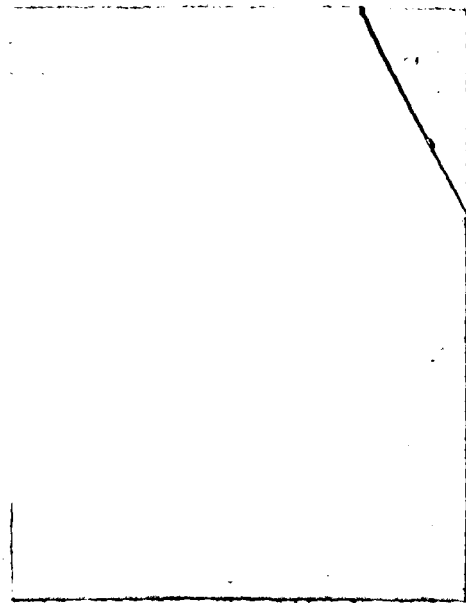


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**AN INTRODUCTION TO THE
INDUSTRIAL HISTORY OF ENGLAND**

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AN INTRODUCTION TO THE
INDUSTRIAL HISTORY
OF ENGLAND

BY

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LONDON

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TO THE MEMORY
OF
MY BROTHER
ALBERT MORSE USHER, 107th U.S. INFANTRY
WOUNDED, OCTOBER 17, 1918
IN THE BATTLES FOR THE HINDENBURG LINE
DIED AT CAMIERS, OCTOBER 28, 1918

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PREFACE

THE present volume has been planned and written with a view to the needs of students beginning work in economic history. For this reason matters have been included that do not lie strictly within the field of industrial history, notably the chapters dealing with agrarian questions. These problems could hardly be deemed essential to the understanding of the development of industry in the literal sense, but such material is ordinarily included in the introductory courses in economic history even if the course is described as "industrial history." This slight inconsistency in nomenclature tends to create some confusion between the scope of the term "industrial history" and "economic history" in general. It is not, of course, serious, but it is perhaps better that these terms should be used with some care in the titles of books. Strictly speaking, industrial history is of no more than co-ordinate importance with agrarian history and commercial history, though the problems of these phases of economic history are relatively more difficult and ill-suited to the capacities of an elementary class. The emphasis currently laid upon industrial history is thus thoroughly justified upon pedagogical grounds, but it would be unfortunate to allow the expediency of this course to obscure the just proportions between the different phases of the general field.

The space devoted to the first three chapters may seem disproportionate to some, but it is believed that the text of the chapters will sufficiently explain their place in the book. If it should be desired to confine attention more exclusively to England, it would not be necessary for a class to read the first two chapters, though the characterization of the forms of industrial organization (pp. 4-17) should in that case be presented by the teacher. It is believed that these chapters will prove particularly useful in courses given with especial reference to work in sociology and economics as distinct from

purely descriptive history. The slight departure from the narrowly nationalistic point of view that usually dominates the writing of economic history makes the present volume a comprehensive survey of the general problems of industrial history.

The references for reading in connection with the text represent personal experience with classes, and it is believed that no books are recommended for use with classes that are not within the compass of ordinary students. An attempt has been made to suggest reading along the line of all the varied interests presented by the subject, so that each student may have opportunity to give expression to his personal tastes. Pains have been taken to make the lists sufficiently inclusive to bring the student in touch with all the critical studies of primary importance, and as most of the works contain bibliographies it would not be difficult to get in touch with the literature on each subject.

In addition to the obligations to writers which are acknowledged in the text or in the notes, the author is greatly indebted to his colleagues at Cornell University, most especially to Professor A. A. Young, without whose encouragement and advice this book would not have been written. Professor W. F. Willcox, Professor C. H. Hull, and Mr. R. A. Campbell have given me the benefit of their advice on many points which involved some departure from conventional views. I wish also to express my obligations to Professor E. F. Gay, whose teaching was instrumental in the formulation of the problems that have since then claimed my best attention. While it is not my intention to imply that he is in any way responsible for views expressed in the present volume, my work has been a direct outcome of the stimulus of his teaching.

ABBOTT PAYSON USHER

CONTENTS

CHAPTER I

FORMS OF INDUSTRIAL ORGANIZATION

- I. Socialists and industrial history: Concentration of attention on the forms of industrial organization — The socialistic characterization of typical forms: household industry, craft industry, the factory system — Criticism of the interpretation of the history of antiquity by historians 1
- II. Typical forms of industrial organization: Undiversified household industry distinguished by the absence of specialized skill — Probably a more primitive form than is usually assumed — Artificiality of the classification of industry in the patriarchal household with slaves as "household" industry — Craft industry distinguished by specialized skill, its presence indicated most clearly by the existence of distinguishable crafts in a given locality — Wage-work and craft-work not distinct stages in evolution — Disintegration of the process of manufacture by the development of crafts — The "putting-out system" a means of integration — Various terms used to describe this form of organization — The essence of the system lay in the ownership of materials by capitalists: in early forms, raw materials only; in later forms, all the instruments of production — Work was done in the home subject to no supervision — The factory distinguished by disciplined coordination — Concentration of operatives was a means to this end rather than an end in itself — The factory, as a form, antedates the Industrial Revolution — Administrative definitions of "factories" have been artificial — Difficulty of classifying the "sweat-shop" 3
- III. Commerce and industry: The degree of industrial specialization is determined by the extent of the market — The market is subject to social as well as to territorial limitations; social limitations especially important in the early period — Industrial specialization concerned in large measure with the wants of the wealthy — The Industrial Revolution resulted in the breaking-down of the social limitations of the market and the standardization of both production and consumption — The expansion of the market in the earlier periods was primarily territorial; best indicated by the growth of geographical knowledge 18

