Armada, the making of the British Empire, the overthrow of Napoleon, bear witness to that. But we cannot be sure; we can only be on our guard against hastily dismissing old ideas as necessarily worthless because they are old, or on the other hand assuming that what is good for one age must be equally good for another.

CHAPTER XIII

Distress and Troubles—The Dissolution of the Monasteries—The Coinage

PART I

The Tudor ideas for the conduct of trade have been explained. The time, however, is not remarkable for any great novelties in industry itself. The one important exception is the coming of a mass of aliens from Flanders, and to a less degree from France, during Elizabeth's reign. Religious persecutions drove them from their homes—the cruelty of Alva and the Spanish soldiers who were trying to subdue the Protestant revolt in the Low Countries, and the ill-treatment of the Huguenots in France, coming to a head in the famous massacre of St. Bartholomew in 1572. As these immigrants were Protestants they were, on the whole, well received in England, all the more since they often brought new trades. Thus Walloons from Flanders brought the making of paper

and silk to Sandwich; various new kinds of fine cloths—"baves, sayes, arras, and mockados"—were made in Norwich and East Anglia by the four thousand Netherlanders who settled there; the thread industry was set up at Maidstone; lace-making brought into Buckinghamshire and Devonshire (Honiton), and other new "mysteries". In farming, the new "enclosed" farms were teaching men the value of manuring, and attending to the soil; sand, lime, seaweed, and the sweepings of the London streets were all used. The chief novelty was the increasing use of hops for brewing beer.

"Hops, Reformation, Bays and Beer,
Came into England all in one year"

says the rhyme;¹ and in Elizabeth's reign Kent was largely turning its orchards into hop-gardens. If, however, industrial progress was not very great, yet the time contains much that is of importance from the point of the wellbeing and life of Englishmen, apart from their trades and occupations. There was (1) a breakdown of the old system of the Middle Ages; (2) much consequent distress; (3) a series of remedies applied by law, some of which lasted long and had deep effects.

We have already traced some causes of the breakdown of the old system—the growth of new towns, the decay of the Guilds, the severance between producer and dealer, and the rise of a wage-earning class working for an employer in the woollen trade. Briefly, the rules of the old days, set up by the Guilds, which had tried to check and limit competition, were giving place to a more free system where wages and prices were more settled by the state of the market. Men

¹ Somewhat inaccurately: hops came earlier.

were beginning to bargain for themselves, just as in the Reformation they were beginning to think for themselves. The same spirit of revolt from authority and custom was shown, both in trade and in religion. Old bonds were loosening, and it was not clear what was to take their place.

It was also a time of much distress. All times of change are apt to be so; for in times of change, active, enterprising men make fortunes, while sluggish, inert, dull people are left behind—and the greater part of mankind are neither active nor enterprising. It was a time of much change. To begin with, the Reformation unsettled men's minds; and men with unsettled minds tend to leave their old occupations to "try their fortune"—and often do not find it. Again, when Henry VIII seized the monastery property, a huge amount of land changed hands. Probably at least 8000 monks, friars, and nuns were turned out; and about ten times that number of people who had been employed by the monasteries had to find new masters and in many cases new work. The monks had been oldfashioned landlords, content with old methods of farming. The new men were often active improvers, who began sheep-farming and turned away the old hands. Again, the monasteries had done much to help the poor with charity—perhaps at times unwisely given, but still charity. The poor now found the monastery gates closed and had to go elsewhere. The confiscation of Gild property hit many artisans hard. The old relief, given when a gildsman's house was burnt, or when he lost his tools, or fell sick, or died leaving a widow and orphans, disappeared.¹ The old Hospitals also were involved in

¹ The effect was something as if Government were now to confiscate all the funds of the benefit societies and sick-pay clubs.

the same ruin. Elsing Spital for a hundred blind men, the Papey for poor, impotent priests, St. Mary of Bethlehem¹ for the insane, St. Mary Spital (the Domus Dei) with 180 beds, St. Giles in the Fields for lepers, and others in London were all suppressed. A little book² of 1542 calls attention to the hard case of the poor, and incidentally gives a curious insight into English as written in Henry VIII's day:—

“Oh ye Cytezyns, if ye wold turne but even the profettes of your chauntries and obbettes to the fyndyng of the poare with a pollytique and godly provysyon, whereas now London beyng one of the flowres of the world as touchyng worldly riches, hath so many, yee unnumberable of poare people forced to go from doare to doare and to syt openly in the streates bedgyng and many not able to do ere other, but lye in their houses in most grevouse paynes, and dye for lack of ayde of the riche to tha greate shame of the, O London. . . . For ye spend unmeasurably. Upon whom? Even upon them which have no neade, as upon the Nobles and Jentlemen of the Courte, upon the Aldermen and other riche commoners, the poare forgotten, except it be with a fewe Skrappes and Boanes sent to Newe gate³ for a face.”

What proved perhaps even more disturbing to the life of England than the confiscations, was Henry VIII's debasing of the currency. True he did not begin it, but he did it wholesale; and Edward VI's Government followed him, till nine ounces of alloy were mixed with three ounces of silver, and twelve ounces of this medley coined into seventy-two shillings. The result was that the shilling of 1551 contained just one-seventh of the silver contained by the shilling of 1527.

The effect of a debased coinage is so disastrous,

¹ Bethlehem (“Bedlam”).

² *The Lamentacion of a Christian against the Cittie of London.*

³ Newgate Prison.

that though the matter is intricate, it is worth a little study. At first the kings profited: what had made one shilling in 1527 made seven so-called "shillings" in 1551; the Crown could pay its debts at one-seventh of the former cost. But the loss speedily outweighed the gain. To begin, interest on royal debts had to be paid, and this interest rose enormously, to somewhere about 28 per cent, and lenders from abroad would not take the bad coin. Again, the debased coin would not pass at its "face" value. Men looked askance at these "bad" shillings, and they speedily fell in value to less than a groat. That is to say, prices went up by leaps and bounds. What had been purchasable at a shilling now cost many shillings. This upset all bargains and all contracts, threw the whole trade of the country into confusion, and that in turn upset the royal revenue. Of course, all payments to Government would be made in the debased coin, and Government had to take its own coinage at its face value. In such times, men who have good coins hoard them, or melt them down, and so the coinage goes from bad to worse. Bad money drives out good. Swindlers abroad—and in England too—flood the country with money debased still further. Then as prices fly up, no one can live on his former wages, and industry is upset a second time by a violent rise in wages. But as wages always rise more slowly than prices, the wage-earner is left for the time in dreadful distress: everything is terribly dear, and his wages have not yet risen. So, sooner than starve, he will beg, or steal, or rebel. The Government has driven him to crime.

There is, indeed, no end to the evils of a debased coinage, and Henry VIII, Edward VI, and Mary's reigns saw most of them. How universal was the

distress the two insurrections in Edward VI's reign testify. There was one in the West, so serious that the Protector Somerset had to get the help of a body of German musketeers, who shot down the Devonshire peasants in two fierce battles. There was another in Norfolk, where the rioters, at first orderly, soon took as their cry, "Kill the gentry!" and were only quelled when 3000 of them had been slaughtered. The locality of the insurrections shows us much. The West was in arms mainly for its old religion, and the West was the most backward district in England. The East was chiefly provoked by the industrial distress, the bad currency, and the enclosing for sheep-farms, and the East was the most Protestant, most manufacturing, richest, and most advanced part of England. Widespread must be the distress, and misguided the Government, that can provoke its extreme Catholics and its extreme Protestants, its poorest and its richest, its most backward and its most advanced, the depths of the country and the home of manufacture, to rebel *at the same time*.

CHAPTER XIV

Distresses and Troubles—The Remedies of the
Time for Poverty and Unemployment—
Elizabeth's Legislation

PART II

We may now pass to the remedies applied to the various troubles of the time, some more, some less, successful. Most successful of all was Elizabeth's

dealing with the debased coin. It was so bad that half measures were useless; the whole coinage had to be replaced. This was, of course, a difficult matter: the Government could not accept bad coin as good, therefore the holders of bad coin would be losers, when they paid it in. Further, it was hard to get the new money into circulation fast enough; parts of the country might be left for a time short of coin, which would be disastrous. However, Elizabeth and her ministers tackled the whole problem boldly and thoroughly. The old coinage was called in by a certain date, and the new substituted. The thing was so well managed that there was little trouble; and the country gained enormously by having a sound coinage again. One thing, however, happened: neither prices nor wages went down quite to their former level. This was due to the fact that silver was becoming much more plentiful. The great silver mines of South America were beginning to furnish huge quantities of silver to the Spaniards. And by degrees the Spaniards spent it on their wars, and so scattered it over Europe. Thus, with silver becoming more common, prices tended to rise. This rise in prices went steadily on through Elizabeth's reign, and through the times of the Stuart kings; it is one reason why Elizabeth had to be so economical, and why James I and Charles I could not make ends meet and always had to be asking Parliament for more money. They had as much revenue as former kings, but the revenue was no longer worth so much; owing to the rise in prices, it had less purchasing power. This rise in prices affected all who either paid rents or lived on rents: those who paid, paid really less; the landlord was less well off than he seemed to be. Manufactures, however, were busy.

Wages did not rise so fast as prices, and the goods that were made would sell at a high rate.

So, cheered by the new currency, and stimulated by a time of steadily rising prices, trade recovered and began to "boom". Active trade meant more demand for labour; and so some of the "unnumberable poare" found work. Before this, however, both Henry VIII and his children had made attempts to deal with problems very familiar to us in our own day: *poverty* and *unemployment*.

The Black Death had as one of its most serious results the creating of a class of vagrants, and these wandered in search of work at higher wages; then the enclosures added to the stream and at the same time made work scarce. The taste for a vagrant life quickly grows, and consequently in the fifteenth century the country was infested with a mass of "sturdy beggars", who lived in the main on charity, did perhaps a little job here and there, and also a good deal of stealing. Parliament had no remedy for this but punishment: prison, or as that was costly, the stocks. Impotent and broken-down men were to go to the place of their birth, where presumably they would have friends to look after them, and none were to beg without a licence. It is curious to notice some of the sorts of persons who were so licensed as beggars in Henry VII's day—soldiers, shipmen, travelling men, and scholars of the University.

The destruction of the monasteries added to the numbers of the unemployed and at the same time made the problem more acute, and Parliament took a new step in 1536. "Ydlenes" was still "the rote of all vyces", and there was plenty of punishment for sturdy beggars, who were to be "beten with whyppes tyll the body be bloody"; but it was seen that some

poor could not work by reason of age or sickness. Hence a collection was ordered in churches, and relief was to be given "from the common boxes". This is an attempt to organize the charity which it was felt ought to support the helpless poor.

On these lines went the statutes of the next seventeen years, but their effect was not satisfactory. The idle did not find work, in spite of savage penalties,¹ and the charitable did not give enough. Preachers were bidden to supply "a godlye and brief exhortation to charitye"; collectors were appointed to "gently aske and demaunde alms" on Whitsundays; the date was shifted to Christmas and again to Midsummer without effect; heavy fines were placed on collectors who refused to carry out their duties; and persons who would not give were threatened with the censure of vicar and bishop. Still the voluntary gifts did not suffice, and, in 1563, persons refusing the "gentle demaunde" of the collector might be sent to prison. Thus contribution became in a sense compulsory; and this was made more definite in 1597, when, after eleven Bills dealing with the matter had been promoted in the same year, an Act was passed providing a *poor rate*, which could be levied by seizing goods from anyone who refused to pay.

So the State passed from *voluntary alms* to *compulsion*, and admitted that it was its duty to provide for the poor who could not work. Punishment (of a rather milder type than before) was to be meted out to the sturdy beggar, as hitherto. Yet there still remained the problem of those who wanted work but could not find it.

¹ A statute of 1547 laid down that they were to be "made to be profitable and to serve", and even allowed branding and the placing of fetters on them when caught, in order to keep them from running away from their masters.

At first, as has been shown, Parliament refused to admit that there was such a class at all, save for the few temporarily distressed persons who might be given a licence to beg if the Justices thought they really were in a hard case. But an enquiry in 1569 revealed that there were 13,000 "masterless" men in the country, and an Act of 1572 made an effort to deal with the problem. Besides the customary severe measures against the "sturdy beggar", who is defined in great detail—vagabonds practising unlawful games or plays, fencers, players, minstrels, jugglers, pedlars, and so on—we have "able-bodied craftless men" with no visible signs of livelihood, and able-bodied men refusing "such reasonable wages as are commonly given in such parts where such persons happen to dwell"; these were to be "set on work" in each parish; vagrant children to be apprenticed so that they might learn a trade; and habitations built for the impotent poor. And in 1576, by an Act entitled *For Setting the Poor on Work*, the collectors were to provide work; wool, hemp, flax, &c., were to be bought and given to the poor to make up; they were to be paid, and the collector was to sell the goods.

If vagrants refused to work they were to be placed in "houses of correction", where, at their first entrance, they were to be whipped, and there, "kept in diet", they were to be set on work. Here is the beginning of the *workhouse*—a house where work was to be provided.

Such were the principles of the Elizabethan Poor Law as put together in the Act of 1601: habitations and relief raised from the rates for those who could not work, punishment for those who would not work, and work to be found for those who could work.

Upon the whole the plan did well and was durable, although the business of finding work for the unemployed proved difficult, and probably was not very successful. But the distinction drawn between the impotent and the idle was thoroughly wise. We shall meet the Poor Law again later, at a time when this wise distinction had been allowed to lapse; and we shall see how disastrous the change was.

Similar ideas appear in the great Statute of Apprentices of 1563, which was intended to regulate the conditions under which men were employed. It laid down that "craftless" men might be compelled to work in the fields, especially in harvest time—this in order to keep up the supply of agricultural labourers. It provided that "hirings" were to be for a year and not for shorter periods—this to prevent men restlessly changing their masters. It made apprenticeship in all occupations compulsory, and lengthened the time to seven years, ending at the age of twenty-four—this to secure that all men should have a means of gaining a living and should be reasonably skilled in their callings. Finally, it gave powers to the Justices of the Peace in each district to fix rates of wages for different occupations in their district; they were to consider local conditions, and to put out an assessment of wages which was to be binding; the old maximum of wages was abolished, and they were to use their local knowledge to fix what was reasonable *in their locality*.

To a certain extent the granting of *monopolies* comes under the same heading—the desire to supervise trade. These monopolies were mostly either given to great Merchant Companies, usually trading abroad, or to persons who invented a new process. The story of the trading companies, of which the best

known is the East India Company, falls into the chapter on the expansion of English commerce, but it may be noticed here that one reason for giving these monopolies was to help new enterprises. As, however, the Crown used monopolies to raise money without the consent of Parliament, they became much disliked, and were abolished in 1624. Patents, which survived them, were, however, still cause of complaint. "The monopolisers," said a member of the Long Parliament, "like the frogs of Egypt, have got possession of our dwellings; they sip in our cup, they dip in our dish, they sit by our fire; we find them in the dye vat, washbowl, and powdering tub." Yet patents have survived this hostility, though even now they sometimes raise the price of things for the consumer.

Taking this Elizabethan system as a whole, we may see much practical wisdom in it. In the first place it was *flexible*; it did not lay down hard-and-fast rules which time would soon leave out of date, but provided a system whereby new conditions could be met with new methods. Because it was flexible it proved *durable*, and that is another great merit. Further, it marks an *advance in sympathy*¹ for the poor. The impotent poor were held entitled to relief, and it was made the duty of the richer folk to provide this relief. The fact that many men were out of work, and could not find work, was admitted, and some effort made to find work, though probably not very much was done here. It proved too difficult for the sixteenth century; it still proves too

¹ Of course the punishments for the vagrants were brutal, but it was still a brutal age. Elizabeth herself commanded the bulls, the bears, and the apes to be baited for the amusement of the Court; and from above, thirty traitors' heads mouldering on spikes at the Tower grinned down at the royal sport.

difficult even now. Again, the maximum of wages was abolished; penalties were fixed for those who gave less than the Justices' assessed rate, but none for those who gave more: the effort to keep down wages was abandoned. Further, it was *far-sighted*: it insisted on apprenticeship, both as a guarantee of skill to turn out good work, and as a security that boys should be brought up to a trade and not be left to drift into idleness. One of the great troubles of our day is that boys begin earning a little money at all sorts of jobs which teach them nothing and lead to nothing, and only leave them stranded when they grow up. The just distinction between the deserving poor and the undeserving was sharply drawn; and experience has shown that nothing so speedily ruins a State as encouraging the undeserving poor. It is only breeding a race of wastrels to hamper the industrious.

CHAPTER XV

The Beginnings of the British Empire

We now come upon a huge subject, the making of the British Empire. It is so vast and so important that at first sight it may seem to belong to the history of Great Britain, and not to find a place in the story of our commercial and industrial history at all. But this is not so. It has a very close connection with our commerce; in fact it was commerce that made it worth England's while to become an empire at all, for early colonies were prized merely for the wealth their mother country could get from

them, whether as at first from gold and silver mines, or afterwards from trade; every colony was, in old days, restricted to trading only with its mother country. Thus England, striving to widen its trade, became an empire as it were by accident.

The story of the Empire covers the seventeenth and eighteenth centuries, if we regard the eighteenth century as ending in 1815, when after the battle of Waterloo the Congress of Vienna settled the terms of peace among the Powers of Europe. In a sense our Empire has not altered much since then. We have more thoroughly grasped India, but by 1815 we had already disposed of all rivals there. Again, we have recently seen a great expansion of British territory in South Africa; but in 1815 we had the Cape Colony and Natal, and those are the keys to South Africa. They open the doorway to the interior. The chief great new field opened since 1815 is Egypt and the Nile Valley. And that is not a colony. We "occupy" Egypt; it is scarcely British territory.

As it is true, in a sense, that the work was completed in 1815, so it is true that in 1603 it was not begun. Attempts at colonies had been made in Elizabeth's reign, but they had all failed; and when the great queen died we did not occupy one acre of land oversea. The dawn was breaking, but the sun had not yet risen on the Empire.

Roughly speaking, then, two hundred years is the period—a long one. But it divides about halfway, and the earlier and later halves are fairly distinct in character. In the first period the work was mainly done by private men, and by trading companies. England as a State took little interest and paid little heed. In the second period the Empire was added

to by successful wars; that is to say it was the very direct work of the State. Again, in the first part we occupied new lands, either not peopled at all, or peopled by savages; while in the second part we mainly captured the colonies of other nations. Further, our earlier colonists either went to find gold and silver, only intending to stay a brief while, or left England because they wanted freedom to worship as they wished in a new home; the later colonists relied on trade and agriculture for prosperity. We shall find the dividing point between these two phases when in some European treaty our Government begins to think it worth while to make a bargain about colonies or overseas trade. This was done first in the great Treaty of Utrecht (1713), which ended Marlborough's war in Queen Anne's reign. Here the periods divide.

Briefly we may describe the first part as the Stuart period; the second as the Hanoverian.¹

We cannot, however, begin with James I, though the first successful British colony dates from his time. The groundwork was laid before. In front of the colonists went the sailors. Where the sailors had been, the colonists followed. We have, then, to see first what the sailors did in opening the New World for us. It may give a wider idea of the value of our Navy. We are used to think of it as guarding our Empire; but it did much more. It won the Empire; but for the sailors, there never would have been an Empire at all.