CHAPTER II

THE RISE OF THE CRAFTS IN ANTIQUITY

- I. The dawn of history not to be identified with the beginnings of social organization: early life dominated by the city — The beginnings of

industrial history not coincident with the first stages of any schematic or logical arrangement of forms of industrial organization — The city life of antiquity: its social elements; the mass of urban population — Distinctive features of city life in the middle ages and in modern times — Similarities in industrial organization in antiquity and the middle ages	24
II. Egypt: Ambiguity of pictorial evidence — A list of crafts from the Twelfth Dynasty — Other indications of the number of crafts — Status of artisans	30
III. Mesopotamia: Economic conditions in the early period — References to artisans in the Code of Hammurabi — The temples as business houses — Difficulty of classifying their industrial operations — Apprenticeship and craft organization — Distinctions necessary between forms of organization and the scale of industrial life	34
IV. Greece: Various interpretations of the economic development of the Greeks in the semi-historic period — Commerce usually the basis of highly specialized industry — Leaf's conception of the Trojan War — Correlation of the view with the industrial history of Greece — Economic mechanism not a measure of artistic accomplishment — Comparison of economic conditions in antiquity with eighteenth-century Prussia — The degree of industrial specialization in the sixth century B.C. — Rapid growth in the fifth and fourth centuries — The "factory system" — Socialistic interpretations — Slavery in antiquity	38
V. Rome and Constantinople: Roman collegia — The list of crafts — Crafts at Constantinople — Evidences of craft guilds	47

CHAPTER III

CRAFTS AND CRAFT GILDS IN MEDIEVAL FRANCE

I. Roman influences in Gaul — Probable degree of survivals in the organization of industry — Basic crafts persisted — Conditions on the great estates, the "gynceum" — Lists of the craftsmen gathered around monastic establishments: Saint Riquier, in the ninth century; Saint Vincent at Le Mans, in the eleventh century — Difficulties of classifying industrial aggregations of partially unfree artisans	52
II. The rise of the "Third Estate": its importance in social and economic history; — The prosperity of France indicated by the growth of population: estimates for Paris, 1292 and 1328; France in 1328 — Nature of the evidence of industrial specialization — Three groups of crafts: merchandizing crafts; crafts occupied with purely local concerns; crafts concerned with export industry — List of crafts at Paris late in the eleventh century — Numbers in the different occupational groups at Paris in 1292 and 1300 — Classification of crafts according to the numbers of craftsmen registered on the tax-rolls — The dis-	

CONTENTS

integration of industry — Relations between producers and consumers: not happily described as direct contact — Necessity of recognizing the social stratification of the market — Beginnings of capitalistic control of the industrial process — Wage-earners, but no wage-earning class — Crafts whose members were regularly employed by other crafts 57

III. Members of the specialized industrial household — Apprentices and apprenticeship — Journeymen and masters — Conditions of becoming a master in the early period — The free craft: a purely spontaneous growth — The sworn craft or gild, a privileged body created by authority — The transition from the free craft to the gild at Paris — The wardens of the gild — Essentially administrative functions of the gilds at Paris — Special conditions affecting the growth of crafts closely associated with the Royal Household — History of the carpenters — Craft statutes as evidence — The more usual regulations — Early Parisian regulations of apprenticeship — Position of the journeyman — Ease of becoming a master — The master-piece not required in the early period — Inspection of goods and processes of production . . . : 72

CHAPTER IV

THE POPULATION OF ENGLAND: 1086-1700

I. Early estimates of population based upon numbers of families, or property-holders — Uncertainty as to the proportion of the total population to those enumerated — Omissions — Importance of ascertaining the general movement of population — Estimates for England and for France — One hundred persons per square mile probably normal density of population for Europe prior to the Industrial Revolution — England relatively under-populated — Relativity of the conception of normal density: influence of rice culture in India, of the Industrial Revolution in Europe 87

II. Estimates of Seebohm and Gasquet for the population of England prior to the Black Death — The subsidy rolls — Figures for five counties compared with the figures for 1377 — Changes in the relative density of population — The westward movement — Its significance . . . 92

III. Size of villages in Derby and Essex in 1086 — Population of towns in 1377 — Essentially rural population indicated by the evidence from the Subsidy Rolls — The growth of London 102

CHAPTER V

VILLAGE AND MANOR

I. Persistence of superficial aspects of village life — Aristocracy and the village — Primitive land tenures an expression of economic needs 109

- II. Scattered farms and villages: Modes of settlement: scattered farms; the enclosed village; the open-field village — Field arrangements of a typical open-field village — Methods of agriculture — Divisions of the fields into strips — Village organization — Racial explanations of these three modes of settlement — Economic interpretations suggested by Siberian conditions — The economic factors underlying a transition from individual farms to the open-field village — Complexity of conditions in Europe before and during the great migrations 112
- III. The common people and the magnates: Aristocracy ultimately the predominant force in medieval rural organization — Relation of a landed aristocracy to the village — Possibility of a survival of the rural organization of the Roman period — Factors in the natural growth of an aristocracy — Influence of the Norman Conquest — Proportions of the different classes as shown by *Domesday Book* — The manor as an administrative and legal conception — Divergent types revealed by the Domesday Survey 120
- IV. The organization of the manor in the thirteenth and fourteenth centuries: The general aspect of a manor — Week works and boon days — Services rendered by crofters — The officers of the manor — Village officials — Destruction of the economic independence of the manor by the development of local markets — Stages in this process 127
- V. The end of villeinage in England: The influence of commutation of labor services upon tenure — Complexity of motives underlying commutation — Chronology of the movement — The new yeomanry of England 131