Mention has already been made of the twin discoveries of Columbus and Vasco da Gama in the last

¹ James I, Charles I, Charles II, James II, and Anne were all Stuarts; and though William III was only half a Stuart, his wife Mary was a Stuart. George I was the first Hanoverian king (1714).

ten years of the fifteenth century, and of the meaning to the world, and especially to England, of the opening of the ocean routes, and the passing of commerce from the "thalassic" to the "oceanic" stage.¹ It passed, however, slowly; the first great discoverers were either Italians, or from states on or near the Mediterranean. Columbus was a Genoese; Vasco da Gama a Portuguese; Cortez, who subdued Mexico in 1521, was a Spaniard, and so were Balboa, who first made his way to the Pacific, and Pizarro (1531), who led the way to Peru. Magellan, who first sailed into the Pacific and so round the world, was a Portuguese in Spanish service; Cabral, who discovered Brazil, where the first permanent European colony was made, was a Portuguese. In fact Spain and Portugal were far ahead. The only early English ventures were those led by the Cabots from Bristol to Labrador and North America, and the Cabots were not Englishmen but Venetians. England was not yet awakened, or was too much occupied with her religious struggle at home.

When the awakening came, it turned at first in a useless direction. There was no idea then that the sea was open to all: on the contrary, a new trade route was the property, and the exclusive property, of the nation that found it. The seaway to the East was Portuguese, and the seaway to the West Indies and South America was Spanish.² Englishmen in these waters would be trespassers, and extremely unwelcome trespassers, for they were Protestants—that is to say, heretics in the eyes of Spain and Portugal, both Catholic States. Hence the first English effort was to find a way of our own to the East: some

¹ See p. 77, note.

² We still sometimes speak of the *Spanish Main*.

new route, unexplored by Spaniard or Portuguese. This could only lie to the north, either to the north of Asia or America. If such were found, it would be our own; and as our ships would pass by the cold latitudes, it was hoped that the inhabitants would be ready to buy our English cloth. Plainly, even if we could get to the Tropics, we could not sell much cloth to dwellers in such hot countries.

English effort first turned to the North-West or North-East passage, and it was long before we gave up this idea. That is the reason why the names of the early English explorers are scattered over the North-West Arctic. Frobisher Bay, Davis Strait, Hudson Bay, Baffin Land, James Bay, Fox Channel, all recall the memory of their finders, and their heroic struggles with the ice, ever with a "perfect hope of the passage"¹ as each inlet opened to the west, and ever disappointed. Hudson, sailing into the great bay that bears his name, felt sure he had found the way at last; but it only led to his death, for his crew mutinied, set the old man adrift in an open boat, and left him to perish. Even the name "Labrador" tells its tale—"the coast of gold" whither Frobisher went on that frantic gold hunt that drew all the early explorers. He found quantities of spiders, which cheered up his men, for "spiders", they said, "be true signs of great store of gold"; but of course there was no gold, and the name of promise, "Labrador", remains tied to one of the bleakest and barest of lands, as a sort of grim geographical joke. The only one of the voyages to the north that produced anything was Chancellor and Willoughby's venture (1553) to the north-east, which led to the discovery of Archangel, and the opening of a trade with Russia, at

¹ Davis's words.

that time without a seaport on the Baltic. But the "way to Cathay" was not to be won either by East or West Arctic, and there were no inhabitants to buy English cloth. All that really came from so much struggling was the training of a race of sailors who had faced the perils of the sea in their most terrible form, and had learnt to fear nothing.

Thus though the route to the West Indies was Spanish, Englishmen were tempted to trespass there; and as Elizabeth and the Spanish king quarrelled till the quarrel ripened into war, trespassing increased and the queen had no wish to stop it. The work was chiefly done by the Devonshire men, Hawkins, Drake, Grenville, Oxenham, sailing from Plymouth, Bideford, and Appledore.¹ They went with their lives in their hands, for trading in the Spanish Main was, in the eyes of the Spaniards, piracy, and pirates got no mercy. Nor, to tell the truth, were they much better than pirates: from trading to raiding was a short step. They were mostly slavers too. It was with a cargo of three hundred slaves from West Africa that John Hawkins went to Hispaniola in 1562, and again in 1564, overcoming the Spaniards' refusal to trade by landing "a hundred men well armed". On his third voyage he took his nephew Francis Drake, and lost four ships out of his six, two of them belonging to the queen, who was very angry, not because he had been fighting the Spaniards, but because he had made no profit. Drake was soon there again, leading seventy-three desperate men to attack Nombre de Dios, near Panama, "the Treasure House of the World", but failing to carry off his plunder. With but eighteen Englishmen he crossed the Isthmus

¹ Appledore, at the mouth of the Torridge, is as a port little changed from the Elizabethan days.

and looked down on the Pacific, cut off a mule train loaded with silver, and, after endless narrow escapes, got home with his plunder. In 1577 he set off with five ships on his memorable voyage round the world, passed Magellan's Straits, sailed up the Pacific coast, where no English flag had ever flown before, plundered the defenceless Spanish towns, and then made his way home by the East Indies and the Cape. Three years he was away; of his five ships, one¹ only returned. But he brought back treasure to the value of £800,000, and he had opened for Englishmen

"those wastes of tide
No generation opened before".

What these and dozens of like enterprises of lesser fame did was to foster a spirit of adventure that made Englishmen turn their eyes oversea, and to breed the seamen who beat off the Armada and won for England sea power. The story of the Armada itself shows how immeasurably superior the English fleet was as a sea force. The great Spanish ships carried few guns for their bulk, and their sailors had little seamanship. They were so big that the English gunners could not easily miss them; so slow that they could not come to close quarters to board; so crank and unseaworthy that in a breeze they heeled over before the wind, and pointed their lee ports so skywards that they could not bring their guns to bear at all. They were as a fleet antiquated, out of date, and only dangerous because of the soldiers they carried. The English fleet was of the new type, low, stiff, seaworthy, relying upon "long bowls"²—gunnery

¹ The *Golden Hind*.

² The game which Francis Drake finished on Plymouth Hoe as the Armada was sighted: and the game at which the Spaniards were hopelessly outmatched.

—and seamanship. In the first day's fighting the English had but two men killed. In the whole affair the Spaniards lost, from battle and storm, more ships than we did men. There was no more question of who had the mastery of the sea; and it was this mastery of the sea that gave us our colonies.

Leaving the tale of the plundering of Spain and her colonies which followed the defeat of the Armada, we turn to the early colonies, or "plantations" as they were then called. Gilbert's effort to found a colony in America in 1583 failed; so did Raleigh's colony of Virginia in 1584, though a few colonists hung on till 1586, when Drake brought them home. Another batch of 150 were left in 1587, but in 1590 they had perished to a man. Indeed these early colonies hardly could prosper. They mostly were gold seekers, and there was no gold. They had neither the skill, the stock, the patience, nor the wish to settle down to tillage. In 1607 the first permanent colony began at Jamestown on new principles, sent out by the "London Company", under a leader who taught that "nothing was to be expected but by labour". In twelve years the number of colonists rose from 105 to 600, and Virginia was thus the first English colony.

Between that and the end of the seventeenth century all the Atlantic seaboard of what is now the United States was settled, except Georgia and Florida. Their names tell much of their early history; many of them were the refuge of persons persecuted for their religion. The New England States, with their scriptural "Salem" and "Concord", were founded by the "Pilgrim Fathers"—Puritans who sailed in the *Mayflower* in 1620; Maryland was a shelter for

Catholics, Pennsylvania¹ for Quakers; Carolina commemorates Charles II. Many were sent out by private companies, seeking to make a profit, under a charter from the Crown. In the main each governed itself, since they were so far away; but they were under Crown-appointed Governors. They traded with England and with each other, the Southern States in tobacco, the West Indies in sugar, and all in slaves. By 1686 the average annual shipment of slaves across the Atlantic to the plantations was 20,000; and hardly a voice² was raised against the iniquity of the trade. Some even defended it as a sort of missionary enterprise; it brought the negroes within the influence of Christianity.

Most of the work of the Stuart colonists in the West has since passed from the British Empire, but a more enduring foundation was laid in the East. India is so vast, so rich, so populous, that it seems almost past belief that most of the winning of it was done, not by Great Britain herself, but by a trading company of merchants—the East India Company. This great Company which still dominated India in 1857 is already almost forgotten, save in history.³ But it began in 1600 with a few members and five ships: and step by step it won India.

In Elizabeth's day, almost all foreign commerce was conducted by *trading companies*. Long before, the great Company of the Merchant Adventurers had taken up export of cloth. There were the Russian Company, the Turkey Company, the Guinea Com-

¹ William Penn founded the colony.

² The Jesuits protested against it.

³ Sometimes the letters H.E.I.C.S. still appear after a name—generally in the obituary columns. They mean the "Honourable East India Company's Service".

pany, the Barbary Company, the Eastland Company, and so on. The reason for these companies, which were given under Charter from the Crown a monopoly of trade to some particular country, was, that in days when pirates were so many, strangers so much suspected, and distant regions so little known, the individual trader had no chance. He would not be welcomed; he would probably be ill-treated and plundered; no one was responsible for him. If, however, he came as a member of a Company, the case was altered. He would abide by the rules of his Company, and he would have friends to protect him, were he molested. The East India Company is only one of a number of Companies; but it became infinitely the most important. Perhaps it was partly that the East Indies were a better trading field; but it was in the main due to the fact that while in the other Companies each member traded with his own capital for himself—on his own bottom as sailors say—the East India Company was a joint-stock affair. The members found the capital, and the Company traded *as a Company*, dividing the profits. This made it far more powerful than any collection of single traders could be.

Its aim at first was purely commercial. To get liberties to trade in the East; to oust the Dutch and Portuguese who were already there; to protect itself against "interlopers"—persons not in the Company who wished to poach on the Company's ground—and to pay good dividends: these were its first objects. Hence it began in the East India islands, striving to get a share in the spice trade, pepper, ginger, cloves, and so on. The Dutch were in possession here, and the Company was worsted. So they turned to India itself. First, liberty to trade

had to be got from the Mogul Emperor; then the traders wanted a living-place and a store—so they obtained leave to set up their first “factory”; as it was called, at Surat in 1612. Other factories here and there on the coast followed, one at Madras in 1620, one on the Hoogly in 1640. Charles II married a Portuguese wife, and part of the dowry he got with her was the Portuguese settlement of the island of Bombay, which thus became the first territory owned by the Company in India. Factories, of course, had to be protected from plunderers and from the unfriendly Dutch; so forts were built to guard them. Fort St. George near Madras was the first. Thus with no other objects than the securing of the traders, the Company began to get little settlements dotted about, a fort here and there with cannon, a few soldiers to defend them. They had no idea of conquest; all they wanted was peace, and liberties to trade.

In the latter half of the seventeenth century the English mastery of the sea, won against the Armada, was challenged by the Dutch. They, too, had thriven by war against Spain; they, too, had an opening on to the new trade routes; they were before us in the East; they ousted our fishermen; they were absorbing the carrying trade of the world. Hence a very bitter contest began between ourselves and Holland, fought out in two ways: first by fleets battling in the Channel, and secondly by a series of laws. In the fierce fighting we were fairly matched; neither side had much the best of it. But we struck Holland a tremendous blow by the Navigation Acts of 1651 and 1660. The ideas were old; but these Acts were specially intended to harm the Dutch. They forbade any export or import of goods between England and

any part of America, Asia, and Africa, except in ships built and owned in England and manned with English crews; they prevented any aliens being factors or merchants in our colonies; they prohibited the bringing of Eastern goods to England from any Dutch port; they excluded all Dutch who caught fish, and so drove Dutch fishermen from our waters. This policy was completely successful. The Dutch power began to wane and the carrying trade to come to the English flag. And when for a time the two nations made peace—being both under the same sovereign, William of Orange—England forged steadily ahead, leaving her smaller rival behind.

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CHAPTER XVI BOMBAY

Life in the Seventeenth Century

The seventeenth century is perhaps the most fascinating of all the centuries in English history. The barbarity of the Middle Ages had gone, but the romance of past times still lingered. England had not yet settled down to the prosiness which is much a mark of the eighteenth century, and she had nothing of the bustling commercial character of the nineteenth century. In the seventeenth century we have the great events—the struggle of the Civil War which saved the liberties of England, the definite refusal to have a Catholic monarchy, and the victory of Parliament over the Crown; we have the tragic life and death of Charles I, the heroic figure of Cromwell, the steadfast purpose of William of Orange; we have the translation of the English Bible, the perfecting

of the English tongue, the work of two unmatched poets, Shakespeare and Milton. Yet even apart from these the century is amazingly picturesque. It is the most beautiful period of English dress; the cavalier in his careless magnificence is rivalled by the sober dignity of Puritan costume, and each far surpasses the elaborate and somewhat ungainly fashions of Tudor days and the stiffness of Georgian times. Again, though it is not possible to say much for Charles the Second, either as a king or as an example to his subjects, yet as a companion no one of the kings who preceded him could approach him in charm. If it were granted to call back any one of them from the shades in order to enjoy an amusing hour's talk, Charles the Second, witty, good-natured, every man's friend but his own, would be the almost certain choice.

It may then be worth while to turn for a brief space from strictly industrial history, in order to see something of what England in the seventeenth century really was; how Cavalier and Puritan, and Whig and Tory, lived and learnt, and travelled, and ate and drank, and amused themselves—if they ventured to do so; in a word, to try to realize the social life of the time. It may lose some of its romance in the realizing; there were many discomforts.

What chiefly strikes the traveller from the Continent as he journeys from Dover to London—or indeed almost anywhere else through our land—is the smallness of the fields and the multitude of the hedges. In most parts of France and Germany he is used to huge, wide, unenclosed plough-lands. England by contrast appears almost a series of gardens. But we should not see it so if we were taken back to seventeenth-century England and could flit

over it in an aeroplane. Some enclosure had been done, but the mass of the country was still either open field or a wilderness of heath and moor—almost hedgeless, but broken with great tracts of brushwood and trees, remains of the old English forest dating back to times before history. Most of the flat Eastern counties were still marsh. It was not till Charles II's day that Dutch engineers were brought over to begin the draining and reclaiming of land which was so like their own home. North of the Trent—now the busiest part of England—there was a very scanty population, living, indeed, for the most part an almost barbarous life. Some of the Yorkshire towns were thriving on clothmaking, but the country was wild and the people wilder. The long years of violence and plunder on the Border did not end even when James I became king. Hordes of mosstroopers still raided cattle, if these were not drawn at night into the shelter of some fortified "peel"; magistrates had powers to call out armed men; parishes kept bloodhounds to hunt evildoers; all men—even the judges on Circuit—went armed, and carried provisions, for none could be bought on the way. Such was the North.

And even the more civilized parts of England would show other strange things. True that wild boars had just become extinct, while the last wolf was killed in Scotland in Charles II's day. But wild deer were still common. Queen Anne saw a herd of five hundred while on her way to Portsmouth, and at Enfield—close to London—there were quantities of them. The white wild cattle still roamed the forests; badgers were plentiful; wild cats howled at night; fen eagles and cranes frequented the Eastern marshlands; and troops of huge bustards were seen

on the downs, where men hunted them with greyhounds.

Men's habits would be almost as strange as the look of the land itself. "Justice and police" would seem to us a curious mixture of ferocity and incompetence. We should not, indeed, see a heretic burnt alive after James I's day; but we should find the nation, from the king downwards, firmly convinced of the reality of witchcraft, and busy in hunting out and burning or hanging witches, poor old hags, guilty because it was said they had formed covenants with black dogs or a "Goblin called Tibb", or because they were ugly and muttered with toothless jaws, or because a neighbour had unaccountable twinges of rheumatism, or his cattle died, or some misfortune led him to think he was "overlooked". Justices of the Peace dealt shrewdly with that terror of the land, beggars,¹ and each town and village kept a watchman and constable to catch evildoers. Thief-catching and so forth was, however, a local job, and once over the parish border the thief was very likely not followed: the constable sat down and thanked God he was well rid of a knave; and the pursuit became slacker and slacker the farther the criminal went from the scene of his crime. But if he was caught he was usually convicted, whether guilty or not. The practice of the Law Courts was all against him. He was kept ignorant of the evidence; he was not allowed counsel; he could not get witnesses on his behalf ready. And the jails were horrible, often let out to jailers who made profit out of the poor prisoners by blows and starvation. However, there were fewer

¹ "Hark! hark! the dogs do bark,
The beggars are coming to town."

No wonder the dogs barked and the village folk trembled.

thieves in prison than might be supposed. Flogging was the penalty for small offences; death for great ones. This kept the jails small, and saved money to the rates.

The squire of the time lived at home and travelled little; very likely he never went farther than his market town. He managed his estate, sold his corn, fatted his beasts for the Martinmas (November) slaughtering, lived on salt meat all the winter, drank quantities of beer, hunted stags, baited badgers, went fowling with his fowling-piece. He had probably been "out" for King or Parliament, and told long stories of the fighting. He had little education, sending his son to the local grammar school where he himself had gone. The boy wrote home ceremonious letters beginning "Hon^d. Father, Sir", and ending with "your dutiful and obedient son". If he went far into learning it was classical, though in Charles II's day men were already beginning to ask if "innocent English authors" and "the principles of arithmetic, geometry, and such alluring parts of learning" might not well take the place of "getting against breakfast two or three hundred Rumlbers out of Homer, or to have measured out very early in the morning fifteen or twenty well-laid-on lashes for letting a syllable slip too soon, or hanging too long upon it". The women abode at home and embroidered, sewed, spun, brewed gooseberry wine, and made the pastry. They rose from dinner early and left their lords and masters to their tobacco and ale at the table—or under it.

Suppose our country squire for some amazing reason obliged to make the long journey to London. The question arises, how will he go? The usual way is to ride "post", that is, getting a fresh horse at each posting-house on the road. If he had to take

his wife with him—which he thanks heaven he has not to do—the good dame would ride pillion behind him or one of his servants. But the squire has heard of the great novelty of the time, the Flying Coach¹ which does the journey from Cambridge (fifty-five miles) in the marvellous time of thirteen hours. Accordingly he makes his way thither, and passes the night at that good inn, the Bull, and the next day starts betimes at six in the morning. He is not very lucky; the weather is wet, and the sides of the roads are perfect quagmires—only the centre is hard; and the coach encounters strings of stage-wagons² laden with heavy goods, and passengers who could not afford the Flying Coach. These wagons refuse to give way, and the coach, trying to round them, sticks fast in the mire; oxen have to be fetched from a farm near by to lug it out. They upset it. Fortunately all the six passengers have already alighted, but it is long before the mud-spattered vehicle is on its wheels again, and the sun sets ere they are clear of Epping Forest. This is serious, for the forest is infested with highwaymen. The guard looks to his blunderbuss, squire loosens his pistols in their holster; eyes strain into the dark, and every ear is on the alert for the gallop of a horse. Was not the coach robbed here a week since by Claude Duval or some other “gentleman of the road”? Deep relief is felt when the trees are at length left behind.

When he reached London he would find it very bustling and busy with strange sights; hackney coaches and sedan chairs out of which stepped “monstrous fair” women and richly dressed men. He

¹ “Flying Coaches” began in 1669.

² This was why cart-horse harness included bells, to give warning of their approach. The bells still survive, though no longer needed.

would see soldiers of the newly raised regular army, one of the Life Guards, of which even the privates were often gentlemen, or of the Blues, the Buffs, the Coldstreams, or the Dragoons; the streets would be gay with signs. Perhaps a town friend would take him into one of the "coffee houses"—the clubs of the day, where he would hear the latest tattle and have the celebrities pointed out to him; he would see the news sheets of the day, the *Public Advertiser* or the *Mercurius Politicus*, and perhaps might read this advertisement:—

"That excellent, and by all physicians approved, China Drink called by the Chineans Tcha, by other nations Tay *alias* Tee is sold at the Sultanness Head a cophee house by the Royal Exchange."

Probably if he tried the "Tay *alias* Tee" he thought it a poor beverage compared with beer.

He may have been moved to take a walk outside London, in which case he would stroll to the "village" of Chelsea or to that exquisite rural hamlet, so much praised by the poets of the day, Islington, or going from St. James's towards Paddington he might, if it were winter, flush a woodcock in the fields where Regent Street now runs. Or a friend would ask him to make one at a dinner party. Here are three menus, the first homely, the second served in the new fashion of courses, the third really magnificent.

"1. A dish of marrow bones; a leg of mutton; a loin of veal; a dish of fowl, three pullets and a dozen larks all in a dish; a great tart, a neat's tongue, a dish of anchovies; a dish of prawns and cheese.

"2. A brace of stewed carps, six roasted chickens, and a jowl of salmon hot for the first course, a tanzey and two neats' tongues and cheese, the second course.

"3. Fricassée of rabbits and chickens, a leg of mutton boiled,

three carps in a dish, a great dish of a side of lamb, dish of roasted pigeons, dish of four lobsters, a lamprey pie (a most rare pie), a dish of anchovies, good wine of several sorts, and all things mighty noble and to my great content."

Dinner was at one, and few did any work after it; but all, whether artisan or merchant, shopkeeper or Government official, began early, often at five or six in the morning; and if they ate a great deal of dinner they seldom had more for breakfast than a "morning draft" of ale with bread, butter, and radishes.

Having had the good fortune to dine with Mr. Samuel Pepys, our squire went on to "the play", where possibly he saw the king, and was much shocked at the new fashion of women appearing on the stage. "And so home" to his inn, perhaps on the way getting a dousing of slop-water emptied, as was the custom then, into the street from the upper windows, and perhaps meeting one of those bands of midnight roisterers, "Mohocks", "Hectors", "Nickers" as they were called, who used to beat the watch, insult passers-by, kiss the women, and make night hideous with tumult. Squire shrinks into a doorway as the band passes yelling up the unlighted street, and reaches his inn. As he drops off to sleep he hears the watchman parading the street with his owl-like cry—"Past two o'clock and a windy morning, dark as pitch".

CHAPTER XVII

The Threshold of the Eighteenth Century—A
Summary of Commercial and Industrial
Conditions

When we come to the eighteenth century we find ourselves on the threshold of an immense change. All through we have been tracing that form of change that is called *progress*; but progress is of different kinds; it may be slow, or it may be rapid—so rapid that we employ a stronger word than change, and speak of *revolution*. Hitherto most of the progress we have been tracing has been slow. At the time of the Black Death, changes certainly came quickly, and we might fairly describe them as “revolutionary”. But, in the main, English industry and agriculture and commerce progressed slowly down to the end of the seventeenth century. If we summarize each of these departments of the nation’s social life we shall see that this is so.

Agriculture.—Here some progress had been made, but it had been rather in men and their way of living than in the methods of farming. Villeinage and serfdom, of course, had disappeared, and the triple system of landlord, farmer, and labourer had in the main taken its place. A good deal of land had been “enclosed” for sheep-farming, though by the end of the sixteenth century this enclosing had come more or less to an end, and corn-growing was again becoming the more profitable occupation.¹ Some new

¹ Norden, writing in Elizabeth’s reign, speaks of the neighbourhood of Harrow thus:—

“Yet this fruteful and pleasante country yeldeth little comferte unto the way-

fruits and one or two new crops had been introduced. Farmers were beginning to use horses more for ploughing, and oxen less. Ploughs and agricultural implements were better, as iron had grown cheaper. Manures were more used. A good many farms were hedged in, lying in one piece instead of being scattered over "open field". Yet in many ways practically no progress had been made at all. A great quantity of land still remained either forest, moor, or undrained marsh. Even of the arable land much was still cultivated as "open field" with all the defects of that system—waste of time walking from one plot to another, impossibility of trying new methods, difficulty of draining or keeping land clean from thistles and so on, if your next neighbour was a lazy fellow who allowed his thistles to seed. There were no root crops, and no grasses such as the clovers and lucernes. There was the same round of wheat barley fallow, wheat barley fallow, as in the days of the Conqueror, and this condemned one-third of the land to be useless every year. As there were no root crops, there was little winter feed. Cattle were slaughtered and salted at Martinmas, and everyone lived mainly on salt meat in the winter. No attempt had been made to improve sheep and oxen by scientific breeding: they were still gaunt, thin, leggy beasts, mainly skin and bone, and often plagued with

faring man in the winter season, by reason of the clayish nature of the soyle, which after it hath tasted the autombe showers it beginneth to mix deep and dirtye, yeldinge unsavery passage to horse and man. Yet the cuntrye swayne holdeth it a sweet and pleasant garden, and with his whyppe and whysell, can make himself melodye, and dance knee deep in dirte, the whole daye, not holding it any disgrace unto his person. Such is the force of hope of future proffitt.

'The deepe and dirtiest lothsome soyle

Yeldes golden grayne to carefull toyle.'

"And that is the cause that the industrious and painfull husbandemann will refuse a pallace, to droyle in theys golden puddles."

diseases. And of course science had not yet come to tell the farmer how to make his soil fertile, to rid his crops of insect plagues, and to cure his sickly cattle. Thus, in the main, agricultural knowledge had stood still, or moved very little.

It is much the same story with industry. True, here we had acquired some new trades. The weaving of finer cloths had been planted by Edward III (the "Old Drapery"), and clothmaking had been again stimulated by the mass of Flemish and Dutch weavers, dyers, and clothworkers (the "New Drapery") who had come in Elizabeth's day to live in a land where they would be allowed to worship as they wished. The same cause had sent us a mass of Huguenots, at the end of the seventeenth century, when Louis XIV of France revoked the Edict of Nantes, which had for so long granted his Huguenot subjects liberty of worship. We owe to them silks of all kinds, ribbons, sailcloth, tapestry, papermaking, watches and clocks, glassmaking,¹ and other things.² But apart from these new trades, methods were all old and unprogressive. The loom and the hand-wheel had changed very little from old times. Iron was still smelted with charcoal as in the days of the Romans. No porcelain had been made in England, and only very rough earthenware. Salt was still mainly made from sea water. No true cottons were yet made in England. Goods were sent about the country in wagons or along the rivers; roads were not yet "made" with macadam, and there were no canals. Above all

¹ Most of the technical terms in the glass trade are of French origin: e.g. the melted glass, the "found" (*fondre*); the fork, "foushart" (*fourchette*); the place for the crucible, the "siege" (*siège*).

² E.g. the secret of hatmaking. So completely did France lose the trade that even Cardinals of the Roman Church had to buy their hats from Protestant England for a time, till France bribed a workman to return.

there was no power: what little machinery there was was all worked by hand, except where waterwheels or windmills were used to grind corn or to pump. There were practically no factories; industry was still what we call domestic. Just as with agriculture, had an Englishman of King Henry V's day returned to earth in Charles II's reign two hundred and fifty years later, he would have found very much which was still of the old style, familiar to his earlier date.

Certainly he would have found some more progress in *Commerce*. There was the New World, now open. He would stare at the idea of Englishmen trading by sea with the East Indies, and "America" would be something quite new. The size of the ships would amaze him, and the business of the ports. Yet apart from this, he would find much of the old pattern. Commerce restricted to particular trading companies, merchants living over their counting-houses; many payments still made in silver and gold. But if you were to take a modern merchant and put him back a little over two hundred years to Charles II's day, he would be quite bewildered. There would be no banks and no bank notes, no Stock Exchange; no papers with quotations of current prices; no railways or steamships; not even a penny post; no limited companies with shareholders in our sense of the word; no daily news of foreign Exchanges to study; no cheques; no telephones, telegraphs, or cables; no news from America or the East, save by an occasional sailing ship; in fact scarcely anything which the modern merchant uses, needs, or consults many times daily.

Vast then is the *revolution* which has taken place between King Charles II's day and our own, in agriculture, industry, and commerce. The ensuing

chapters will make the attempt to give an outline of it.

CHAPTER XVIII

The Eighteenth Century—Outlines of the Main Changes

If we include in the "eighteenth century" the fifteen years of war which really lie outside it in date but belong to it in character, and so go down to the battle of Waterloo (1815), we shall see vast changes. First came the Union of England and Scotland into "Great Britain" (1707). The two countries gave up commercial rivalry and agreed to become partners—much to the advantage of both, but most to the gain of Scotland,¹ which had hitherto been poor, backward, and often torn to pieces by rebellions and Highland raids. Close on the heels of "Great Britain" came the making of "Greater Britain". As has been seen in Chapter XV, a good deal of progress had been already made here. We had a fringe of colonies down the eastern coast of the United States. But these were in no sense a national affair. Until the reign of Queen Anne almost all of them had been planted by private efforts. Enterprising merchants had sent out expeditions to colonize; or men persecuted at home for their religion had made new homes oversea. The State cared little for these

¹ As both Home Rule and Tariff Reform are, as men say, "in the air" at present, it is worth thinking what might happen if Ireland, Wales, and Scotland all had Home Rule. There would then, in all likelihood, be a majority of Tariff Reformers in England, and England *might* set up a tariff against, say, Scottish industries. The effect on Scotland would be disastrous.

“plantations”, as colonies were called, and had done nothing to add to them. Jamaica, conquered by Cromwell, was the only gain made by war; Cromwell, in this as in other things, was in advance of his time. But in the eighteenth century the English Government began to realize the value of colonies, and to get them by war from her rivals in Europe. So by 1815 we had won Canada from the French and Cape Colony from the Dutch; we had taken many West India islands—then most valuable as the sole source of sugar; we had begun to interfere with the East India Company, and by the work of Clive and Warren Hastings had ousted the French and were rapidly making England supreme in India. We had indeed lost our North American colonies, but the discovery of Australia and New Zealand had done something to make up our loss. *Great Britain* and in a sense *Greater Britain*, then, were the work of the eighteenth century.

Again, as we have seen, in Queen Anne's day England was mainly an agricultural country; what manufacture she did was all done by hand; power-driven machinery was unknown. She had a small population, and had no trouble in growing corn enough at home—even though the methods of agriculture were still very backward. Wood was still the common fuel, and roads were atrocious; canals were not made; ships, of course, used sails; there were no factories, very few banks, no great industrial concerns, hardly any newspapers. On the other hand, by the end of George III's reign we were a manufacturing country—the world's workshop. Machinery was used in all the textile trades; the great cotton industry had leapt into life; coal mines were busy providing fuel, not only for hearths, but for furnaces;

we were supplying the world with iron and steel; excellent roads had been made; canals covered the country; factories had sprung up—at first on the river banks, where water power could be had, then, later, near the coalfields when James Watt had made the steam engine efficient. Ships had been seen which went without sails, and soon the new power was to be applied in the locomotive. It was no longer possible to feed the huge population on home-grown corn, and we had become a corn-importing country.

Hardly less striking was the change in the countryside. The last relics of the old "open field" disappeared. Commons were enclosed; large farms took the place of small ones; the yeoman farmers dwindled; new and better methods of agriculture, of stock-raising, of cropping, were followed. Yet though all these things increased the supply of home produce, the busy towns absorbed it all and wanted more. Bread was often dear, and farming still profitable.

It was this prosperity at home, this "boom" in town and country, that enabled us to bear the burden of all the wars of the eighteenth century, ending up with twenty years of struggle against France and Napoleon, and come out triumphant. Great Britain could endure the cost of war better than her rivals; we spent and borrowed, and borrowed and spent, till the National Debt, which in 1707 was 17 millions, stood in 1815 at the staggering figure of 800 millions. The large size of a debt may seem an odd way of indicating wealth; but the point is that none but an enormously rich nation could carry such a debt. Perhaps we cannot begin our particular survey of the eighteenth century better than with some account of changes in finance. For not the least of our resources

was our "credit", the belief that we could and would discharge our obligations. And while the growth of this credit really depended on the growth of the prosperity and the industry of the country, yet the bringing of it into use was mainly due to the Bank of England.

CHAPTER XIX

Banks and Credit—The Bank of England

One of the chief essentials of business is the saving of *time*; another, very obviously, is the saving of *money*; and a third is *security*, or the saving of worry. Enormous progress in all these "savings" has been made since the beginning of the eighteenth century in England, and much of this progress is due to the growth of Banks and Banking.

We are so well used to the easy carrying out of all sorts of difficult things in business, that we are apt to forget the difficulties. For example, we desire to pay money to someone in a distant part of the country, or in Australia, or in Canada, or in a foreign country. If we had to see to it ourselves it would be a most troublesome and hazardous business. Were the sum large the weight of the gold would make carriage expensive; there would be the risk of loss, or robbery; there would be the trouble of calculating the sum in foreign coinage, and ever so many other things. These are all avoided. If the payment is to be made abroad we purchase from our bank a draft for the amount; if in the United Kingdom we send a *cheque* crossed "& Co.", and write "not negotiable" on it. The receiver can only cash it through a banker, and if it

falls into the wrong person's hands it is practically impossible for him to turn it into money. Money can thus be paid to a distant person without trouble and without expense, save of some few stamps for postage, cheque, and receipt.

Or again, we desire to travel, and at first sight it would appear as if we must take a large sum of ready money, and be always anxious for its safety. Again this can be avoided. Even where a cheque will not be accepted, we can take a circular letter of credit or "circular notes"—that is to say, an authorization from our bank at home to certain foreign banks in almost every city on the Continent or throughout the world to pay cash, on presenting the note and a letter of authorization. Neither note nor letter is of itself more valuable than pieces of paper. It is easy to keep them apart so that both cannot be stolen together. And so again the system of banking makes the carriage of money easy.

Again, it may be that a man for some purpose needs a large amount of money wherewith to make payments at home, for which cheques will not do. Instead of burdening himself with more gold than he could lift, he gets Bank of England *notes*; Croesus could carry his whole fortune in this way without being weighed down.

Or again, a man has money, but no aptitude for business, nor desire to embark in it. He can invest his money; that is, he can buy shares in some company which will use his money in its business to make profits. Out of the profits it will pay him *dividends* for the use of his money. He can, if he pleases, lend it to private concerns which may pay a higher rate, but where the business may involve more or less risk; or he can lend to Government, who pay him low

interest, but his money is secure; or he can leave it on deposit at his bank, and his bankers will use it and allow him interest. In all these ways he is saved trouble, and often anxiety—and all that passes is not money, but bits of paper, cheques, certificates of shares or stock, receipts, dividend warrants; all *paper* bearing in most cases stamps of some kind, and representing money. All this is due to the working of a financial system depending largely on the banks.

These things apply alike to great and small, rich and poor. If the country is engaged in a war, and cannot find the ready money¹ to carry it on, it issues loans bearing interest; and people with surplus funds invest in the loan, that is to say they send orders to brokers to buy and bankers to pay; and so the rich man's capital is transferred by the banker to the use of the Government to pay for rations for troops or to build battleships. The poor man has his Savings Bank book; he pays in his money at the Post Office, and Government allows him interest on it, keeps his money safe for him, uses it, and issues it to him when he wishes.

In fact, all this enters so deeply into every side of life that it is scarcely possible to imagine a country without it. Yet most of this banking and credit and company enterprise has grown up in the last two hundred years. It really began with the Bank of England, and that started in 1694.

The story of the rise of banking in Europe is a curious one, too long to tell here. The earliest

¹ One of the most serious results of an invasion of England, or even a real likelihood of invasion, would be that people would tend to refuse cheques and want cash. We should then realize that there is not nearly enough cash to serve our needs.

bankers were Italians,¹ merchants from Genoa, Florence, and other cities, whose main business was to lend money to States. Our kings borrowed from them to pay for their wars, and Edward III was slow in paying, and so ruined the great Italian house of the Bardi. But though these banks sent money about by letters of credit and bills of exchange, they did not deal with individuals or take deposits and pay interest on them, because this branch of banking has not been developed, and in the opinion of the time what we call "interest" was illegal and wrong. It was thought fair for one man to go into partnership with another, because he only took profits if profits were made; he also ran the risk of incurring a loss. But to take interest, or as it was formerly called *usury*, was to bargain for payment for your money *whether a profit was made or not*; and this was held to be unchristian. The Jews, of course, took usury, and this was one of the reasons why they were so unpopular. Edward I expelled them all from England, and they were not allowed by law to live in England again till Cromwell's day.

Before this, however, opinion had changed, as it was bound to change when the conditions of commerce widened. As soon as it was common to trade with borrowed money, it was held to be fair to ask for payment for the use of the money. Loans were no longer merely made to oblige someone in temporary distress;² they were means of getting control of money. So the law changed with opinion, and

¹ This is why the banking street in London is called Lombard Street (Lombardy).

² This is exactly the case of Antonio in Shakespeare's *Merchant of Venice*. He wanted money because his ships had not returned, and he borrowed from Shylock. But he describes usury (interest) as taking a "breed for barren metal", i.e. payment where no profit was made.

in Henry VIII's day the rate of "interest" was fixed by law. Ten per cent might be taken; anything above this was "usury" and illegal. This is our modern distinction, though we have long given up any attempt to fix a *legal* rate; *interest* we allow to be fair, but excessive interest we call *usury*.

The first persons to take advantage of this new permission were the goldsmiths in London. Having valuables themselves, they were supposed to be good persons to whom valuables might be entrusted. In the Civil War of Charles I's day, many people sent them plate and money to take care of; and King Charles borrowed money from them, and so did Cromwell. Charles II—always short of money—did the same, paying them 8 per cent, while they gave their customers 6 per cent. In 1672 the dishonest king announced that he did not intend ever to repay the capital, but that they would have to be content with the interest.¹ So with this permanent debt began what is now called the National Debt—money which the State has borrowed, and is practically certain not to repay, but which yields interest.²

The goldsmiths were *private* bankers—merely substantial and wealthy persons to whom it was held to be safe to entrust your money. We have not yet reached a bank which is a *Company*, or still less a *national concern*. That came with William III. At first his position as king was insecure; the Whigs supported him, the Jacobites wished to bring the Stuarts back. London, however, was strongly Whig,

¹ Even the interest was left unpaid for some years.

² The gross total National Debt now stands at about £700,000,000. Some of it is paid off when there is a surplus, but no man imagines that all of it will ever be discharged.

and William consequently had the City and the moneyed men behind him. In 1694 his Government, wanting to raise £1,200,000, offered the lenders the privilege of uniting themselves in a Company as "the Bank of England", with the sole right of issuing notes *as a corporation*. The money was readily found, and so the Bank of England began.

It was in origin a "party" affair, a Whig scheme; but it survived the efforts of the hostile Tories and the jealous goldsmiths, and grew into being the most respected institution in England. "As safe as the Bank", men said. Its notes soon circulated readily, and never in its history has its credit been seriously shaken. Even in the worst of the war against Napoleon when our fleets mutinied, and when from 1797 till the end of the war cash payments were stopped, and the Bank was authorized to pay in notes only, the notes did not depreciate seriously in value. Though the Bank would not give five sovereigns in exchange for one of its own five-pound notes, other people steadily regarded them as worth five pounds.¹

Much of its success was due to the Government. It had the monopoly of note issue against any other joint-stock² banks; it managed the rapidly growing National Debt; it kept the Government balance; and private men trusted what the Government trusted. Thus it got a mass of private deposits also; indeed, it was believed at first that it had a monopoly of private-deposit banking as a Company just as it

¹ The notes did depreciate in real value, especially after 1808: that is to say, prices generally went up. But as very few transactions took place in gold the divergence between the gold and the notes was not much seen, in England.