CHAPTER VI

THE TRADERS AND THE TOWNS

- I. Schmoller's conception of the "town economy" — An unduly literal interpretation of the sources — Formalism and legal fictions — Enfranchisement of trade by means of special privileges — Medieval trade territorially extensive but of relatively small volume — Its needs not inadequately met by the complex legal status of trade and traders 134
- II. Fairs and the Law Merchant: Fairs and markets — Some fairs especially important for wholesale and for foreign trade — European cycles of fairs — Possible fair cycle in England — Essential and ancillary business at the fairs — Tariffs, tolls, and "free trade" — Enfranchisement conferred by the charters was legal rather than fiscal — Pie-powder courts: their procedure and the Law Merchant — Special franchises of continental merchants in England 137
- III. Associations of merchants: Organization of resident alien merchants — Origins of the Teutonic Hanse — Activities of the Hansards —

CONTENTS

xi

- The Steelyard — Privileges of the Hanse — The *Carta Mercatoria* — Purveyance, or prise — Struggle to maintain the privileges granted by the *Carta Mercatoria* — Decline of the Hansards — Merchants of the Staple — Purpose of the Staple — Its location — Origin of the company — Control of the trade in wool — Rise of the Merchant Adventurers — The cloth trade — Struggle with the Hansards . . . 146
- IV. Township and borough: Distinction between the legal and the economic aspects of urban life — Differentiation between urban and rural life — Military factors in the growth of boroughs — Administrative factors — Economic and legal developments in the thirteenth century — Significance of the late emergence of incorporated towns in connection with Schmoller's theory — The Gild Merchant — Political decentralization and cosmopolitanism 158

CHAPTER VII

THE DEVELOPMENT OF GILDS IN ENGLAND

- I. The word "gild" — Three types of gild — French terminology — Brentano's theory — Probably no fraternal element in the craft gild, no direct connection with the modern trade union 165
- II. Religious gilds: References to religious gilds at an early date; little information until 1389 — Functions and membership of religious gilds — Officers, rules, and customs 168
- III. The Gild Merchant: Religious elements in the gild merchant — Relations with the crafts; craft gilds — Gild merchant and municipality — Essential privileges — Non-resident membership — The sharing of purchases — Officers and meetings 171
- IV. The Craft gilds: Religious gilds composed of members of a single craft — Crafts chartered by the King — Crafts deriving their authority from the municipality — Crafts at Norwich in 1415 176
- V. Relation of different types of gild to each other: The gild merchant most powerful when the other types were relatively less prominent — Religious gilds developed contemporaneously with other craft organizations — Confusion of functions and aims — Associations of crafts for ceremonial observances — Occupational statistics — Predominance of small crafts — Craft gilds probably a less conspicuous feature of social life than religious gilds 181
- VI. The religious gilds and the crown: The gilds and the Statute of Mortmain — Acquisition of charters from the King — The grant to the Tailors of Salisbury — Confiscation of gild property in 1547 — Not directly a cause of the decline of the craft gilds — Wage-earners and employers — Companies formed by the employing classes 187
- VII. The Statute of Apprentices: Purposes of the statute — Distinctions between the various crafts — Obligation to follow some calling — The wage-fixing clauses 191

CHAPTER VIII

THE WOOLEN INDUSTRIES: 1450-1750

- I. Development of technique in the woolen industry — Types of wool and of woolen fabrics — Fundamental processes of the woolen and worsted industries — Characteristic features of woollens and worsteds — Growth of the worsted industry in England 195
- II. The division of labor in the woolen industry — Growth of specialization of tasks — Subordination of dyeing and fulling — Proportions of workers in the worsted industry — Acquisition of capitalistic control by the mercantile class — Spinning not a specialized occupation in the modern sense — Relation of industry to agriculture 201
- III. Geography of the woolen industries — Effect of the diffusion of industry upon the towns — The Weaver's Act — Anti-capitalistic purpose of the statute — Importance of the exemptions — Changes in the industries after 1550 209
- IV. The scale of manufacture: 1395-96 — The putting-out system at Colchester — The larger and the smaller masters — Importance of the putting-out system about 1450 — Descriptions of the system in the late sixteenth century — Divergent forms — Persistence of these conditions until the early nineteenth century — Sporadic tendencies toward the factory system 215

CHAPTER IX

THE ENCLOSURE MOVEMENT AND LAND REFORM

- I. The meaning of "enclosure" — Its effect upon agricultural methods — The Midland system — Change in the characteristic size of farms — Social consequences of the change — Sequence of these changes — Continuity of the enclosure movement — Uncertainty of purpose in the early stages 225
- II. Enclosure of waste — Legal problems involved in enclosure of the open fields — Rights of common pasture — Enclosure by agreement — The duty of a steward — Early enclosures partial — Creation of precedents for enclosure by act of Parliament — Theory of the Enclosure Acts — Dangers to small proprietors — Lord Thurlow's criticism of Parliamentary procedure — Essential difficulties in determining questions of right and title — The problem of common pastures — Social consequences of enclosing them — Protests at the close of the eighteenth century 232
- III. Early attempts to correct the mistakes of the Enclosure Acts — Allotments and small holdings — Experiments of landowners with allotments — Early legislation — The Act of 1882 — Need of compulsion — The Act of 1887 — The small-holdings movement — Peasant proprietorship — Defects of the Act of 1892 — The Act of 1907 240