² Private bankers could issue notes; but not other "Company" banks.

had a monopoly of note issue. This was found to be a mistaken idea in 1833, and from that time started the mass of joint-stock banks which do deposit banking nowadays. But the Bank of England got the lead, kept it, and showed the way to the rest.

How much banks have done to save the actual handling of money may be judged by this. In 1868 the average yearly value of notes in circulation was £24,000,000; in 1910 it was £29,000,000. Vast as the sum seems, the increase looks curiously small, and it is explained by the growth of the use of *cheques*. Cheques indeed have become the "money" of the country. There is an institution in London called the Bankers' Clearing House, whither bankers send cheques drawn on other banks to be credited to their proper accounts. In 1868 this Clearing House dealt with £11,000,000 in cheques *daily*; in the year 1910 the daily amount was £48,000,000. Multiply this by 300 and you will get in London alone, without taking the provinces into account at all, about the annual value; and all paid in cheques.

Security and convenience are much; thrift is at least as important. This, too, banks have done much to aid, either directly by encouraging men to save, since they know their savings will be secure, or by keeping the moneys of the friendly and benefit societies, the sick clubs, the trade unions, and so on, which aim at helping the workman in distress. But most noticeable of all is the work of the Post Office Savings Bank. It is over fifty years old.¹ It began with 300 offices; there are now 15,000. Over £168,000,000 are now invested in it, and all in small sums. Fifty pounds is the limit in one year, and

¹ The Post Office Savings Bank began in 1861.

£200 in all for each individual depositor. The average is under £20. By this means many millions of people are able to save small sums, knowing that their money will be safe and that they will get interest, though only a low rate, on it.

Punch in his cartoons caricatures the Bank of England as the "Old Lady of Threadneedle Street" with a stocking full of gold sovereigns in her hand and a general look of a thrifty, pinching, and nervous spinster. The "Old Lady" is thrifty, no doubt, and has money, but her services to the country have not really lain in the hoarding of gold,¹ but in showing the country how far it is safe to make "paper" take the place of gold. She is not nervous though she is careful; she has bred confidence and credit by her example; and so far from being a spinster, she has a huge family of children and grandchildren who all look up to her for wisdom and example. You would not be far wrong if you put down all the great trading companies, the insurance companies, the financial concerns, and so on, as connected with the "Old Lady of Threadneedle Street", for she created the spirit of trust that has made them prosperous.

CHAPTER XX

The Trade Wars of the Eighteenth Century

If we reckon from 1689 to 1815 (the accession of William III to the battle of Waterloo) we have a

¹ Some critics say the Bank does not hoard enough gold. The German Government, for example, keeps £10,000,000 in gold, ready for the emergency of war.

period of one hundred and twenty-six years. They show England in a curiously combative mood: war follows war; indeed the time is almost equally divided between peace and war. Compare this with the century which has nearly passed since Waterloo. In it England has only engaged in one European war, which lasted three years.

Into the various reasons of these wars we need not now go, but we may point out some general features of them. To begin with, in every one of them we fought against France; in several of them we also fought against Spain; and in the latter two we also fought against Holland. This was because first Spain and afterwards Holland came to be almost completely under the influence of France, and in striking at France we struck at Spain and Holland also. Now France, Spain, and Holland were at that time the three powers which had any considerable possessions and trade overseas. Spain had made many of the great discoveries in the New World; much of South and Central America and of the West Indies were hers. The Dutch had risen to importance by their revolt against Spain, which at one time had possessed the Netherlands, as Holland and Belgium were called. They had become a great sea power, plundering the Spaniards, and later, in the time of Cromwell and Charles II, able to fight with England on equal terms. They were not great colonists, though they made a settlement at the Cape of Good Hope and had a number of possessions in the East Indies; but they were great "carriers", shippers of merchandise, and traders. France, later on the field than others, had, however, vast prospects in North America. She had settlements on the St. Lawrence and at the mouth of the Mississippi.

If she could extend her power inland over those two great river basins, all Canada and all the centre of North America would fall into her hands; the English colonies in North America would be left a mere fringe on the eastern coast. She was also our chief rival in India.

What happened was this. In fighting against France, Spain, and Holland, England's right arm was, as usual, her navy. In Europe we could not always do a great deal, though we must not forget Marlborough and Wellington. But we could, and did, strike at our enemies' colonies, which were often left somewhat unprotected. So the wars were followed by treaties in which England picked up some of her rivals' possessions oversea. This is the second great debt we owe to our sailors. In the sixteenth century they had explored the New World, and so taught the merchants and colonists to adventure out there. In the eighteenth century they stripped our rivals, so that we grew rich on their losses. That is the "Influence of Sea Power on History".

If, then, the navy was so intensely valuable, we may well ask why our rivals, who were rich and could together have easily outnumbered us, did not make a great effort and crush the British fleet. The answer depends on several things. They did try. Louis XIV tried and failed; and Napoleon tried; but Nelson was too quick for him. Yet much as we owe to the "hearts of oak"—whether ships or men—we owe more to being an island. France, Spain, and Holland were never free from the danger of war *by land*. In fact, before the eighteenth century was well begun both Spain and Holland were crippled by their earlier wars on land. France, it is true, was in full vigour. But she never concentrated herself on

sea power. She always had great European schemes too; a constant quarrel with the Empire (Austria), and vast efforts to capture more territory on the Rhine. In familiar phrase she had always too many irons in the fire. So England was almost always able to find enemies for France who would keep her busy in Europe, so that she only half backed up her soldiers and sailors in America and in India. That is what Pitt saw when he said, "We will conquer America in Germany". If France was fighting there she could not protect Canada. Seen thus, all the money which England paid to France's *continental* enemies in the eighteenth century was not wasted.

One thing more: France had not the same chance of *keeping up* a good navy as England had. England has many harbours; France few. Therefore while England has a big maritime population, France has a very small one; it comes chiefly from the Mediterranean ports and Brittany. Thus while England could replace lost sailors,¹ if the war went on, France could not. It was no use then to put landsmen on ships and say, "Be sailors"; they were only landlubbers. Hence two significant facts. First, in the War of American Independence (1775-83) the French navy at the beginning was as good as ours, or better. It was this temporary French supremacy at sea which made our attempts to reconquer our colonists end in disaster.² But later the French navy wore out, and Rodney won us a great victory at the end of the war

¹ Now that the "sailor" has become so much more a mechanic and an engineer, does England still retain this advantage against—let us say—Germany?

² Cornwallis, in command of the British forces, took up a position on the coast at York Town, where Washington blockaded him. So long as we held the sea, our men could have been supplied by our navy. But it was a French fleet that appeared and not an English one; and Cornwallis was starved into surrender.

and saved us. Otherwise we might have lost Canada and Gibraltar. Observe, too, that *in this war alone* of the eighteenth century wars France was *not* at war in Europe: she could give us her full attention, and so we had, on the whole, the worst of it. The second point to notice is that during the wars with the French Republic and Napoleon the Bretons (who chiefly supply the French navy with officers and sailors) hated the Revolution, and would not serve in the Revolutionary Government's fleet; therefore it was at that time exceptionally bad. Jervis, Nelson, and the rest of them were excellent sailors, and one of their greatest merits was that they saw how weak the enemy was, and took full advantage of it.

Perhaps this may seem out of place in the story of industry and commerce. It is not. We owe the Empire to the navy, and we owe much of our commercial supremacy to it also. It is well to think of this—"lest we forget, lest we forget".

Let us now very briefly summarize the wars of the eighteenth century and see what England picked up.

(1) At the end of the War of the Spanish Succession (1702-13) we got by the Treaty of Utrecht the Hudson Bay territory, Newfoundland, Nova Scotia, and St. Kitts. Spain ceded Minorca and the key of the Mediterranean, Gibraltar; and gave us a treaty right to import slaves to Spanish America—an enormously valuable concession from the point of wealth. Observe that though our victories had been won by Marlborough *on land*, our gains were all *over-sea*.

(2) In the War of the Austrian Succession (1739-48), or "Jenkins' Ear War",¹ we fought with France

¹ Called so from the fact that one reason for the quarrel between us and Spain was that our ships were in the habit of trading illegally with the Spanish

and Spain. Though we won no great victories we did not give up Gibraltar, which France had promised to recover from us.

(3) In the Seven Years' War (1756-63) we were again fighting with France and Spain. By the Treaty of Paris we secured Canada, which Wolfe's victory had won for us, and Cape Breton, Florida, and half a dozen West India islands. We took Cuba and Manila from Spain, but gave them back. It was in this war, too, that Clive overcame the French in India. He adopted the device of a Frenchman, Dupleix, to enlist native troops¹ and drill them as European soldiers, and so beat Dupleix at his own game. But then, as usual, Dupleix was not properly backed up by France. Later, by the battle of Plassey, Clive won us Bengal.

(4) The fourth war—that of American Independence (1775-83)—as has been seen, went ill for us. We lost our North American colonies. France got in a good blow at us there. But thanks to Rodney's great victory off Guadaloupe we were able to save the rest. And in India Warren Hastings managed to beat all the enemies France raised up against us among the native princes; while the French fleet in the East, though it pressed us hard, was not quite strong enough to strike a decisive blow.

(5) The fifth war, if we regard it as one—it was really two—lasted from 1793 till 1815. In it we met first of all the violence of the Revolution, and later the amazing genius of Napoleon. The navy protected us from invasion, destroyed the enemies' fleets—the French, the Spanish, the Dutch, and the

colonies. The Spaniards caught an English captain named Jenkins and (he alleged) cut off his ear by way of punishment.

¹ Sepoys—*Sipahi*: the French "spahi" (Algerian troops) is the same name.

Danish—and preyed on their colonies. It could not indeed end the war; the soldiers had to do that in Russia and in Spain, at Leipzig and at Waterloo. But at the end England had “weathered the storm”, and was supreme in India, had taken Malta, the Cape Colony (from the Dutch), four West India islands, and Ceylon.¹

Yet there was another side of these wars—particularly of the last—which is perhaps more important even than the colonial gains. While troops marched, plundered, and burnt far and wide in Europe, England was at peace. Napoleon’s soldiers entered the capital of every country in Europe,² but London defied him. And while ruin spread at the heels of his troops, while wealth was destroyed, farms burnt, industries ruined and commerce paralysed, England alone went peacefully on her way, growing rich on the demands even of her enemies. Muskets, blankets, powder, cannon, military stores, goods of every kind, she made in peace and sold on the Continent. Napoleon tried to strangle English trade by forbidding (in the “Berlin Decree”) any of the countries over which he had influence—it was at one time nearly all Europe—to trade with England. *But he had no ships to enforce his order.* Consequently England, whose flag alone was safe at sea, absorbed almost all the commerce of the world, while her factories hummed with orders for things which the devastated Continent lacked but could not make. Even into France our goods were smuggled. French

¹ It is worth while to get an uncoloured map of the world and mark in different colours the British gains during these wars. The first, third, and fifth were substantially profitable; the second and fourth unproductive. (“There’s luck in odd numbers.”)

² Except Stockholm and Constantinople: Moscow was the *old* capital of Russia.

soldiers marched to fight in shoe leather made in England. So through these twenty years, while Europe stagnated, England sprang forward. Her wealth, in spite of war and taxation, was the marvel of the time. When after Waterloo old Marshal Blücher rode through the streets of London greedily eyeing the shops, there burst from him the words "What plunder!" It was even more true in another sense than his. It was the plunder of Europe.

War may be wicked and senseless; the preparations for it burdensome; the miseries of it immeasurable. But to the country that is secure during the quarrel, it is often extraordinarily profitable. This was England's position; and if we will make our statesmen realize that this security must always be ours, it can be our position still.

CHAPTER XXI

Machinery and Power—The Chief Inventions of the Eighteenth Century—The Industrial Revolution

The trade wars of the eighteenth century gave us colonies, which meant markets, while the wars themselves inflated trade and caused an immense demand for English goods. It happened, however, that the eighteenth century was also marked by a mass of *mechanical inventions* which completely altered almost every industry. Appearing mostly in the cotton trades, they were copied into the other textile trades; they set the fashion for machinery; and men, putting

their brains to work, soon made more inventions. This gave us *speed* and increased output. Machinery called for *power*, and the steam engine provided it. This opened up our coalfields, and the increased demand for *iron* stimulated that industry. Other industries developed as a result of new knowledge of *chemical processes*. Finally, *improved means of communication* led to cheapening of prices, and the setting up of industries in many inland places whither it had been impossible to carry material and goods cheaply. All this changed England definitely into a manufacturing country.

It is not possible to give a full account of all these things. We can only select the chief points, and we begin with the *Textile Trades*. Of these, at the beginning of the eighteenth century, far the most important was the wool industry, which was spread all over the realm. Linen was woven in Scotland, Ulster, and Leeds; true cottons were not made at all, because no one in England had the skill to spin cotton yarn strong enough for use as warp.¹ The machines in use were the wheel for spinning and the hand loom for weaving. Of these the loom had been little changed since the early days of civilization, and though some improvement had been made in the spinning wheel, especially on the "Saxony wheel" invented about 1630, yet spinning was still a slower process than weaving. Consequently spinners were always busy in the cottages, and yarn fetched a good price. Both industries were mainly domestic, that is to say they were carried on in cottages in many parts of the country.

The first of the group of inventions which in the

¹ The long threads going through the length of any woven fabric are the warp. The transverse thread (going across from side to side) is called the weft.

end completely changed all the textile trades was made in 1733, when Kay, of Bury, invented the "fly shuttle". This was a device whereby the shuttle which carries the weft from side to side was mechanically pushed across on a level shelf instead of being passed from one hand of the weaver to the other. This not only increased the speed of weaving, but it enabled the weaver to weave cloth much greater in width.¹ The hand-spinner, always behind-hand, was now hopelessly outdistanced; the demand for yarn became greater than ever, and spinners were kept busier. A huge stimulus was thus given to the inventing of any means of mechanical spinning, and three inventions were made in the latter half of the eighteenth century: Hargreave's "spinning jenny", Arkwright's "water-frame", and Crompton's "mule". The "spinning jenny" was a happy thought of working a number of spindles mechanically together; the "water-frame" produced by rollers cotton thread strong enough and smooth enough to be used for warp, and so first opened the way for English cottons;² while the "mule", which made much finer spun yarn than English hand work could do, led to the making of all the fine materials such as muslin. It was not long before these machines were modified and applied to the wool and linen industries. Thus spinning rapidly caught up and passed weaving in speed, and the old hand-spinners began to find their work leaving them.

Invention, however, did not stop with spinning and

¹ Hitherto the width was limited to the width enclosed between the weaver's arms when he was passing the shuttle from hand to hand—"single-width" cloth. Double-width was done by two weavers handing the shuttle one to the other.

² Arkwright adapted, in order to prepare his cotton, a carding machine invented for use with wool by Lewis Paul about 1748.

carding; weaving and other processes were next invaded. A clergyman named Cartwright constructed the first power loom, which began to come into use about 1790, and by 1815 was improved into a thoroughly practical machine. Machines were added for wool-combing which would do the work of twenty hand-combers; the spinning machines were adapted for use in wool and linen industries; the power of chlorine was applied to bleaching. Formerly goods had been left to bleach in the open air for six months; now they could be whitened in a few weeks. Colour printing, hitherto performed by a small block applied by hand, was completely changed by Bell's invention of the revolving cylinder. Bell's machine could do more than one hundred hand-printers, each with an assistant, had been able to manage in the old days. And as the capacities of machines were better realized, more and more ambitious things were done. Heathcoat's lace-making machine is an example of machinery doing what had been thought so complicated as to be impossible for anything but the human hand.

Machines need power, and at first water power was all that was to be had. Hence the new factories spread along the river banks in Lancashire and Yorkshire, where swift-flowing water was at command.¹ But a new power was at hand—the steam engine. Steam engines—of a sort—wasteful and clumsy—had been in use for pumping in Cornish mines since Queen Anne's days. Newcomen and Smeaton had improved them, but they were still very unsatisfactory. A Glasgow instrument-maker named James Watt first made the steam engine a practical machine. His separate condenser saved the loss of heat and the

¹ Factories are still commonly called "mills": and ruins of these old "beck-side mills" are common enough in the North.

waste of fuel; by using higher pressures and making his engines double-acting,¹ he increased power and steadiness; and he first grasped the best plan of applying the up and down stroke of the piston to the rotary motion of the wheel and axle. He was lucky in his partner, Boulton of Soho, whose workmen first worked iron cylinders accurately, so that there was no leak of steam. Watt's engines soon caught the notice of manufacturers. "The people in London and Manchester are all *steam-mill* mad", wrote Boulton in 1781. Indeed Boulton was justified in his answer to George III's question as to what he sold: "I sell, Sire, what all the world desires—*power*."

Steam engines drove the machines, and drove them cheaply and steadily. Hence came another change; the mills which had settled by the riversides now began to draw to the coalfields or their neighbourhood. Scanty villages suddenly turned into new towns, smoky, squalid, ugly, but busy. The flat Eastern counties, with neither water power nor coal, found their old industries gone.

No less striking was the advance in the iron and coal trades. Up to the beginning of the eighteenth century all iron had been smelted with charcoal; much of it had been done in Sussex and Kent where wood had been plentiful. But the charcoal burners had wellnigh cleared the forests, and we were importing pig-iron, since we could not make enough for ourselves. The credit of first using coke successfully in

¹ Until Watt's time, steam had only been used to secure a vacuum in the cylinder; when it was admitted and condensed, the atmospheric pressure acting on the piston drove the piston down. There was no *up* stroke: the piston was drawn up by a balancing weight or by the momentum of a flywheel. Thus Watt by first using steam pressure to drive his piston made the first true *steam* engine.

blast furnaces belongs to the Abraham Darbys, father and son (about George II's reign); but the difficulty was to get an effective blast. The steam engine, however, provided that, and quadrupled the yield of a furnace. Iron became cheaper and was put to new uses. Men called John Wilkinson of Bersham (the first of the great ironmasters) "iron mad", because he was always pressing the use of iron for unheard-of purposes. But he lived to prove his mockers wrong, for he helped to build the first iron bridge,¹ he made at his works the first iron ship (1790), and insisted on being buried in an iron coffin. Meanwhile inventions completely altered the wrought-iron and steel trades. Huntsman of Sheffield first practised the casting of steel; and Cort, by his two discoveries (1783) of *puddling* (i.e. burning the impurities out of pig-iron) with coal, and the use of *rollers* to consolidate and shape the iron, made the manufacture of wrought iron far cheaper and far quicker. Cort's processes made the fortunes of the great ironworks of South Wales. Cyfartha turned out 10 tons a week before; by 1812 the output was 200 tons a week.

One can only give instances; there is no space for a complete account. The demand for coal stimulated mining. $2\frac{1}{2}$ million tons per annum was all we used in 1700; in 1750 the amount had doubled; in 1780 it was $6\frac{1}{2}$ millions. In 1740 there were no true cottons made; in 1789 we imported and manufactured 32 million lbs.; in 1815, 100 million. Yarn which cost 42s. the lb. to make in 1775, in 1815 cost 8d. Between 1740 and 1815 the quantity of cloth milled in Yorkshire had multiplied by eight; the value of exported woollens had tripled. In 1740 we hardly exported any iron; by 1815 the export was 91,000 tons.