CONTENTS

xiii

CHAPTER X

THE INDUSTRIAL REVOLUTION

Origin of the phrase "Industrial Revolution" — Social importance of the period compared with other transition periods — Early consciousness of the social transformation among English writers — Difficulty of characterizing the movement — Identification of the movement with the great inventions an error — Toynbee's emphasis upon the rise of the *laissez-faire* policy — Socialistic emphasis upon capitalism and the rise of the factory system — Inadequacy of any single formula — Relative independence of the causative factors underlying the changes in the textile and in the metal trades — Genesis of the new cotton industry — The fuel problem and the metal trades — Probable rank of various industrial groups in 1700 — Effect of the Industrial Revolution upon the rank of different groups 247

Statistics of industrial groupings: England in 1851; Prussia in 1855; British India in 1901 — These figures probably indicative of conditions that had long prevailed — Statistics for the early twentieth century reveal the full influence of the Industrial Revolution — Change in the relative importance in industry and agriculture — Tables for British India in 1901; France in 1866; the German Empire in 1895 and 1907; France, in 1901 and 1906; England and Wales in 1811, 1821, 1891, and 1901 — Primary factors in industrial location in the old and in the new order — Humidity and cotton spinning — Mineral deposits — Problems of commercial availability — Influence of the Industrial Revolution upon population — Gregory King's forecast, 1693 — Actual growth of population in England 257

Chronology of the Industrial Revolution: Stages in the development of inventions — Significance to the individual inventor of the technical equipment of society — Invention in the larger sense a social accomplishment 271

CHAPTER XI

THE EAST INDIA COMPANY AND THE VESTED INTERESTS

The English and Dutch Companies for trade with the East Indies — The novelty of Indian cottons — Development of the trade — Limitation of the expansion of English trade in the Spice Islands — Establishments on the continent of India — Distress in the woolen and silk industries — Agitation for protection — The Act of 1696-97, to prohibit the wearing of East Indian goods — Contrast between the French and English policies of protection — Relation of the commercial issue to party politics in England — The East India Company the focus of discussions of commercial policy throughout the seventeenth century — Thomas Mun's defense of the Company — The place of the balance-of-trade doctrine in the controversy — Ne-

negotiations of 1713 with France — Complexity of the political issue — The Calico Act of 1721 — Exceptions made in favor of the existing cotton industry — Discrepancy between the expectations of the woolen manufacturers and the results of the protective legislation	276
---	-----

CHAPTER XII

THE NEW COTTON INDUSTRY

- | | |
|--|-----|
| I. The relation of invention to the rise of the cotton industry — The process of spinning — Carding machines — Continuous and intermittent processes of spinning — The throstle, its limitations — Grades of yarn — Wyatt's claims as an inventor — Probable relations between Wyatt and Paul — Paul's spinning patent of 1758 — Commercial ventures of Wyatt and Paul — Generality of interest in the problem of mechanical spinning — Arkwright's early career — Work on the spinning machine — The patent suits — The jenny — Crompton's mule; its accomplishments, immediately and ultimately; its influence upon the industry — Development of the power-loom | 287 |
| II. The expansion of the cotton industry: Statistics of consumption of raw cotton — Values of merchandise exported — Values of goods consumed at home and of exports compared with similar statistics of woolens and linens — Relative importance of the different branches of the textile manufacture — The influence of the spinning inventions upon the costs of yarn, 1779-1832 — Comparison of labor costs of mule spinning with labor costs in India | 302 |

CHAPTER XIII

THE REORGANIZATION OF THE METAL TRADES

- | | |
|--|-----|
| I. A new fuel and a new furnace: The change of fuel not an adequate index of the character of the transformation of the metal trades — Substitution of the indirect for the direct process — Malleable iron, cast iron, steel — Persistence of the direct process due to mechanical limitations — Unsatisfactory results of the direct process — Types of furnace — Transformation of the high bloomery furnace into the modern blast furnace — Dudley's experiments — The Darbys at Colebrookdale — Perfection of a coke-burning furnace — Need of blast — Smeaton's blast pump | 314 |
| II. James Watt and the steam engine: The Newcomen engine — Watt's training and profession — Scientific study of heat and the Newcomen engine — His inspiration — Change in the character of the engine as result of Watt's condensing chamber — Mechanical difficulties encountered in building engines — Causes of these difficulties — Importance of the development of the lathe — The slide rest | 324 |
| III. The metallurgical problems of the iron industry: Difficulty of eliminating carbon — The reverberatory furnace — Onions' description of | |

CONTENTS

xv

- his method of puddling — Uncertainty of the nature of Cort's contribution — Development of the rolling mill — New products . . . 329
- IV. Sir Henry Bessemer: Special significance of his career — Early training and inventions — The bronze powder scheme — Necessity for secrecy — The capacity of machine-makers tested by the mode of awarding contracts for the machines — Importance of the achievement indicated by their success in executing the contracts — Further experimentation — Genesis of the steel project — Original purpose — Decarburization by means of a blast of air — Development of the converter — Announcement of the new process — Disappointments — Importance of non-phosphorus-bearing ores — The Thomas and Gilchrist patent — Its influence upon the geography of the European iron industry 334