¹ Brosely Bridge, 1779.

In fact wherever you look it is the same story: sudden activity and gigantic progress.

One other industry demands a little mention—china and earthenware. Here again is the same story—invention and expansion. Cookworthy discovered in Cornwall the china clay from which true porcelain is made. Till his time all the raw material had been imported. So began our porcelain manufacture. At the same time Josiah Wedgwood at Burslem improved the manufacture of earthenware out of all knowledge; new wares, good designs, colours, glazes, everything had his minute and careful attention. His works at Etruria became renowned throughout Europe, and set the fashion for other British makers to copy.

All this progress would have been seriously hindered if Britain had had to rely merely on roads, for roads in the eighteenth century were still extraordinarily bad. Turnpikes had been set up to pay for keeping the roads in repair, but Arthur Young, travelling over England about the end of the eighteenth century, only found four good roads. Upsets in coaches were still common. Young speaks of ruts four feet deep on the Preston Road, and in Essex a "mouse could scarce pass a carriage", while wagons sank in the mire, whence thirty or forty horses were needed to drag them. The first good roadmaker was a blind man, Metcalf of Knaresborough. His work was followed by that of the Scottish engineers Rennie¹ and Telford,² who were both roadmakers and bridge-builders. It was Telford who first opened the Highlands. He made 920 miles of road and more than 1200 bridges. Till his time there were only ferries over the Tay at Dunkeld or

¹ Born 1761.

² Born 1757.

the Spey at Fochabers; no mail coach ran north of Aberdeen; Justices and the advocates on Circuit always rode. Telford also built splendid roads from Carlisle to Glasgow, and through North Wales, and in various parts of the country. His most conspicuous work was the suspension bridge over the Menai Straits. The most important improvement of the time was the use of better material for road surface. Telford did something towards it, but the real improver was another Scot, John Macadam,¹ who showed that stone must be broken into small angular pieces of a fairly uniform size, if the road was ever to become hard. So long as rounded stones, unbroken flints, and gravel were used, the road would not bind, and traffic would soon break it up into ruts. From his time "macadamized" roads have given perfect satisfaction for all except the heaviest city traffic, till motor cars came to raise dust; and even now his system is only reinforced with tar: men now speak of "tarmac".

Over these improved roads the mail coaches, started by Palmer of Bristol in 1784, could maintain a good speed.² An average of eleven or twelve miles an hour was kept up over long journeys, by means of constant relays of post horses, while worthy persons could career about the country in post chaises in pursuit of the heartless Mr. Jingle, or with Mr. Bob Sawyer on the roof.

However good the roads, they were quite unsuited to the heavy traffic of goods. The cost of carriage would have been prohibitive. But some time before the days of Telford and Macadam, another engineer had given England a better means of communica-

¹ Appointed surveyor-general of the Bristol roads in 1815.

² See De Quincey's essay on the mail coach.

tion. This was James Brindley (born 1717, died 1772), a Derbyshire millwright. He was only half-educated,¹ and his first employers thought him half-witted. But he was a man of amazing capacity and enterprise. Having made a name by curing rickety mills and defective pumps, he was mentioned to the Duke of Bridgewater, who was seeking for some means to send coal from his pits at Worsley into Manchester and Liverpool. It was only ten miles, but in those days coal was carried from the pits in "horse loads" (280 lb.) slung in two paniers on a horse's back. Between Liverpool and Manchester the cost of carriage was 40s. a ton by road and 12s. a ton by the river Irwell. Brindley undertook to build a canal; and he grasped the true principle of canal making—that "water is a giant, but the giant must be laid flat on his back"; in other words, to keep to one level as far as possible, even if it involved making lofty aqueducts or long tunnels. So he carried his canal 39 feet high across the Irwell in an aqueduct; and later for the Grand Trunk Canal he tunnelled through Hare Castle for a mile and three-quarters. The "Duke's canals" put Liverpool, Manchester, and the collieries in communication; the Grand Trunk Canal (with branches) ran through the centre of England and opened waterways between Liverpool, Hull, and Bristol, by uniting the waterways of Mersey, Trent, and Severn. In all, Brindley himself laid out 360 miles of canals, and his imitators, when the way was shown to them, made many hundreds of miles more, till Britain was covered with a network of canals.

¹ To the end of his days he could not spell and could hardly write. "To masurin Duk's pools" is one entry in his diary; "atin and drink 6d." another. His success must not be taken as an argument that education is needless.

Nowadays we have railways, and their speed seems to make canals antiquated. But for many purposes canals are better than railways. They are cheaper, if slower; they can carry enormous quantities of goods; and for brittle goods, such as earthenware, they are much the best. Unluckily, when railways came, canals declined; and in many cases the railway companies, shrewder than the public, bought up the canals as being dangerous rivals, and have let them go to ruin. Yet they were in their day invaluable; the great outburst of industry and commerce that marks the end of the eighteenth century would have been crippled without them; and the making of them bred a new race of men, the "navigators" ("novagtors" is Brindley's usual spelling), who were used to hard work and not afraid of it, men of rough skill and endless perseverance, who at one time made the powers of the British "navy" the wonder of all Europe.

CHAPTER XXII

The Agrarian Revolution—New Methods of Farming—Enclosures—The Decay of the Yeoman Farmer

The North and middle of England having turned into a hive of industry, as related in the last chapter; new towns having sprung up and old ones grown out of recognition; a vast increase in the population¹ having taken place: it is easy to see that there would

¹ 50 per cent in the latter half of the century.

be a great demand for corn and meat. As Britain was in the eighteenth century still a "protected" country, both by law and by nature,¹ we should infer that the new demand made farming in the eighteenth century both busy and profitable. Partly this was true; partly, however, it was (rather contrary to expectation) false. We must trace in more detail the results of this new demand for agricultural produce.

(1) It caused a rise in prices; this helped farmers, who so made more profits on what they sold. In the long run, some of the benefit would go to the landlords, because they, finding the farmers making unusually big profits, would be able to ask higher rents. If, when his lease ran out, the farmer refused to pay a higher rent, his lease would not be renewed, and the farm would be offered in the market. Some other farmer would very likely agree to the higher rent, seeing that times were good, and hoping that prices would go higher yet. But rents rise less quickly than prices; and thus both farmer and landlord would so far be prosperous. Still more prosperous would be the man who owned the land he farmed; he would have no rent to pay, but would take all the profits—that is presuming that nothing interfered to prevent him from taking full advantage of the new demand.

(2) The increased demand encouraged farmers to use new and better methods. In the eighteenth century many improvements were made. Men first realized the value of clover and lucerne, whose deep roots break up and cleanse the soil. The use of turnips became common, thanks to Jethro Tull, who

¹ A country is protected *by law* when, by duties, foreign goods are discouraged in order to benefit home goods. It is protected *by nature* when foreigners cannot conveniently send things to compete in the home market. In 1800 meat and perishable things could not be imported; there was no cold storage.

first used a drill for sowing in lines, and taught the value of hoeing. His teaching was taken up by Lord Townshend, who had recently quarrelled with his old friend Walpole, the Prime Minister, and had retired from the Ministry to his Norfolk estates to farm. He began the "Norfolk" course, a rotation of four crops, putting clover and turnips between his corn crops. Thus he kept his land always under crop, instead of wasting a year in "fallow", and did not impoverish it by taking two corn crops in succession, as had been done under the old "open-field" system¹ (see p. 9). Not only did this yield more and keep land in better condition, but the turnips provided winter feed for cattle. This, again, helped the farmer in two ways. Not only did fatter beasts fetch better prices, but being stall-fed in winter the manure could be collected and used. Further, men were beginning to pay more heed to judicious breeding. Bakewell of Dishley's sheep—the "new Leicesters"—yielded just as much wool as the old sheep, which had been heavy-boned, long-legged beasts, "with skin rattling on the ribs like a skeleton covered with parchment"; but being compact and well covered with flesh, they yielded far more meat. The breed of cattle was also improved. Hitherto oxen had been gaunt, leggy beasts, useful for ploughing; but now Shorthorns, Herefords, and Devons made the "roast beef of old England"

¹ Compare:—	Norfolk Course.		Open-field System.
	corn	.....	corn
	clover	.....	corn
	corn	.....	fallow
	turnips	.....	corn
	corn	.....	corn
	clover	.....	fallow
	corn	.....	corn
	turnips	.....	corn
	corn	.....	fallow

more worthy of its name. The average weight of beeves at Smithfield went up from 370 lb. (1710) to 800 lb. (1795); sheep increased from 28 lb. to 80 lb.; calves and lambs in proportion. Meantime many farms had also risen hugely in value; the Norfolk estates of Lord Townshend's, where hitherto "two rabbits had fought for every blade of grass", became very valuable. Arthur Young speaks of a general increase round Norwich of ten times in value.

Splendid days for the farmer we shall guess, but we must not be too hasty. All this prosperity depended on these new methods of crops and breeding; but—farmers are a slow-moving race—did all the farmers use them? Could they use them?

We have seen that in very early days all the land was cultivated as "open field" under the old three-field system of corn, corn, fallow. Then came the Black Death, and after it a great increase of pasture farming. A certain amount of land had also been "enclosed" for arable farming. But with all this the bulk of English cultivated land had remained as it was. In 1700 three-fifths of it was still "open field".

Picture, then, the "open-field" farmer, seeing these methods and desiring to try them. Can he? He is the possessor of a mass of strips of land, scattered here and there in wide fields, severed from the strips of his neighbours only by turf-baulks. He cannot grow turnips or clover instead of leaving his strips "fallow", because his strips are *unfenced*, and the wandering village cattle will soon devour any green stuff. He may make his strips models of well-kept land, free from weeds and thistles, but the thistle seed blows over from his lazy neighbour's strip and his work is lost. He may desire to drain his land; but where is he to run the water away? His neigh-

bour will not let him run it on to his land. He may buy well-bred sheep or cattle; but he has no pasture of his own; he must turn them out on the village pasture with the other village beasts. The breed will soon be lost; scab and disease will infect them; his labour and money are wasted. In short, for the "open-field" farmer, progress was impossible. Others could profit by new methods, but not he. He was like the thirsty traveller in the desert, tormented by the mirage of water. It seemed within his reach, in reality it was not.

The only remedy was to get rid of this old cumbersome worn-out system of open field; to share up the land anew, giving each man his holding in a compact piece that he could enclose and till his own way. It sounds easy and reasonable; but it is not easy to get men to see reason. To enclose and partition the land of an open-field village, everyone must be agreed to make the change. Some men are obstinate, dull, selfish, haters of change. These will be suspicious; they will wish to stay as they are; they hate new-fangled methods; and everyone will want the best bit for himself. Hear them in the village alehouse discussing the proposed change: "My fayther and my grandfayther and his fayther afore 'im 'ad the same bit," says one, "I ain't a-goin' to move." "Oo wants turnips and 'oein' of 'em?" says another. "Why should Giles 'ave the best bit in the ninety acre?" enquires a third; and all echo that. Finally: "Us'll let Squire know us doan't want no changes."

Still, the majority may in time be converted; and if the lord of the manor and four-fifths of the commoners agree, a private Act of Parliament can be got, overriding the obstinate, and compelling enclosure. Three thousand of such Acts were passed in George III's

reign, besides a general Enclosure Act in 1801. Thus most of the open field was broken up. Yet even so prosperity did not always come. Private Acts of Parliament are expensive, and entail heavy lawyers' charges. When at length his new allotment of land came to the farmer, he had to fence it. That costs money too, and in the process of change agriculture has been for the time upset; he has lost a lot of his crops. He has lost other things too. Very probably the village common has been enclosed with the rest. He can no longer pasture cattle there, nor cut turf for fuel, nor gather wood for firing. He is pinched for money, and the new methods demand money to make a start; straightway he is in difficulties.

The small man was hard hit, too, by something outside his control, by those very improvements in machinery which had caused this growth of trade and of population clamouring for more food. In old days, most of the woollen industry had been a *by-industry*, practised, that is to say, at home in the cottages at nights. In the winter, hand looms had clattered, spinning wheels whirred, evening after evening; cloth and yarn had brought good prices to eke out profits from land. In the last twenty years of the eighteenth century, machines were beating the hand-weavers and hand-spinners out of the field. So another prop was loosened, and fell away just when the small man needed it most.

At his wits' end for money, he will be tempted to sell his land. With land so profitable for the man who has money, he will not be long in finding a buyer. Besides, land meant to the rich man more than profit; it was the mark of a gentleman to be a landed proprietor with a big estate; moreover, it

meant votes and political power. Many men were looking out for land; many others busy in adding to their estates. The small man was soon bought out.

So as usual the race was to the strong. In agriculture, as in manufacture, the eighteenth century saw so many changes that we may speak of an *agrarian revolution*: new methods and new crops; large farms instead of small; enclosures in place of open field; and new men in the old acres; gain, and loss. Big crops were gathered, and the large farmer thrived; but the small man, especially the small owner, went under. At the beginning of the eighteenth century there were 180,000 freeholders in England, mostly what we call "yeomen"—small freeholders. By the end of the century the yeoman was practically extinct.¹ He was left behind in the race of competition; he had no capital to pay for drainage, hedging, and expensive manuring; he was beaten. He was bought out, went off to the towns to try something else, or sank into being a mere agricultural labourer, working for wages on the new big farms.

Perhaps yeoman farmers did farm badly; none the less they were, as men, a fine class. They did not make much show perhaps, but they had what is called "a stake in the country". They were "good citizens" in the largest sense of the word. As the land was their own, they had worked hard on it—better than men work for wages; and in an earlier day they had been the backbone of the nation. Experience has shown over and over again that those States thrive best whose land lies chiefly in the hands

¹ So Arthur Young says. Recent investigation, however, has shown that more survived than was at one time supposed, but there is no doubt that they very greatly diminished.

of small owners. It was these men who had provided us with our best soldiers; they who, under the leadership of Fairfax and Cromwell, had saved the liberties of England in the seventeenth century. They were solid, safe, trustworthy men, not very enlightened perhaps, but sound patriots; and England could ill afford to lose them.

CHAPTER XXIII

Laissez Faire—Distress and some Remedies— Factory Acts and Trade Unions

The eighteenth century, and especially the last half of it, was a time of far-reaching change, and revolution seemed to be in the air. It infected trade and agriculture in Britain just as it attacked men in France. So far we have followed its results upon inanimate things, goods and machinery, roads and canals, farms and fields. We have seen a huge growth of wealth, a vast increase in speed, output, and activity. There is another side, however. When a machine tended by one mechanic does as much as one hundred hand-workers, what becomes of the ninety and nine? When industry clusters in factory towns, what of the dwellers there? When old England passed away and modern England took its place, what of the men who were born under the old system, and now found their occupations gone and their places filled?

When a thing easily adapts itself to new shapes, new conditions, and new channels, we borrow a metaphor from water and describe it as "fluid". Much

of commerce is fairly "fluid"; goods do not mind whether they are sent to one market or another; but mankind—or to use a technical term "labour"—is far less fluid than goods. For example, skill in hand work is not easily applied to new conditions of machinery; nor again does labour move easily. If better prices are to be had in one market than in another, merchants send goods there readily; but the workman has a home, wife, and children—baggage not easy to transport in the times before railways; he has friends; he is not accustomed to travel and dislikes the idea of stirring, even if the hope of better wages is held out. Economists speak of the "flow" of labour, but it is a very tardy flow even in our own days. In 1800 labour was very reluctant and slow to move at all.

Thus a change in industry and occupation is always hard for the time upon the workers. In the end they may benefit; but the process of changing is sure to be painful. So we must trace in a little detail the effect of the eighteenth-century changes upon labour.

In the Middle Ages the workman had been under the rule of his Craft Guild, which had attempted to check what was thought to be injurious competition and to secure a fair recompense in return for honest work. When the Guilds perished, Elizabeth's *Act of Apprentices* had placed the regulation of wages in the hands of local Justices, who were to draw up rates of wages for different trades in their district. It is doubtful whether this Act was ever widely kept, but certainly by the beginning of the eighteenth century it had fallen into disuse. Where wages were not fixed they would be left to ordinary bargaining—competition as it is called. But a great mass of workers did not get wages at all. The hand-weaver and hand-

spinner who works at home for himself is not concerned with wages; he is his own employer, works what hours he chooses, sells at the best price he can, and takes what profit he makes.

Thus when the factory system began, it found neither law nor custom already in force to help to settle the *hours of work* or *wages*. The spirit of the old time—now passing away—had been for *regulation*; the new idea was for *freedom*, for leaving men to make their own bargains. It was held that each would do the best he could for himself; that this would lead to a good result; that if the State meddled it would only muddle; that industry should, in a word, give free play to competition. This idea of complete freedom for the individual, and complete absence of interference by the State—which was praised as ideal by many of the political economists—is generally called the policy of *Laissez faire*.

The idea of *Laissez faire*, however, proved more successful in theory than in practice.

We have already seen something of the effect of the agrarian revolution on the farmers, especially on the yeoman farmers. It remains, however, to consider the case of the labourers. They, quite as much as the yeoman farmer, suffered from the decline of hand-spinning and hand-weaving at the end of the century. But even before this, their case had been hard. For the first half of the century, prices were low and wages were rising; but with the leap in the population beginning from 1750 prices began to go up, and in the last twenty-five years of the century they went up very fast indeed, leaving wages far behind. Corn, butter, meat, and all necessaries became dearer and dearer, especially when Britain plunged into the long war against France,

and tax after tax was put on to meet the cost of ships and soldiers. About 1740 the average price of a quarter of wheat was 30s.; by 1790 it was 45s.; from 1802-8 it was 73s. In the famine years it was terribly dear—116s. in 1801, 155s. in 1812. The poor man, it is true, ate less white bread than he does now, but all grain was dear in proportion. Agricultural wages differed much in different parts of the country. About 1780 they were 10s. 9d. near London, 6s. 3d. in the Midlands, even sinking to 4s. 6d. in Lancashire. It is plain that no labourer could live and keep his family on 4s. 6d. a week; the by-industries of spinning and weaving sometimes brought in enough in addition to his wages to keep the home together. But even at the best conditions the labourer had a terrible struggle; at the worst it was hopeless. Many gave up altogether, and "came on the parish" for relief out of the rates. This led to disaster.

By the system of poor relief settled in Elizabeth's day, outdoor relief was to be sparingly given—and that only to those who were past work. The man who was able-bodied, but who could not find work, or said he could not, was to be set to work in a workhouse. With the distress from 1770 onward, men came more and more to the workhouses. This distress in the country set kind-hearted men thinking of a means to help, and about 1780 they began to be less strict with the poor relief. They took to making weekly allowances of money to those labourers who seemed most in need. They thought it was better to give men a little relief in their own homes, than leave them till want drove them to the workhouse.

It seems fair, but as it was used it was a bad

remedy. The real cure was a rise in wages; the farmers should have paid their men enough to live upon. But this plan of making allowances from the rates was disastrous. It discouraged thrift and encouraged idleness. If a man could show he was very badly off, with a large number of half-starved children, he got a big allowance. So the lazy man was tempted to make himself as wretched as possible; he never tried to do the best he could; he married early, with no thought as to whether he could keep wife and children decently or not. On the other hand, the self-respecting man who was too proud to become a pauper had to pinch and starve; he could not afford to marry. Then, of course, idle fellows bring up their children badly, and so the mischief spreads. In fact it is easy to see that the result of the "Allowance System" was to encourage wasters and to breed wasters; while it often prevented the marriage of the best men, who would have brought up children well. Besides this it was terribly expensive: rates flew up as paupers multiplied. In some cases they rose to twenty shillings in the pound.