CHAPTER XIV

THE RISE OF THE MODERN FACTORY SYSTEM

- I. The definition of a factory: The factory presumed by early writers to be dependent upon machinery — Aggregation of workers and factory discipline — Irksomeness of discipline — Early experimentation with the factory system — Reasons for the late development — Factories without machinery 346
- II. Legal obstacles to the establishment of the factory system: Elizabethan legislation — Breakdown of the system of apprenticeship — The knit stocking industry — Troubles in the West Riding — The attempt to apply the Statute of Apprentices — The Woolen Inquiry and the Report of 1806 352
- III. The rise and progress of the factory system: The earliest factories — Development of factories in the cotton industry at the close of the eighteenth century — Conditions in the woolen industry — Factories and the factory population in 1816 — Abnormal proportion of women and children — Probable explanation — Changes in the worsted industry — Pauper apprenticeship — Attempts at regulation — Likelihood of misjudging the progress of the factory system — Proportions of the industrial population in factories at various dates — The occupational returns of 1901 355
- IV. Artisans and machinery: Influence of the transition upon the workers less certain than frequently supposed — Little evidence of hardship among skilled artisans — Importance of the introduction of unskilled labor in the textile trades — Various causes of distress — Machinery an emancipating force 363

CHAPTER XV

THE RISE OF COLLECTIVE BARGAINING

- I. The wage-fixing clauses of the Statute of Apprentices — Uncertainty of the extent of their application — Journeymen's organizations in

- London: 1667 and 1696 — Weavers' clubs in the West of England about 1727 — Webb's interpretation of the Act of 1756 — Evidence of collective bargaining — The Spitalfields riots — "Subscription societies" — The Spitalfields Act: 1773 — Mode of administration — Later history of the act — Wages regulated according to the price of bread — The ribbon manufacture at Coventry — The big purl time — The list of 1813 — Organizations of the weavers to resist depression of wages — Difficulty of enforcing the list of 1816 — Petition for an extension of the Spitalfields Act — Repeal of the act — Wage lists at Coventry 367
- II. The Combination Laws: Difficulty of estimating the importance of the Combination Laws of 1799 and 1800 — Not generally enforced — Probable purpose of the Act of 1799 — The conception of status — The Act of 1800 — The doctrine of conspiracy 377
- III. The Laws of 1824 and 1825: Francis Place — Beginning of the agitation for repeal of the Combination Laws — Contact with Hume and M'Culloch — The Committee of 1824 — Preparation of the text of the acts — Anticipations of Place — Immediate results of repeal — The Committee of 1825 — Differences between the Acts of 1824 and 1825 — New importance given to the doctrine of conspiracy — Difficulties of unionists — The Act of 1871; a satisfactory but legally ambiguous position 380

CHAPTER XVI

THE PROTECTION OF HEALTH AND WELFARE BY THE STATE

- I. Obstacles to reform and the reformers: New social problems and the unreformed constitution — Difficulty of creating a central administration in a Parliamentary system — The ideal of local self-government — Development of the agitations for social regulation and for free trade — A. A. Cooper, the seventh Earl of Shaftesbury — Edwin Chadwick 387
- II. Sanitation: Sewers and methods of removing waste in the early nineteenth century — Conditions in the poorer districts: Liverpool — Chadwick's conception of the modern system — Investigations by the Poor Law Commissioners — The Public Health Act of 1848 — Failure of the first Board of Health — Accomplishments of the period 1854-71 — The legislation of 1871 — Unfortunate policy in the departmental organization of the Local Government Board — The Ministry of Health Act: 1919 395
- III. Housing: Importance of housing to public health — Shaftesbury's act — The Torrens Act: 1868 — The Cross Act: 1875 — Subsequent development of the building code — Relative failure of the reconstructive aspects of this legislation — The new housing problem 403
- IV. Factory legislation: Unwillingness of Parliament to legislate di-

CONTENTS

xvii

- rectly with reference to adult men except in "dangerous trades" — Laissez-faire doctrines unimportant in the history of factory legislation — Necessity of correlation between the spread of the factory system and the development of factory legislation — Nature of opposition to factory legislation in Parliament — Acts prior to 1833 — The agitation begun in 1831 — The Act of 1833 — Regulation of hours — Extension of the factory code to other industries by the Acts of 1867 and 1878 — Unsatisfactory character of the statistics collected by the factory inspectors — Dangerous trades . . . 407
- V. The relief of destitution: The Elizabethan Poor Law — The Law of Settlement: 1662 — Increase in the amount of destitution in the late eighteenth century — Causes — Depression following the Napoleonic Wars — Abandonment of Cholesbury to the poor — The mixed workhouse and out-relief — Abuse of the Poor Law by landlords and farmers — Chadwick's proposals — Inadequacy of the Poor Law of 1834 — The Royal Commission of 1909 . . . 415
- VI. Social insurance: Relation of insurance to the relief of destitution — Variety of contingencies to be met — Possibilities of shifting the burden of providing for disability — Insurance a superior form of provision for distress — Liability of employers under the common law — The Compensation Act — Hostility of workingmen's organizations — Insurance against sickness and disability — Unemployment — Old Age — Probable accomplishments of this legislation . . . 422

CHAPTER XVII

THE DEVELOPMENT OF THE RAILWAY

- I. Early private tram lines — Lines projected by canal companies as common carriers — Richard Trevithick and the non-condensing engine — Steam-driven coaches on the highways — Development of the tram lines by the collieries in the Newcastle field — George Stephenson — Relation of northern experiments with the locomotive to Trevithick's work — Stephenson's experiments with the resistances created by grades — The Stockton and Darlington Railway — Examination of different methods of steam traction by the promoters of the Liverpool and Manchester project — Stephenson's plan for the line — The locomotive contest — The "Rocket" . . . 431
- II. Growth of the railway system: 1830-46: Predominance of local interests in early projects — Through traffic — Beginnings of amalgamation — The Midland Counties lines — Formation of the Midland Railway: 1844 — The Great Western — Its broad gauge . . . 443
- III. The rise of competition: 1846-73: Competitive traffic regions — Beginnings of the East Coast Route — The London and North Western connection with Scotland — The London-York projects — The Great Northern — The rate war — The Octuple agreement — Schemes for amalgamations in 1853 — The issue before Cardwell's committee . . .