Many of the artisans in the towns were as ill off as the labourers. They too were hit hard by the high prices of food, and bread riots were common enough during the war. They had troubles, too, of their own. They were very hostile to the new machinery; they felt that when machines saved labour, there would be men out of work, and so they often broke the machines. Crompton's house and machines were wrecked for this reason, and a set of men calling themselves "Luddites"¹ broke the stocking-frames round Nottingham; the same hostility was common

¹ After a half-mad boy named Ludd, who broke a stocking-frame in a fit of temper.

in Yorkshire and Lancashire.¹ Really the machines were not so dangerous as the artisan believed. They did throw the hand weavers and spinners out of work, and these certainly suffered till they could find new work; but generally the machines made trade so brisk that there was a fairly good demand for labour. Every new trade was thriving and men were needed.

The artisans really suffered, however, in the conditions of their work. There was a loss in the drawing of them into the new factory towns, where life was less open, the air less pure, the surroundings less healthy than in the villages. That loss was inevitable. It was greater then than it is now, since lately housing has been improved, and more care taken for health and open air than was done at the beginning of the nineteenth century. This was not, however, their greatest loss. When men worked for themselves in their own cottages, they were their own masters as to hours.² If they felt tired they could stop. But the new giant—Steam—was never tired, and the “hands”, as they were coming to be called, had to keep pace with him. In the factories at first the hours were cruelly long: a twelve-hours day, not including meal-times, was common; it was often thirteen or fourteen hours. There was no Saturday half-holiday, and, week in week out, the hands toiled with no break save the Sunday. The factories, too, were not the factories of our day. Many were good, but others were often cramped, ill-lighted, ill-ventilated; often damp and overheated; the machinery was unfenced; no pains were taken to insist on any pre-

¹ Charlotte Brontë's novel *Shirley* gives an excellent idea of these troubles.

² They often overworked their own children, however; and the conditions of industry carried on in cottages are very unhealthy, since the same room was commonly used for working, meals, and sleeping.

cautions for health. The result was that disease and injuries were far too common. The dust of the Lancashire cotton mills, or from the grinding of steel goods in Sheffield, soon settled on weak lungs; lead poisoning carried off workers in the potteries; exposure and sudden changes from the damp heat inside the mills to the chill winter air brought bronchitis and consumption.

Even more to be pitied than the men were the children. Machines did the heavy work; in many cases all that was needed was someone to mind them, to piece together a broken yarn, to feed or replace some temporary trifle. Women and children could do that, and it was soon found that children's work was the cheapest. So children went to the mills with their parents, and worked the same hours; hours which were too long for a man were cruel for children. Yet they often went to the mills at the age of nine and sometimes younger. "I have seen them", said a witness in the House of Commons, "fall asleep, and they have been performing their work with their hands while they were asleep after the machine had stopped." Sometimes under brutal workmen they were whipped or soused in water to wake them. In some cases the children were set to heavy work, too heavy for young bodies; and the effort to do it resulted in deformities. One witness, asked if there were many children deformed in this way, replied: "Yes; in my town you could find wagon-loads".

Here was an extremely serious state of things. It is bad enough if the men have no leisure and no rest; it is far worse if it is the same with the women and children. It means the destruction of the home if the woman cannot attend to her children, and good

homes are the first thing needed for a sound nation. Again, if the children grow up overworked, listless, with no time for education, and no time for what is even more needful to a child, namely healthy play, it means that the next generation will be spoilt, and the effect of that will be long felt. In fact, during the years from 1800 to 1830, what with the evil conditions in the factories among the artisans, and the disastrous allowance system in the country, England went near to spoil her workers altogether.

A hasty conclusion lays the blame on the employers. But this is not fair. We admit now that a man should be paid what we rather vaguely call a living wage, though it must be remembered that in 1830 economists were teaching that all this should be left to competition. But it was not the employers who brought the children into the mills. It was their parents who sent them there; they took the children's wages; and they—greedy for money—exposed the children to these long hours and hard conditions. If the wages had been doubled the children would have been no better off. The only result would have been that parents would have been more tempted to send them to work early. It was a lack of understanding of the new conditions, a lack of sympathy, and a lack of power to bargain. Children cannot bargain at all; and a workman, *alone*, cannot bargain effectively; he must either work or starve. A week's work not done is pure waste: it is a week lost; it can never be made up. The employer could afford to wait, but the workman could not. Thus people began to see that "*laissez faire*", the policy of letting all industry alone, might be in theory sound, but in practice faulty.

Three sets of remedies were applied. The "New Poor Law" of 1834 returned to the older, saner ways,

abolished the allowance system, cut down the outdoor relief, grouped parishes into unions, promoted economy, and put the management of the poor relief into the hands of guardians. The result of it was an immediate drop in the poor rate, and a great lessening of the number of paupers. This chiefly affected the country districts. The evils of the factories could not be dealt with so promptly. But piece by piece reforms were made, very timidly at first.

In 1819 nine was fixed as the earliest age for entering a cotton mill, and the hours for children between the ages of nine and sixteen were fixed at twelve, exclusive of meal-times. In 1825 the hours were shortened on Saturdays. Earnest men were now taking up the matter, chief among them Lord Ashley,¹ the great philanthropist. Hours in cotton mills were shortened again for young persons in 1831, and Althorp's Act further cut them down to forty-eight hours a week for children under thirteen. This Act applied to all textile mills. In 1842 the state of affairs in mines was examined and found to be terrible, boys and women working in harness like ponies, dragging trucks of coals along galleries where the roof was so low that they had to bend double. By the Mines Act women, and boys under ten, were forbidden to work underground. Between 1847 and 1853 further progress was made. "Young persons" were not to exceed ten hours, and a Saturday half-holiday was fixed; and though these Acts only applied to textile mills, they came in the end, by the "Ten Hours

¹ Afterwards Earl of Shaftesbury. His attention was called to what proved to be his life's work—namely befriending the poor and the wretched—while he was still a boy at Harrow, by the sight of a pauper's body being hustled noisily and heartlessly through the street to the churchyard. A tablet on the school wall, bearing an inscription and his motto "Love—Serve", commemorates the incident that moved him to begin his momentous work for his country.

Act", to fix the ordinary working day for all. As the mills could not do without the women and children's work, when these knocked-off the factories stopped, and so the men got the same hours. And the principles of the Factory Acts about overtime have now spread practically everywhere, and Government Inspectors of Factories see that the rules are kept.

The Factory Acts, then, put in force a new idea. Giving up the doctrine of *laissez faire*, it is now agreed that the State must protect those who cannot, or will not protect themselves. And every year the State interferes more and more in industry. But there was still a third matter. As has been seen, part of the trouble came from the workman's lack of power in bargaining. To supply this power, to place the workmen in a position to make better terms with their employers, was the first object of the *Trade Unions*. Their chief aim was to raise wages. This was the third remedy for the early evils of the industrial revolution. Unlike the other two, it was not the work of the State; indeed the State was at first hostile to trade unions. They were regarded as conspiracies, and all "combinations of workmen to raise wages" were made illegal in 1799. Employers were more sensible, however. They often dealt with unions of their workmen, illegal though these were, and in 1829 the laws against combinations of workmen were swept away. It was impossible to suppress such combinations; to make them illegal only made them secret societies, and these are always dangerous.

Trade unions thus became legal, and they have grown steadily ever since. They have undoubtedly done a good deal for the workman. They have in-

creased his power of bargaining, and so helped to get him better wages. They have also collected money in the shape of Union funds by contribution from the workman, which they issue to help him when he is sick or out of work. We shall have to see something of their later history in another chapter.

Briefly summing up this chapter, we have seen that the period of the industrial revolution brought a good deal of misery. Part of it was due to industrial change from hand-work to power, and that was inevitable; part to unwise administration of the law—that was remedied by the new Poor Law; part to new conditions which in some cases left the workers unable to make good terms for themselves, and often led to their being overworked. This was due partly to lack of understanding and sympathy, partly to a belief that the wisest treatment of industry by the State was to let it alone. This was altered by the Factory Acts. Finally, trade unions made it easier for the workmen to get better wages. All these things, however, worked slowly, and are still influencing industry in our own day.

CHAPTER XXIV

Modern England and Modern Industrial Conditions—The Reform Bills and Free Trade

With the industrial revolution came, in the main, industrial England as we have it now. There are, indeed, important novelties belonging to the nineteenth century—railways and steamships, the penny post and the telegraph, and the establishment of free trade. These did not, however, alter the nature of

our industries; they made them easier, quicker, and wider. But the main features remained the same. It is worth while to set them down.

(1) We had become definitely a *manufacturing country*. Many more people lived by industry than by agriculture. The mill, the mine, volumes of smoke from forge and factory chimney, were the real marks of Britain's wealth. Britain is still figured as "John Bull" the Farmer; but John Bull has really given up that business and made himself into a vast company, "John Bull & Co., Manufacturers and Universal Providers".

(2) Also, we had become a great exporting country. We could not find a market for all our produce at home. A country that sells a great deal will buy a great deal; thus there was a *steadily increasing volume of foreign trade*.

(3) *The balance of population had shifted*. Yorkshire, Lancashire, the northern counties, the Midlands, and the neighbourhood of Glasgow, where the coal lay, drew industries and trade to them. The weaving business left the eastern counties; the iron furnaces of Sussex and Kent were put out of blast. So the part north of the Trent that had been the backward part of Britain came to be busy, while the south and east declined.

(4) With the shift of population had come a *shift in wealth*. At first the only rich men in England had been landowners; later there grew up a great merchant class; now, however, *the great manufacturers* came to rival them in wealth, if not in power.

This change in population and wealth was one of the main causes that led to the Reform Bill of 1832. Industry and trade are not political, but they are, at times, deeply concerned with politics. On the type

of member who is sent to Parliament depends what the attitude of the Government will be. During the eighteenth century the landed class was practically supreme in Parliament. Voters in the country were almost entirely owners of land, and even in the old towns the franchise was restricted to a relatively small class of electors; there were a mass of small so-called "rotten boroughs" which had members but very few inhabitants, while the new manufacturing towns had no members at all.¹ By a series of Reform Bills the franchise has been enormously widened. Speaking generally, the first Reform Bill in 1832 gave votes to the shopkeeper and householder class; the second, in 1867, gave votes to the artisan and lodger class in towns; the third, in 1881, included the agricultural labourers. So the aims of Parliament have changed very much. It is more under the control of what is—rather vaguely—called "the people"; it is ready to interfere in industrial matters, because it includes many men who feel that they understand them; it is, briefly, much more "democratic"—that is, ruled by the people. So, since the first Reform Bill, which began the widening of the franchise and for the first time gave members to the new great industrial centres, there has been an outburst of what we call "social" legislation—legislation "for the people". The Factory Acts are one example, National Education is another, Employers' Liability Acts another, Old Age Pensions another. This "democratic" character of the House of Commons has thus been of much importance in the history of industry.

¹ Leeds, Birmingham, and Manchester had no members in 1830; on the other hand Old Sarum, which had once been a town but was now a green mound, and Gatton, of which nothing was left but ruined wall, each sent two members to the House. These, and many like them, were "rotten boroughs" or "pocket boroughs".

The most striking evidence of this new spirit in Parliament was shown in the establishment of "free trade". Men sometimes speak as if "free trade" was begun in 1846, but this is inaccurate. That year certainly saw the destruction of the Corn Laws, chiefly on account of the Irish Potato Famine.¹ The people of Ireland were starving, and Sir Robert Peel, Prime Minister at the time, felt that he could not keep up taxes on foreign corn coming into the country when men were dying by hundreds of starvation in Ireland. Once the Corn Laws were off, it would be, he felt, impossible to put them back. So the Corn Laws went, and with them went the last bulwark of Protection. But long before 1846 the movement for free trade in manufactures had been going on. Adam Smith started it in 1776 with his book the *Wealth of Nations*. The younger Pitt took up his ideas, and did away with a mass of duties on foreign trade. Huskisson put an end to the Navigation Acts, which especially favoured British ships, and abolished or reduced many more duties in 1823; and Peel himself made almost a clean sweep in the years from 1842 to 1845. In 1842 all export duties disappeared, and 430 out of 813 duties on raw materials. Thus the change was made bit by bit, till the Corn Laws had become practically the only relic of the old Protection.

This reduction and sweeping away of duties came from several reasons. First, it was seen that high duties encouraged smuggling, and as the Government had to keep up a vast mass of coastguards to

¹ Richard Cobden and John Bright had for some years before been engaged in a political campaign against the Corn Laws, and had gathered a number of Free traders to support them. Peel was half-convinced of the justice of their case, even before the Potato Famine came to decide matters.

try to check the smugglers, this often cost more than the high duty brought in; if the duties were reduced it would not be worth while to smuggle, and so the Government would gain in its revenue and save money by dispensing with a mass of coast-guards.¹ Secondly, it was found that when Protection was removed, industries did not seem to suffer. For example, when the Navigation Acts went, the shipowners cried out that they would be ruined; but shipping, which in twenty years before the Acts were repealed had increased 10 per cent, increased 45 per cent in the twenty years after their repeal. When the silk duties were reduced, the silk manufacturers trembled at the idea of huge imports from France; but in ten years they were exporting £60,000 of goods to France. This kind of thing happened over and over again, and so Chancellors of the Exchequer were encouraged to think that trades would always do best when free. It is certainly true that a "protected" trade is often a "lazy" trade; it is content with the market it has, and does not strive to develop. Competition may wake it up and make it do its best; on the other hand it may overwhelm it.

The corn trade, however, was not quite on the same footing, and the results of the abolition of the Corn Laws were somewhat different. Bread is, of course, the chief food of the people—a thing that cannot be done without. A rise in its price presses much more hardly on the poor than on the rich. It is practically impossible to economize in bread—except by starving. Further, Britain could not, in 1840, produce enough corn for its people even by

¹ People seldom smuggle unless duties are high; e.g. smuggling of tea is rare, but smuggling of cigars and of saccharine, on which there is a high duty, is still common enough.

cultivating very poor corn land; and corn grown on poor land is grown in a costly way, and so the price is bound to be high. In years of bad harvest the supply of British corn was nowhere near enough. But if the ports are "open", corn can come from abroad. If there is a dearth in Britain, there have probably been good harvests elsewhere; so the price will be kept low and fairly steady; there will be an end of "famine prices". Thus the abolition of the Corn Laws did mean much cheaper food on the average, and this acted like a rise in wages all round. The wage-earner did not get more money, but his money would buy more, so that he was distinctly better off. On the other hand, British farmers felt the competition of foreign corn very sharply; and one result of the Corn Laws was to discourage British corn-growing. So we came to depend still more on food from abroad; and this, in time of war, may be dangerous. It has led also to a decay of our rural population. Thus free trade in corn made the country for the time better off; whether it made it stronger is another thing.

One other point is worth notice. Agriculture was the last of our great occupations to be affected by the increasing use of machinery and power. A picture book of no more than sixty years ago shows men reaping with a scythe or a sickle, thrashing with a flail, and sowing by hand. Such things were still the rule. Nowadays threshing machines, drills for sowing, and machine reapers which cut and bind the corn in sheaves, are practically universal; and steam ploughs are much used in flat districts. But even with this, agriculture still remains the occupation least affected by machinery; and it has therefore received the least stimulus from the new knowledge

and power which have so profoundly influenced other industries.

CHAPTER XXV

Steamships—Liverpool and Glasgow

In dealing with the great mechanical progress of the nineteenth century, it is convenient to take the story of the steamship first, although steamships and railways grew almost together, and railways came into common use first.

The first steamship, the *Charlotte Dundas*, was built by Symington in Scotland in 1802, and proved successful as a canal boat. Five years later Fulton built the *Clermont* (with Boulton and Watt's engines), for use on the Hudson River in America. Bell's *Comet*¹ plied in 1812 from Glasgow to Helensburgh, and in the course of the next few years steamboats became fairly familiar on the Thames and on American rivers. In 1816 the first steamer crossed the Channel from Brighton to Havre, and in 1821 steam was employed on the packet boats plying from Holyhead to Dublin. In 1819 the *Savannah* crossed the Atlantic in 25 days, and in 1825 the *Enterprise* went from London to Calcutta in 103 days. In 1838 the *Sirius* and *Great Western* were built expressly for transatlantic voyages. They averaged about 10 knots, on a coal consumption of 30 tons per day.

So far, however, these "steamboats" had many practical defects. They were nearly all built of

¹ The *Comet's* engine had one cylinder, with a 16-inch stroke.

wood, which is not suited to steam navigation; they were all paddle-boats, and paddles are dangerous in rough weather; and finally, they only made a partial use of steam. They found it hard to carry enough coal, and so when the wind served they used sails, steaming chiefly when the wind was light or contrary. About the middle of the century substantial improvements were added.

The first was the use of *iron* instead of wood. Wilkinson, of Bersham, made the first iron vessel,¹ but the use of iron spread slowly. The first iron steamship was the *Aaron Manby*, running from London to Havre in 1820. No important transatlantic steamboat was made of iron before the *Great Britain* in 1843. After her success the use of iron became common, and in the 'sixties most new steamships were made of iron. Iron has many advantages over wood. The bottom of the ship fouls less, and so the speed is greater; again, being much stronger, the sides need to be far less thick—that means more room inside for both cargo and coal.² The ships are also stronger, more rigid, and better able to stand the strain of the engines. But now iron has been practically ousted by steel, which is even stronger and lighter. Since 1880, few iron ships have been built; steel is the chief material. Thus the cargo capacity has been enormously increased, even allowing for the coal bunkers.

Besides being made of iron, the *Great Britain* embodied another most important novelty. She was the first big *screw* steamer. The real value of the

¹ An iron barge was used on the Foss before his time.

² It must be remembered that in a sailing ship nearly all the storage space is available for cargo: thus the early *wooden* steamers had to give up much space to coal, and that made them less profitable.

screw lies not in an increase of speed—paddles can drive a ship as fast in a calm sea—but in safety and economy. The screw lies down below, mostly out of reach of waves,¹ whereas the paddles and paddle-boxes are a mark for a heavy sea. But more important still, the screw does its work almost as well whether it is buried deep, or not much under water. It is little affected by whether the boat has a heavy cargo or a light one. But paddles only work well when the water just covers the lowest float. Consequently a paddle-ship on a long voyage soon got out of trim; as the coal was burnt the ship got lighter, and the paddles worked less effectively. Again, the rolling or pitching of the ship affects them enormously. One paddle will be deep in the water, the other nearly out. The engines will be strained and the work feeble. Thus the screw has great advantages, and since the days of the *Great Britain* it has become universal for ocean-going boats. Nowadays most big ships have two screws, so that if one breaks down, progress can still be made with the other.