- Effect of its decisions upon the development of the Midland Railway
— The attitude of the Midland towards third-class passengers . . . 448

CHAPTER XVIII

THE GOVERNMENT AND THE RAILWAYS

Costs of railway construction — Parliamentary costs — The general character of Parliamentary procedure — Provisions of the early charters — Beginnings of regulation — The Act of 1845 — Provision for non-discriminatory rates — Attempts to provide administrative supervision — The Railway Commission of 1873 — Careful discrimination of the Committee of 1853 in stating the advantages of the policy of maintaining competition — Report of the Departmental Committee of 1911 — Likelihood of nationalization of the railways 459

Status of pooling agreements — Methods of rate-making — Growth of opposition among the traders — Agitation for a general revision of rates — The Act of 1888 and the new rates — Uncompromising attitude of the railways — The Act of 1894 — Reasonable rates — Declining rates of dividends — Growth of combination among railways 468

CHAPTER XIX

COMBINATIONS AND MONOPOLIES

- I. Relatively late date of the combination movement in Great Britain — Significance of studying the causes of differences in the progress of the movement in different countries; — Character and location of the mineral resources of Great Britain — Monopolistic control of the Newcastle coal trade before the development of rail competition — Relation of iron deposits to monopoly — Dependence of Great Britain upon foreign markets 475
- II. Temporary and permanent combinations — Vertical and horizontal combinations — A vertical combination in the shipbuilding industry — Advantages of such integration — Combinations in the thread industry 479
- III. Interpretations of the combination movement by socialists and radicals — The conservative view 493

CHAPTER XX

INCOMES, WAGES, AND SOCIAL UNREST

- I. Material well-being: Reduced death-rates the best evidence we have of improved living conditions — Effect of social changes upon different classes — General rates of wages unsatisfactory — Differentiation between the skilled and the unskilled — Unskilled workers close to the poverty line — Bowley's estimates of wages during the nine-

CONTENTS

xix

teenth century — Relative changes in incomes above and below £160 per year — Giffen's evidence of the increase of the smaller incomes — The problem of large fortunes — Chiozza Money's indictment of the existing social order — Difficulties in interpreting the statistics of the concentration of wealth 499

II. Chartism: Intellectual basis of chartism — Development of the program by a group of London artisans — The Charter — The revolutionary tendencies of northern agitators — The influence of the Birmingham group — Collapse of the movement 512

III. The unions and the socialists: The ideal of a national "Trades Union" — Owen's influence — The Grand National Consolidated Trades Union — The Dorchester Laborers — The National Association of the United Trades — The Amalgamated Society of Engineers — It becomes the model union — Parliamentary activities — Growth of the Independent Labour Party 518

SELECTED REFERENCES i

INDEX xix

MAPS

Relative Densities of Population, 1086	95
Relative Densities of Population, 1377	96
Relative Densities of Population, 1570	97
Relative Densities of Population, 1600	98
Relative Densities of Population, 1700	99
Sketch of the Enclosure Map of Stow, Lincolnshire, 1804	112
Map locating the Important Surveys and Terriers referred to in "Gray's English Field Systems"	117
The Plan of a Manor	127
The Great Fairs and Staple Ports	139
The Hanse	148
Rural Areas identified with the Woolen Industries about 1550	210
Competitive Railway Systems, 1843	445
Competitive Railway Systems, 1853	453
Competitive Railway Systems, 1885	455

FIGURES

1. The Throstle	289
2. Paul's Spinning Machine, 1758	293
3. Improved Model of Hargreaves's Spinning Jenny	298
4. Crompton's Mule	299
5. Osmund Furnace	316
6. Furnace with Water-Blowing Apparatus	317
7. Detail of Water-Blowing Apparatus	318
8. A Norwegian Bloomery Furnace	319
9. Blast Furnace	322
10. Developed Cylindrical Blowing Engine	323
11. Apparatus used by Watt in Experiments to demonstrate the Advantages of a Separate Condensing Chamber	326
12. Section of an Engine set up by Watt at Chacewater in Corn- wall, 1777	327
13. The Reverberatory Furnace	329
14. Purnell's Rolls	332
15. A Modern Rolling Mill for the Production of Rails	333
16. Bessemer Converting Vessel	342
17. Vertical Section of the Bessemer Converter	343

GRAPHS

GRAPHS

I. Imports of Raw Cotton and Exports of Manufactures, 1700-1800	304
II. Imports of Raw Cotton and Exports of Manufactures, 1801-1881	306
III. Relative Values of Textile Products, consumed at Home and exported	307
IV. Percentages of Raw Materials used in the Textile Trades, 1798 to 1882	309
V. Selling Price of Cotton Yarn, Number 40, and Cost of Raw Cotton, 1779-1882	311
VI. Selling Price of Cotton Yarn, Number 100, and Cost of Raw Cotton, 1779-1882	311
VII. Labor Costs of Spinning per Pound of Yarn	312

SELECTED REFERENCES FOR CRITICAL STUDY AND FOR CLASS READING

THESE references have been restricted to the most important books as extended bibliographies are easily accessible. It has seemed best to restrict the lists to the literature that is indispensable to critical study. In most instances the references given were used in preparation of the various chapters, but no attempt has been made to include all books and documents that have been used.

It is hoped that the titles classified as collateral reading will assist in the preparation of reading assignments for classes of undergraduates. Care has been taken to avoid any assignments that are not well within the scope of the average class.

Bibliographies.

Gross, Charles. *The Sources and Literature of English History. From the earliest Times to about 1485.* London, 1915.

Hall, Hubert. *A Select Bibliography for the Study, Sources, and Literature of English Medieval Economic History.* London, 1915.

Woodbury, C. J. H. *A Bibliography of the Cotton Manufacture.* Waltham, 1909.

An unusually careful special bibliography.

General Works of a Critical Character.

Ashley, W. J. *An Introduction to English Economic History and Theory. The Middle Ages.* London, 1894. 2 vols.

A discriminating study of select topics that has long occupied an important place.

Cunningham, W. *The Growth of English Industry and Commerce. Vol. I, The Early and Middle Ages. Vol. II, Modern Times.* 5th Edition. Cambridge, 1910-12.

The most considerable study of the general economic history of England. A monument of patient research and of discriminating judgment based upon methods of presentation that minimize the larger sociological problems of economic history. Likely to be less useful to a student than works whose arrangement is topical, though invaluable for reference.

Lipson, E. *Introduction to the Economic History of England. Vol. I, The Middle Ages.* London, 1915.

A comprehensive survey of the important topics. Represents careful study of the materials recently made available by the publication of records and local studies.

Rogers, J. E. T. *Six Centuries of Work and Wages.* New York, 1884.

The most considerable work of a writer who brought to the subject conceptions of method which were not adopted by other English scholars. There are many suggestions, however, in his general points of view, and on many matters pertaining especially to agriculture his work is of substantial value.

Rogers, J. E. T. *The Industrial and Commercial History of England*. New York, 1892.

A series of university lectures.

— *The Economic Interpretation of History*. London, 1888.

Briefer General Works and Texts.

Ashley, W. J. *The Economic Organization of England*. London, 1914

Bry, G. *Histoire industrielle et économique de l'Angleterre, depuis le*
origines jusqu'à nos jours. Paris, 1900.

Cheyney, E. P. *An Introduction to the Industrial and Social History of*
England. New York, 1901.

Cunningham, W., and McArthur, Ellen A. *Outlines of English Indus-*
trial History. New York, 1895.

Gibbins, H. de B. *Industry in England: Historical Outlines*. London
1896.

Meredith, H. O. *Outlines of the Economic History of England*. London
1908.

Price, L. L. *A Short History of English Commerce and Industry*. London
1900.

Warner, G. T. *Landmarks in English Industrial History*. London
1899.

CHAPTER I

Critical Discussions.

Bücher, K. *Die Entwicklung der Volkswirtschaft*. 3d edition, consider-
ably enlarged. 1900. Translation by Wickett, from the third edition
Industrial Evolution.

The changes that occur in the various editions consist in the addition of
new material. The doctrine of the book has not been revised despite the crit-
icisms of historians, but there is a brief defense in the preface of the last edition.

Marx, K. *Das Kapital*. 1st edition, 1867. 4th edition. Hamburg,
1890-94. Translation. *Capital, a Critical Analysis*. London, 1887.

There is no deliberate attempt to suggest a scheme of industrial stages, but
much material is important in connection with the socialistic interpretation of
the transition to the factory system. Especially chapters XIII, XIV, and XV
(English edition.)

Meyer, Edouard. *Kleine Schriften zur Geschichtstheorie*. . . . Halle, 1911

A collection of essays written at various times, several of them devoted to
criticism of Bücher's generalizations.

Rodbertus, J. K. Zur Geschichte der Römischen Tributsteuern seit
Augustus. *Jahrbuch für National Oekonomie und Statistik*. 1861
p. 339.

Characterizes the industrial organization of the ancient world as "house-
hold industry" and thus furnishes the essential step towards the generalization
popularized by Bücher.

Salvioli, G. *Le Capitalisme dans le Monde Antique*. Paris, 1906.

Criticism of Bücher with constructive interpretation.

Sombart, W. *Der Moderne Kapitalismus*. Leipzig, 1902. 2 vols.

The most considerable socialistic interpretation of industrial history. The simpler aspects of the scheme suggested are similar to Bücher's scheme, but in its entirety the generalisation is much more elaborate and complex.

Usher, A. P. Generalizations in Economic History. *American Journal of Sociology*. Vol. XXI, pp. 474-91.

Weber, M. "Agrargeschichte," in Conrad's *Handwörterbuch der Staatswissenschaften*.

An interpretative essay of substantial length, broader in scope than its title would suggest. There is much criticism of Bücher, and an attempt at constructive interpretation of the life of the ancient world.

Collateral Reading.

Bücher, *op. cit.* Chapters III and IV.

Gaskell, P. *The Manufacturing Population of England*. 1833. Introduction. (*Ibid.*, *Artizans and Machinery*, 1836. Chapter I.)

CHAPTER II

Critical Discussions.

Breasted, J. H. *Ancient Records of Egypt*. Vol. II. Sections 246-95, 663-759.