A third field of improvement lay in the engine. The first marine engines were too slow for use with a screw; they had to be geared up. By degrees boiler pressures were raised—in 1850 they were still only 42 lb. to the square inch—and engines were coupled direct to the screw shaft. Engines were still very wasteful, however, till John Elder invented the compound engine, where the steam was made to do its work *twice*, once in a high-pressure and then in a low-pressure cylinder; this at once added to the power of the engine and cut down the quantity of

¹ In a heavy sea the screw is sometimes exposed and "races", i.e. revolves violently, having no water resistance. The engineer is on the watch for this.

coal burnt. Ships could go much farther at a lower cost, and the space needed for coal bunkers being lessened, the earning power of the ship was increased. This made the steamboat a commercial success, not merely for passengers who are in a hurry, but for goods which do not much want speed, but want a low cost of carriage.¹ Elder's principle has been carried further; marine engines are nearly always "triple-expansion". But a recent invention by the Hon. C. A. Parsons of the "turbine" engine is likely to revolutionize marine engines again. In the turbine engine the work is done by the steam at high pressure rushing through innumerable diagonal vanes (working somewhat on the principle of a windmill), and this does away with the cumbrous cylinders, piston rods, crank heads, and so on. The machinery is packed into very small space, and great speed is possible. So far the turbine engine is not very economical for vessels needing low speeds, but it will probably be improved further. It, however, provides the power which drives the great *Mauretania* through the fierce seas of the North Atlantic at 26 knots.

Still the sailing ship held its own for a long time. In 1870 the bulk of the trade of the world was still carried in wooden sailing ships. Since that time, however, first iron and then steel steamers have left wood and sails behind. The following table will show it:—

¹ At first sight it would seem as if steamers could never compete in economy with sailing ships. Coal costs money; wind is free. But *time* comes in. A sailing ship costs wages, and dues, and so on, even if there is no coal bill. If, then, a steamship makes two voyages while a sailing ship makes one, she makes two profits to one; and the extra profit will more than cover the cost of coal. Besides punctuality counts for something, and that the "traump" steamer can attain fairly well.

TONNAGE ADDED¹ TO THE REGISTER IN THE UNITED KINGDOM
(not including warships)

	Wooden Ships.		Iron Ships.		Steel Ships.	
	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.
	tons.	tons.	tons.	tons.	tons.	tons.
1860	154,000	7000	14,000	86,000	—	—
1870	73,000	7200	50,000	360,000	—	—
1880	18,000	1800	40,000	447,000	1,600	36,000
1890	7,700	1300	6,000	40,000	96,000	817,000
1900	8,700	4000	400	16,000	8,000	1,100,000

Briefly, in the 'sixties it was still mainly sails and wood; in the 'seventies it was iron and steam; the 'eighties onward have been the age of steel and steam.

In estimating the importance of steamships to the world, one must remember that, so far as carriage of goods goes, sailing ships could do the work as well in most cases, though not so fast. Therefore steamships have not caused the revolution that railways have done. Steam has not increased the *bulk* of cargoes to the same extent that trains have done, nor have steamships opened up the ocean, as railways open up a country. What they have done is to increase speed and punctuality. Their chief work has been for the passenger, and in dealing with perishable goods. They have made travelling easy; men nowadays go to and fro across the Atlantic with greater speed and more safety than they went from London to Edinburgh two hundred years ago. Thus steamships have helped nations to know each other, they have encouraged the emigrant and the colonist, the enterprising man who has a fancy to try his fortune in a far country, the business man and the commercial traveller. Also, they bring to Britain

¹ Numbers of wooden sailing ships were already in existence.

vegetables, eggs, meat, and all sorts of agricultural produce, which would spoil amid the delays of the sailing ship; but this is dealt with elsewhere.

It is worth while to say something briefly of the story of two great British ports. If we exclude London, and choose Liverpool and Glasgow, it is not because the importance of London's shipping, or the number of ships built on the Thames, is forgotten. London is still the first port of the United Kingdom, and was long leader in shipbuilding too. But Liverpool and Glasgow illustrate the change that the industrial revolution wrought in opening up the North. As ports they are in age mere children compared with London; yet they show how quickly children can grow.

Till the oceanic trade with the New World began to grow, Liverpool, facing as it does to the Atlantic, had no real opportunity. Its development began with the later years of the seventeenth century, and its early trades were all connected with the American colonies. Tobacco came from Virginia; sugar and rum from the West Indies; and a less reputable business, slave trading, also occupied many Liverpool ships. This last of course vanished when the trade became illegal for British ships in 1807, while the War of Independence from 1775-1783 for the time upset the tobacco business. Tobacco and sugar, however, still remain substantial Liverpool trades. But the real development of the port came with the industrial revolution, and the springing into life of the huge cotton industries of Lancashire and Cheshire. To bring over the raw material for these trades, chiefly from the Southern States of America, and then later to carry English cottons abroad, is the chief occupation of Liverpool cargo boats. Not only,

however, does Liverpool import and export cottons, but it is the doorway to the West which is chiefly used by all the manufacturing north. Machinery and hardware, iron, cloth from Yorkshire, and so on, mostly find their way to the sea through Liverpool. It imports also vast quantities of food, wheat, and grain from Canada, the United States, and Australia, beef from South America, mutton from Australia and New Zealand. An excellent example of how important *Oceanic* trade is nowadays compared with *Thalassic* is given by the relative importance of Hull and Liverpool. Each is on a big estuary; each has a huge manufacturing district behind it. But Hull and the Humber face eastwards to the Continent, and so lack the advantage which Liverpool and the Mersey have in opening on the Western Atlantic seaboard.

Still more characteristic of Liverpool than the volume of its trade is the passenger traffic carried on by the great liners to and fro across the ocean. In the list of the great steamship-owning companies of the world, two-thirds of the first twenty-five are under the Union Jack, and half of these are Liverpool lines. The best known of these is the Cunard, which started in 1840, being the first to undertake the regular carriage of mails across the Atlantic. It now owns in the *Mauretania* and the *Lusitania* the two fastest liners afloat. The *Mauretania* has done the passage between Queenstown and New York in about four and a half days.¹ Besides the Cunard, there is the

¹ The following table gives an idea of development of steamships:—

Comet (first British steamer), 42 ft. long; 3 h.p.

Britannia (first Cunard liner, 1840), 1154 tons; 207 ft. long; 740 h.p.; 8.5 knots; 115 passengers.

The *Mauretania* (latest Cunard liner), 32,000 tons; 790 ft. long; 70,000 h.p.; 26 knots; and carries 2000 passengers. It takes 22 coal trains

White Star Line, the Canadian Pacific, the Ocean Steamship Company, the Leyland Line, the Clan Line, the Ellerman Line, the Anchor Line, the Bibby Line, the Pacific Steam Navigation Company, and many others. Most of these send out one liner a week; several of them two a week; most go across the Atlantic, but many go either to South or West Africa; others to the East Indies; others to the Pacific coast of South America. In fact, if you meet any big liner at sea flying the Union Jack, it is odds on her being from the port of Liverpool.¹ Figures are easily forgotten; but these are perhaps striking enough to stick in the memory. During the eighteenth century the population of Liverpool grew nearly *tenfold*; such an amazing rate of increase could not, we might suppose, be kept up. But it has been nearly kept up through the nineteenth century also; Liverpool again grew to nine times its previous numbers. Yet fast as men have increased, ships have increased still faster. Forty-five thousand tons of shipping used the port in 1800; about eighteen times that amount used it in 1900. No wonder that Liverpool has 11 miles of docks and 28 miles of quays; it wants them all.

The Mersey stands for shipping; the Clyde turns our thoughts in another direction—that of *shipbuilding*. There is no better example of what determina-

to load her for one trip. Her funnel would just fill up Argyle Street, Glasgow, with ample room for the trams to run inside; the whole ship could barely be got into Northumberland Avenue by Trafalgar Square (London), and her top deck would reach nearly as high as the Grand Hotel (eight stories). The *Olympic* is still bigger.

¹ Of course there are many other lines besides the Liverpool ones. The Peninsular and Oriental, which carries most of the traffic to India and the East; the Orient Line trading to Australia and the East; the Union Castle Line, which goes to South Africa; and many others, are London or Southampton lines. But though Southampton has advantages for the passenger traffic in being nearer to London, and also to Dover and the Continent, Liverpool is nearer to the open sea.

tion and skill can do than the story of Glasgow. Geographically it has the same opportunities as Liverpool. But the Clyde as a waterway seemed hopeless.

Even before the industrial revolution, however, Glasgow was determined to become a port. At the beginning of the seventeenth century, when there was only 2 feet of water on Dumbuck ford, and only 15 inches at the Broomielaw; when the channel was blocked with sandbanks and islets; when vessels of more than six tons could not come within 14 miles of the city; when the builder of anything that even for early days could be called a ship, had to wait for a flood to get it down the river; even then Glasgow was struggling with its refractory river. Dumbarton refused the offer to be Glasgow's port, and in 1668 a bit of Newark bay was bought by the city and named "Port Glasgow". For a hundred years, efforts were made to get rid of the sand, but no real improvement came till Golborne hit on the plan of deepening the central channel by building jetties to throw the current of water into the centre of the river. The scour of the water would thus sweep the sand out. Dumbuck ford at low water was thus deepened to 7 feet, and in the course of a few years 14 feet of water was secured. The next obstacle was the huge whinstone rock disclosed in 1854 at the bottom of the channel near Elderslie. By this time 14 feet was not enough, and the rock had to be blasted away. This took some thirty years to do, bit by bit. But at last it was done; and by constant dredging the channel has been further deepened, till it is now 23 feet at low water and 34 feet at high water. As the size of ships built on the Clyde goes on increasing, this depth will probably have to be increased also. But doubtless it will be done.

On the city's growth and on its commercial wealth we cannot now dwell. It traded vigorously with America in tobacco, and with the West Indies in sugar; it has at its back a great manufacturing district, with coalfields and iron mines; it has been pre-eminent in turning out pioneers of industries—Watt, the inventor of the modern steam engine; Mushet, who first discovered the value of the "black band" ironstone; Bell, who made the steamboat a success; Neilson, the inventor of the "hot blast"; Napier, John Elder, and many others. But what is the chief boast of the Clyde is its shipbuilding. First wooden ships, then steamers, then iron ships, then steel ships, have been built in steadily increasing numbers on the Clyde. All the way from Rutherglen above Glasgow down to Greenock and Dumbarton at the mouth, the shipping yards crowd the banks. In some years half the tonnage built in the United Kingdom has come from the Clyde; and though the growth of Sunderland, the Tyne ports, Belfast, Stockton, and Hartlepool has a little diminished this lead, the Clyde still turns out more than a third of the total. It is still far ahead of any one competitor. In 1910 the Tyne built about 100,000 tons of British mercantile shipping,¹ the Clyde close on 170,000 tons. This on a river which, a hundred and fifty years ago, could be comfortably waded at low water!

¹ This does not include ships of war, in which the Clyde does a great business.

CHAPTER XXVI

Railways

Another of the inventions which mark the nineteenth century—perhaps even the first in importance—is that of the locomotive engine, which gave us railways. The plan of using wooden rails for trucks was common enough in mining districts even in the seventeenth century, and iron rails were used towards the end of the eighteenth century, while about 1800 a Cornish inventor named Trevithick had constructed an engine which ran on the roads, much to the terror of onlookers. Various colliery owners tried engines for hauling coal, but the first real progress was made by a Northumberland engineman named George Stephenson, employed at Killingworth, who in 1815 built an engine which really did work fairly well.¹ He conveyed the power from his cylinders direct to his driving wheels; he coupled his wheels with cranks; he saw that the weight of the engine was enough to prevent slipping on the rail, and that there was no need for racks or tothing which previous inventors had used; and finally by turning his waste steam into the chimney he got an efficient blast. The next step came with the appointment of Stephenson as the engineer of the Stockton and Darlington Railway, the first line opened to carry passengers as well as goods. In 1825 Stephenson drove the first train over it, six coal wagons, a passenger coach, twenty-one wagons filled with passengers, and then six more coal wagons, and “such was its velocity that in parts the speed was twelve miles an hour”. In spite of

¹ Some of the Killingworth engines built in 1816 were still at work in 1862.

this triumph men still doubted, and engineers in general reported that for the Liverpool and Manchester Railway, of which Stephenson was also engineer, the best plan was to have the trains cable-hauled by fixed engines. Stephenson eagerly pressed the locomotive, and in the end a solemn trial of engines was arranged at Rainhill in 1829. People came in crowds, as to the Derby. Stephenson's engine "the Rocket" was an easy winner, and triumphantly showed an average, with a 13-ton load, of 15 miles an hour.¹ This settled all engineering enemies, and henceforward there was no talk of anything but the locomotive.

People who disliked—as always—new ideas, struggled against the railways. Landowners declared they would spoil their property; farmers believed the smoke would kill the cows, or at any rate spoil their milk; innkeepers and horse breeders said the roads would be deserted and horses useless; no one would travel by them—they would not pay; the engines would burst; and even so sensible a magazine as the *Quarterly* called on Parliament to limit the speed to 8 or 9 miles an hour. In spite of the general hullabaloo, railways had come to stay. The London and Birmingham line was opened in 1838; others soon followed, and by 1840 over 300 miles of railways were open. Though checked once or twice by mad speculation when useless lines were planned, and worthless shares run up to high prices, ending in failures and panic,² progress has gone on steadily;

¹ The Rocket did better than its predecessors, as Stephenson had adopted the tubular boiler. A modern coal train weighs 700 tons, and a goods engine hauls it on the level at about 25 miles an hour. An express engine (weighing with the tender some 100 tons) hauls about 350 tons at a speed not much under 60 miles an hour on the level.

² In 1846, applications were made to Parliament for schemes involving a proposed outlay of £380,000,000; about one-third of these were passed.

and now there is hardly anything that can be called a town that has no railway joining it to the world.

At first the lines were local affairs. Later came the time of the big companies, formed by absorbing the small ones. The London and North-Western Railway developed out of the London and Birmingham; the Midland out of the Leicester and Swannington, and North Midland, and a host of other lines; the Great Western added to itself the Bristol and Exeter, the South Devon, and the Cornwall Railway. So came the great *trunk* lines, ensuring punctual co-operation, through journeys, and high speed.

For general purposes of travel and carriage of goods, railways are still unrivalled. Canals are cheaper, but much slower. Lately tramways and motors have taken up some of the work which railways did. Tramways are excellent for short journeys, cheap, and with frequent services. Motor power (depending on a different engineering principle—the explosion in a cylinder of a mixture of petrol and air instead of the expansive power of steam) is still in its infancy. The fuel is expensive, and though the speed is high, heavy weights cannot be carried. We may yet see the principle, however, adapted to the locomotive.¹

In giving cheap carriage and easy travel, railways have done much to level up conditions through the country. In old days there were great differences of wages in different districts, and some places were backward and oldfashioned. Now that travel is so easy, men move more readily in search of higher wages; thus there are no longer any great differences between one part of England and another. It is the same with goods. Of course, things are cheaper

¹ Some engines burn oil instead of coal; but this is merely a change of fuel.

where they are grown, or dug, or made; but again, railways have tended to lessen these differences. They give country people access to markets all over the land. Big towns draw their supplies from great distances. Far away in Cornwall you may see a train of trucks all filled with cauliflowers—for the London market: 280 miles away.

CHAPTER XXVII

The Post Office and the Penny Post

Even when travelling becomes easier, people will be slow to leave home if they feel they are going to lose sight of it entirely, if they are seldom going to hear news from those they leave. It may be, as it was in England of the 'thirties, that of the poorer people few could read or write; but it may equally be that the cost of letters is so great as to put them out of the reach of the poor. So it also was in England of the 'thirties. The story is well known, yet it will bear telling again, how Coleridge saw a poor girl receive a letter from the postman with the demand of one shilling for the postage, look at it, and hand it back, saying that she could not afford to pay. In compassion, Coleridge pulled a shilling from his pocket and, in spite of the girl's protests, paid the postage and gave her the letter. When the postman was gone she opened the letter, showed him to his bewilderment that it held only a blank piece of paper, explaining that it was the device whereby she and her brother sent each other news of themselves. So long as the letter came she knew he was well, and

the cost of postage, for they had no shillings to spare, was saved. And the brother was not in a distant land; he was only in another part of England. Such was the effect of the old high rates of postage in forbidding communication.

Such was the old system—postage proportionate to the distance and always very high;¹ payment on delivery; and the privilege of “franking”—that is sending letters of their own or of friends free of charge—was given to M.P.’s and members of the Government.² It happened that the story told above came to the ears of a Mr. Rowland Hill, and it struck him that there must be something wrong in a system which led brother and sister to cheating, in order to satisfy their love for each other. In 1837 he proposed a plan for a penny postage per half-ounce all over Britain. The Post Office officials said that the loss of revenue would be tremendous, but the Government took up his plan, and in 1840 penny postage was established.³ In that year the number of letters doubled; in nine years it had risen to nearly five times its previous number;⁴ and the lower postage still paid the revenue well. In seventeen years it was making more than it had done at the old high rates.

From 1840 onwards came a series of Post Office

¹ The lowest rate was 4*d.*; the average was 6*d.* London to Brighton 8*d.*, to Aberdeen 1*s.* 1½*d.*, to Belfast 1*s.* 4*d.*; if a double sheet was used the charge was fourfold.

² To frank a letter the M.P. wrote his name on the outside.

³ Why Hill’s proposal was accepted so easily was not merely because people agreed that a penny post would be excellent, but because in his writings on the matter he was able to *prove* by his skill with figures that the average cost of the actual carriage of a letter was only about $\frac{1}{16}$ of a penny, and was not much increased by the distance to which a letter was carried; the expenses of the Post Office in delivery and collection and other things made up the bulk of their expenditure.

⁴ In 1839 about 75 million letters went through the post—an average of 3 per head of the population. In 1884, 1322 million went—an average of 37 per head.

reforms. A book post was established. The Money Order department, which had begun in 1792 as a more or less private concern of three Post Office clerks known as "Stow & Co.", was made an official concern, and the charges much reduced. In five years the number of orders rose from 190,000 to nearly three millions. In 1861 the Post Office Savings Banks began. In 1870 the Post Office took over the telegraph system, and postcards came the same year. 1883 saw the starting of the parcel post; and since then we have had sixpenny telegrams, and repeated concessions allowing a greater weight of letters and parcels to be sent without increased cost. Finally came Imperial penny postage in 1898. It used to cost 8*d.* to send a letter fifty miles to Brighton; now one can be sent 12,000 miles to Australia for one penny.

The work, then, of the Post Office has been not unlike that of the railways and steamships. They have made it easier to bring men and goods together from distant places. The post brings distant *minds* and *ideas* into contact. Men can make their wants known, can advertise what they have to sell, can learn conditions of trade, and can deal with customers not only all over England, but all over the world.

CHAPTER XXVIII

Telegraphs and Telephones

Linked both with the Post Office and with the railways is the telegraph. Without it railway signalling would have been impossible and high speed out of the question. In business it is far speedier than the

letter, and informs men in London and Liverpool hourly how business is going in Paris, Berlin, and New York. Post Office, railways, and steamships have diminished distance for the body, since the only sensible way of measuring distance is by time and money. Miles do not matter; the only question is how long it takes to go and how much it costs. The telegraph has annihilated distance for the mind.

Before the electric telegraph, a rude method of signalling by semaphores was in use between London and one or two of the chief southern seaports. The first practical use of electricity for signalling was made by Wheatstone in 1837 on the London and Blackwall Railway. Just at the same time, Morse in America hit on almost the same plan, and also invented the Morse alphabet (the dot and dash system) which is now used everywhere. Many improvements in detail have been made, some of them to enable the telegraph to print its own message, others increasing its speed and convenience. Railways at once adopted the telegraph, and by its use, and by dividing their lines into blocks, have been able to make collisions extremely rare. Lately, electrical devices for automatic signalling have almost taken the place of the signalman on lines like the Metropolitan, where trains run at very short intervals. The taking over of the telegraph by the Post Office in 1870 has given the whole of England a telegraph system which is complete and reasonably cheap.¹

¹ "Press" telegrams are sent at a much reduced rate. Cables are, of course, rather expensive, but here the use of "codes" comes in. "Code" words are sent, and each word means a whole sentence, which can be deciphered by the use of the key to the code. Thus the following: "Have bought ex dividend Hull Corporation Stock First Issue £1000 nominal amount at par, and have canceled purchase of Glasgow Irredeemable Stock", can be expressed in two code words. The press rate across the Atlantic is 5*d.* a word (urgent) and 2½*d.* a word (non-urgent).

Land telegraphs came first. Three later extensions have followed. The first was the submarine cable. That between England and France was laid in 1851; others to Belgium, Holland, and Ireland soon followed. An Atlantic cable was planned in 1855, but the first cable broke in laying, and the second, in 1858, only worked for a month. A third attempt was made in 1865 by the *Great Eastern*, but again the cable broke, 4000 miles of it being left lying at the bottom of the Atlantic. Another cable was laid successfully by the same ship in 1866, and the broken one fished up and spliced, which gave us two transatlantic cables. Since that time submarine cables have been laid under many seas, and more than 30,000 miles of them are now in use.

In 1857, when the great Mutiny broke out in India, the news had to come by the steamships. Grey, then Governor-General at the Cape, had heard of the mutiny, but no orders had reached him from England, or could reach him for weeks. On his own responsibility he ordered a body of English troops destined for Persia to go to Calcutta. His prompt decision did much to save our Indian Empire. Nowadays, however, what happens in one part of the Empire is immediately known all over it. Day by day we were able to follow the story of the war in South Africa. On the Monday morning following the Black Week¹ the whole Empire learnt that huge forces would be sent to repair defeats, and that Lord Roberts and Lord Kitchener would go to command them. Not only in news and in business do these cables link the Empire together; the more intimately men know each other, the closer are the bonds of

¹ In December, 1899, which saw our repulses at Magersfontein, Stormberg, and Colenso.

union. Rudyard Kipling thus speaks of these cables:—

“The wrecks dissolve above us; their dust drops down from afar,
Down to the dark, to the utter dark, where the blind white sea-
snakes are.

There is no sound, no echo of sound, in the deserts of the deep,
On the great grey level plains of ooze where the shell-burred
cables creep.

“They have wakened the timeless things; they have killed their
father Time;

Joining hands in the gloom, a league from the last of the sun,
Hush! men talk to-day o'er the waste of the ultimate slime,
And a new Word runs between, whispering: ‘Let us be one!’

After the cables came the telephone, the result of Mr. Bell's invention, first shown in 1876 and pronounced the “wonder of wonders”. It has taken a long time to become common, but now the “wonder of wonders” is used by every business, common in many private houses, ready for the public in every post office.

Lastly, and more wonderful still, is Mr. Marconi's recent invention. Telegraph, cable, and telephone all depend on wires, but by using high-power currents, combined with extremely ingenious mechanism, Mr. Marconi has been able to telegraph *without wires*, and more, to send messages to vast distances. From his “wireless” station at Poldhu in Cornwall he has been able to communicate with Newfoundland, and with ships far out on the North Atlantic which carry his apparatus. They, in turn, can send messages to the land, can say where they are, or can call for help. They do not know who will get the message or where the rescuer is; it is, as it were, an electrical shout flung into the air that will be picked up by any ship that has the ears to catch it.

Compare Columbus' first voyage across the Atlantic with the modern liner's. He sailed into the unknown, at the mercy of the wind, out of sight of land, lost to the world for five weeks.¹ The modern liner knows where it is going, is driven by steam, takes five days to cross, and is in hourly communication with the land all the time.

CHAPTER XXIX

Some other Inventions—Standard Patterns, Cold Storage, and the Transmission of Energy

To give an account of the new uses of machinery in the nineteenth century would need a book to itself. A few salient points are all that can be given here. First, we may remark the vastly increased *use of iron and steel* for machinery, for shipbuilding, for bridges, even for buildings, now often constructed of steel girders and reinforced concrete. Three noteworthy inventions have increased the supply of iron and steel. The first was the use of the "hot blast" invented by Neilson, a Glasgow engineer. As the weight of the air driven through a blast furnace is greater than the weight of all the charge of iron ore, lime, and coal put together, it is plain that putting all this air *cold* into the furnace will mean a great loss of heat. By using the waste gases which came off the top of the blast furnace to heat the air before it was

¹ He started on August 3, 1492 (a Friday), put in at the Cape Verde Islands to repair, left there on Sept. 6, and first sighted land (an island) on Oct. 12 (another Friday).

forced in as blast, Neilson made a huge saving of heat and therefore of coal. The second two concerned steel, now relatively cheap, but in old days very dear. Bessemer discovered a way of blowing air through iron when it was liquid, and so making it burn out its own impurities; and Siemens invented the Siemens-Martin regenerative "open hearth", by which a far greater heat could be obtained than was possible before. In the puddling furnaces wrought iron would only grow pasty: it would not really liquefy. But if you look (through blue spectacles, for otherwise the glare will blind you) into a Siemens-Martin furnace you can see the steel actually boiling like water. So the price of steel, the strongest material known to man, was brought down till it became of common use for all sorts of things.

Again we have the invention of all kinds of *machine tools*. The Nasmyth steam hammer which urges by steam power a weight of 50 tons: the circular saw which tears its way through wood as we tear paper: the punching, drilling, and planing machines which will shape iron more easily than a carpenter shapes wood: the Jacquard loom which will weave patterns: the Blanchard lathe which will copy irregular things such as a gunstock: machinery that will weave a yard of lace more quickly than the hand-workers could do an inch—and would do its yard far more cheaply than the hand-worker's inch;—all these and others are illustrations of amazing mechanical skill. Or take another example of mechanical device, that of type-setting and printing. Instead of the old methods of setting the type by hand, and then inking and printing by a double to-and-fro motion, we have the "mono-type", which casts each letter mechanically as it is needed, and printing machines which carry the

"stereo" (the "cast" of the type) shaped in the form of a drum, so that it can rotate, being inked in one place and printing itself off on a long roll of paper as it goes round. Such a machine will reel off 3000 copies an hour. Newspaper machines work on this principle, and cut, fold, gum, and pile the papers ready for delivery.

All these are examples of the grasping of the real principle of machinery, namely its power to *repeat* and *copy*. Perhaps the greatest progress has been made in the use of what is called *standardization* of patterns. In old days of hand-cutting, screws were of so many different "pitches" that it was never thought worth while to try to replace one broken screw by another. A fresh nut and screw were employed. But Maudslay's slide rest and the screw-cutting lathe have done away with this confusion. It is only needful to specify a certain number and size, and you can be certain of getting a screw the exact duplicate of the broken one. Similarly with much machinery, with the parts of watches, of agricultural machines for reaping and sowing, of bicycles and motor cars; each part is made so closely to pattern that it is certain to fit.¹ This confidence that a broken part can be at once replaced makes it safe to use complicated machinery at long distances from any repairing shop. Thus the standardization of machinery has vastly increased its value, both by making it easier to use and cheaper.

Two further novelties call for a brief notice. The first is *the method by which food is preserved*. Origi-

¹ It is a common show-exploit with motor cars to dismantle half a dozen engines, to mix the parts at random, and to re-erect the engines. So accurately are the parts "standardized" that the machines are at once usable without further adjusting.

nally no means of keeping meat was known, except by salting it. Salt meat in quantities is not wholesome. Our sailors in war time, carrying on the wearisome blockades of the French ports, or even long voyages in peace time, suffered terribly from scurvy. The plan of tinning—first meat and then fruit and vegetables—has made the life of the sailor and the explorer, the soldier and the colonist in out-of-the-way places, much easier.¹ But the process of preserving food has been carried much further by the practice of *cold storage*. At first the meat was frozen, but now it is found that to chill it to a low temperature is enough. Thus we can get American beef and Australian and New Zealand mutton, practically fresh, in the home market. This has made for cheapness, but it has hit the British farmer hard. When the Corn Laws vanished and he lost protection against foreign grain, it was pointed out that in many things he had a *natural* protection. It was impossible in 1850 for the American and Australian farmer to compete with farmers at home in meat; and so long as carriage was mainly done by sailing ships there was not much competition in things like butter, eggs, vegetables, chickens, and so forth from the Continent. Now, however, the swift steamer and the plan of cold storage have almost removed this natural protection and thrown the British farmer open to the competition of the world. Not only does he compete against American beef and Australian mutton, but he has Danish and French butter, Russian fowls, South African and Californian fruit,—in fact every kind of produce from abroad in the

¹ On the other hand there has been a loss where country people at home, instead of eating the fresh simple food of their native villages, sell their own produce to the towns, and live instead on tinned meats and preserved food.

market against him. This is no proof that he ought to have protection; it is only the pointing out of a fact, namely that the natural protection in perishable things which he enjoyed in 1850 has—contrary to all expectation of the time—vanished. He has, therefore, lost; the consumer has of course gained—in cheapness.

Another novelty of which we only see the beginning, is the discovery that power can be transmitted electrically to great distances. Steam cannot be sent along a very long pipe: it cools. But the drop in the energy of electricity at the end of a long wire is relatively small. Thus it is possible to develop electrical energy in one place where power is cheap, and send it to another where power is wanted. There is a great deal of unused power which Nature supplies for nothing in waterfalls. This can be turned by means of turbine wheels and dynamos into electrical power, and sent off along wires to distant places. For example, most of the machinery in the town of Buffalo is driven by power extracted from the Niagara Falls, thirty miles away; and men are planning to send power from the Victoria Falls on the Zambesi to much greater distances.

In our islands we have not much water power, though it is true that a good deal more could be made available. In Scotland and Wales, at all events, the obstacle is not so much lack of water as the difficulty of collecting it and storing it in artificial lakes. But though water power could be obtained, it is not very effective in a country where coal is cheap. Power can be developed more effectively by using steam engines or gas engines to drive dynamos. There is, however, another side to the same question. It does not follow that the right plan is to send coal about the

country in trucks; it may become more economical to use it at the pit's mouth, generating electrical power there, and then transmitting the power along the wires. If this were done there would be less need for industries to congregate in factory towns, and many of them would move out into the country, where rates would be less, and the surroundings healthier. Again, though we have few waterfalls we have a great source of unused power, round the western coasts in particular, in the great daily rise and fall of the tides. No one has yet found a means of using this, but that is no reason why a means should not be found. Finally as no country stands by itself, but is in constant competition with its neighbours, we may have to meet the rivalry of a country which has an abundant supply of Nature's power in waterfalls. Norway has it, but does not yet use it.

CHAPTER XXX

Modern Tendencies—Combines, Trade Unions and State Regulation

Leaving new processes and inventions, we may turn for a moment to notice modern tendencies in trade and industry. And first we shall remark a continued tendency towards bigness. This does not merely consist in working on a huge scale, with large factories, more powerful machinery, enormous capital, vast numbers of "hands" and a colossal output, though this is part of the truth. The "big" houses have many advantages over the small em-

ployer. They can afford expensive improvements which he cannot afford; they can take full advantage of the division of labour, which may be beyond him; they can advertise more widely; they can beat him in speed and in price. There is, however, something beyond this. Industries tend to combine in great associations; the ironmasters, the coalowners, the master-spinners, the soapmakers, the electrical cable manufacturers, the shipbuilders, and many others each combine, and these combines or federations or "rings" tend to grow wider and stronger. They begin in a district, and grow to cover all the firms engaged in some one trade in the country. They agree to stand by each other in case of trouble with their men; in some cases they agree to limit competition among themselves, to check "cutting" of prices, and do what they can to keep prices at a remunerative level. This is even more marked in America than in England, since the manufacturer in America has little to fear from outside competition. But even in England the practice of combining has grown very much, and it is becoming more difficult for any manufacturer to keep out of these combines or to act against them. They have often the power to "freeze him out", that is to say to lower prices till he is undersold and beaten. Either he has to give up or to come into the combine.¹

These "combines" of manufacturers have been accompanied by, and in some ways have been caused by, great combines in labour. First the trade unions were *local*; they were the spinners, the weavers, the

¹ The history of the Imperial Tobacco Company, formed to resist the attack of an American combine on the English trade, illustrates this. It has resulted in the creation of one of the great monopolies which we have in England. The Sewing Cotton Combine is another example.

engineers, the bricklayers, and so on, of a particular town or district. Then they grew and became *national*; all the spinners, or weavers, or engineers of Great Britain each joined in their own union. Then they took a step further, and trades which were associated began to act together. Each union remained distinct, but all the unions covering one great industry agree to unite in a common policy. We have lately seen the dockers, the transport workers, the railwaymen, and the coal miners all uniting; and the tendency is going further yet, when trades, whose interests are not at first sight the same, propose to unite; for example, miners and railwaymen. A long strike of railwaymen, if successful, would speedily paralyse much of the coal trade, and so throw miners out of work; and the recent strike of coal miners produced widespread distress in almost every industry. But miners and railwaymen and the other trades have this in common, that all want to get better wages; and they think that a huge strike, which would cause the greatest possible distress, is the best way of getting their demands. In these "sympathetic" strikes as they are called, where one trade strikes to assist another, we have a new tendency. It is another illustration of the bigness of modern industrial concerns: it shows a growing *solidarity* in labour as a whole. And it has been accompanied by a great increase in the political power of labour. Many workmen nowadays refuse to be either Liberal or Conservative in politics; they choose to belong to the "Labour" party and vote for "Labour" members. And the number of these increases.

Another tendency in modern industrial conditions is the increasing interference of the State. The work begun in the Factory Acts has been carried much

further. Things like "overtime" are no longer left to the employer at all; at least he cannot compel men to work overtime, and if they agree to do the extra work the rate of pay is bound to be increased at a prescribed rate. Practically every place where people are employed is liable to inspection, and the Government inspectors can compel the employer to carry out improvements in sanitation and comfort which they think to be necessary. By the Employers' Liability Act the employer is liable to compensate men hurt in his employ, unless the injury is entirely the result of personal carelessness or disobedience; this has been extended from workmen to include domestic servants. Again, the State insists upon education for all, and provides it free; in some cases the principle goes further, and needy schoolchildren are given free meals. Old Age Pensions have been given to those above the age of seventy who are too old to work, and the National Insurance Act provides that out of a joint fund provided by the employer and the workman, insurance against sickness and bad times is to be paid. These are only a few out of many examples of the way in which the State now thinks it needful to care for the working classes and their children. Some people call this Socialistic Legislation. It is certainly widely different from the older *Laissez-faire* principles.

CHAPTER XXXI

Britain and Her Rivals

The year 1851 saw the opening of the Great Exhibition in Hyde Park. It was thought by many at the time that we had then reached a time when nations were realizing the folly of wars, and would henceforth join only in the peaceful rivalry of trade. Coming to the "Workshop of the World" and seeing examples of its marvellous machinery and its innumerable products housed under Paxton's glass dome, foreigners would realize what might be done in a peaceful country which had embraced Free Trade, and would go home and imitate us. Some of those hopes proved singularly futile. So far from 1851 beginning an era of peace, it really stood at the threshold of renewed European wars. Instead of seeing the disuse of armies, the last half-century has seen them grow to a size never rivalled even by Napoleon. Cannon and guns, explosives, torpedoes, shells, ships of war and submarines, have made more progress than any of the arts of peace. So has died one delusion of the Manchester School. The dream that an era of Free Trade would begin has proved as fleeting. Just as the armies have grown bigger and the cannon of longer range, so the walls of tariffs, behind which nations have entrenched themselves, have grown higher and more forbidding. So far from regarding Britain as an Example, the nations have treated her as a Warning. Even our colonies have gone on the same course and protect themselves against us. Britain stands now as it did in 1851, the one Free Trading nation of the

world. Whether in thus standing alone she displays a monopoly of wisdom or of folly is the most hotly debated question of modern politics.

But if we failed to convert the foreigner to the ways of peace and free trade, we did something by the Exhibition which perhaps had been better left undone. We put all our goods in the shop window; we displayed our arts, machines, and processes before the world's eyes with the air: "You see how easy it all is; why shouldn't you do the same?" and the foreign visitors did grasp this, and went home determined to "do the same". And behind their tariff walls they have done the same, perhaps less well than Britain, but certainly well enough to rob us of a good many markets. Probably it was inevitable; Britain could not have remained the one great workshop of the world; but in the opinion of many the Great Exhibition hastened and sharpened the competition.

For, after all, the advantages which won for us the supremacy in industry and commerce were not all permanent, nor have we a monopoly of them. The value of our harbours, and of our place on the Atlantic seaboard, is enduring, though even here it must be noted that the piercing of the Isthmus of Suez by the Canal has done something to send trade back to the Mediterranean "Thalassic" route. We have the best steam coal in Europe, and plenty of iron ore lying close to all our coal beds, but we have no monopoly of coal and iron mines. Belgium has them and Germany has them; and America has them in great abundance, even more than we have. We have plenty of good labour, though here again we are being caught up. Better technical education is needed if our men are to keep pace with the

German and American workman. These assets are fairly permanent. But much of our superiority was due to good fortune. It was in Britain that the inventions happened to be made. Britain was the birthplace of the spinning jenny, the power loom, the steam engine and the locomotive. That was luck; it gave us an enormous start in the race. But it did not ensure that we should keep the lead when other nations copied us and learnt our methods. We had no monopoly of mechanical skill, though our engineers and mechanics were at one time ahead of all the rest. Again, while the Continent was ravaged by Napoleon's wars we were safe; thanks to the fleet, our manufactures thrived in peace. But this again was an accident; the Continent would not always be handicapped by war. Again, owing to these wars British shipping alone kept the sea; goods were only safe under the British flag; and so we absorbed the carrying trade of Europe. Till lately we have had no rival at sea, but that happy position is somewhat threatened, not merely in battle-ships, but with the great liners and cargo boats. The fact that we were the first country to adopt iron and steel for shipbuilding, and that at first Britain was the one place where good marine engines were made, was enormously to our advantage; but it was an advantage which in the nature of things we could not altogether keep to ourselves. And, once more, we do not produce many of the raw materials which we manufacture. Our largest trade depends entirely on imported material—cotton—and many other trades use a deal of imported material; wool comes from Australia, hides from America, copper from Spain, and so on. As we were the first to grasp the value of power and machinery, it was natural that these goods

should come to Britain to be manufactured. But in some cases there is no reason why they should continue to come. Cotton comes from India and from the Southern States of America, but it might in each case be manufactured in the place where it is grown. America has every advantage in manufacture which we have,¹ and though India has less coal, it has the advantage of very cheap labour. Lancashire cannot rely on keeping the monopoly of cottons which has been hers in the past.

So in attempting to estimate how far Britain is gaining or losing in the industrial race, it is necessary to remember facts; to recognize that it was partly by good luck that we got such an enormous start, and to understand that as knowledge spread this accidental advantage was bound to dwindle. Our two chief rivals in trade, the United States and Germany, have both of them a larger population than we have. Both have coal and iron, the States in particular having huge supplies of coal. Both have developed industrial skill that rivals ours. We cannot be surprised if each of them is making inroads upon markets where once upon a time British-made goods had no competitors; and we need to be vigilant, in order not to lose ground in a struggle which daily becomes keener.

¹ Some would say she has one advantage which we have not, in that she has a monopoly of her home market. This would enable her manufacturers to make a very high profit on American-made cottons at home, and so to put their export cottons on the market exceedingly cheap.