Erman, A. *Ägypten und Ägyptisches Leben im Alterthum*. 1885-87. Translation. *Life in Ancient Egypt*. 2 vols., London, 1894.

Still useful, though seriously out of date, because it remains the only comprehensive description of social life in Egypt.

Francotte, H. *L'Industrie dans la Grèce Ancienne*. Bruxelles, 1900-01.

The most extensive of several good studies of Grecian industry.

Harper, R. F. *The Code of Hammurabi. King of Babylon about 2250 B.C.* Chicago, 1904.

King, L. W. *Letters and Inscriptions of Hammurabi*. Vol. III. English Translations. London, 1900.

Lau, R. J. *Old Babylonian Temple Records*. New York, 1906. Columbia University Oriental Series. Vol. III.

Meyer, Edouard. *Geschichte des Alterthums*. Vol. I, Parts 1 and 2, 2d edition, Stuttgart, 1907-09. Vol. I, Part 1, 3d edition, Stuttgart, 1910.

Newberry, P. E. *The Life of Rekhmara*. London, 1900.

A new edition of this important relief.

Nicole, J. *Le Livre du Préfet, ou l'Edit de l'Empereur Léon le Sage sur les Corporations de Constantinople*. Genève, 1904.

Virey, Ph. *Le Tombeau de Rekhmara. Préfet de Thèbes sous la XVIII^e Dynastie*. Min. de l'ins. Pub. Mémoires de la Mission Archéologique Française au Caire. Vol. V. Fasc. I. Paris, 1889.

Waltzing, J. P. *Étude Historique sur les Corporations Professionnelles chez les Romains*. Louvain, 1895-1900. 4 vols.

Wilcken, U. *Griechische Ostraka*. Leipzig, 1899.

An account of the Egyptian institutions of the later period based upon materials furnished by Greek potsherds.

Collateral Reading.

There is little reading upon the specifically economic problems of these early cultures that is entirely suitable for a general class. Portions of Erman might be used, and Maspero, G., *The Struggle of the Nations*, contains an excellent chapter on Thebes at the height of its power. The most readable account of the Mesopotamian cultures is furnished by Johns, C. H. W. *Babylonian and Assyrian Laws, Contracts and Letters*. New York, 1904.

CHAPTER III

Critical Discussions.

Depping, G. B. *Règlements sur les Arts et Métiers de Paris*. Paris, 1837. Collection des Documents Inédits.

The earlier of the editions of the Book of the Crafts.

Eberstadt, R. *Magisterium und Fraternalitas*. Leipzig, 1897.

A statement of the extreme feudal theory of the origin of the craft gilds.

— *Der Ursprung des Zunftwesens und die älteren Handwerkerverbänden des Mittelalters*. Leipzig, 1915.

A development of the work above mentioned.

Fagniez, G. *Études sur l'Industrie au XIII^e et XIV^e siècles*. Paris, 1877.

The most detailed study of early craft organization at Paris.

Flach, J. *Les Origines de l'Ancienne France*. Vol. II, Paris, 1893.

Primarily constitutional, though the treatment of the origin of the towns contains much material that is of importance to economic history.

Géraud, H. *Paris sous Philippe le Bel*. Paris, 1837. Collection des Documents Inédits.

Contains the tax-roll of 1292 and the Dictionary of Jean de Garlande.

Lespinasse, R. de, et Bonnardot, F. *Les Métiers et Corporations de Paris: XIII^e siècle*. Paris, 1879. (Histoire Monumentale de la Ville de Paris.)

A later edition of the Book of the Crafts.

Levasseur, E. *Histoire des Classes Ouvrières et de l'Industrie en France avant 1789*. Paris, 1900-01. 2 vols.

A work that bears comparison with Cunningham's work on England in its discriminating scholarship and comprehensive knowledge, and relatively more readable because the method of presentation is less severely annalistic.

Martin-Saint-Léon, E. *Histoire des Corporations des Arts et Métiers*. Paris, 1909.

A standard work now available in a new edition.

Collateral Reading.

There is no reading available in English upon these problems of French history. Conditions of essentially similar character are presented by the history of industry in the Low Countries now adequately told by Pirenne, H. *Belgian Democracy, its early history*. (Manches-

SELECTED REFERENCES

v

ter, 1915.) Chapters i, iv, and ix are especially recommended. This excellent book came into my hands after the present chapter had been written, and no attempt has been made to add specific references to the important confirmations of fact and method. It is particularly interesting to note the criticisms of Bücher at pp. 15 and 92-93.

A discussion of craft specialization from a different point of view from that adopted in the text may be found in Bücher, *op. cit.*, chapter VIII.

CHAPTER IV

Critical Discussions.

The controversy over the population of England prior to the Black Death appears in the following articles in the *Fortnightly Review*. Seebohm, F. "The Black Death and its Place in History." (Vol. II, pp. 149, and 268.) Rogers, J. E. T. "England before and after the Black Death." (Vol. III, 191.) Seebohm F. "The Population of England before the Black Death." (Vol. IV, 89.) The views advanced by Seebohm have been espoused by several writers without material change in the arguments used or the figures suggested. Rogers subsequently used his materials in the lecture that appears in the volume *The Industrial and Commercial History of England*. His views have not been favorably received, and it is therefore with some diffidence that similar estimates of population have been advanced. The conclusions to be drawn from the Subsidy Rolls, however, seem to confirm this hitherto unpopular view. Detailed references to the Subsidy Rolls maybe found in the bibliographies of Gross and Hall. The relation of these tax-lists to the probable population is best indicated by the study: Powell, E. *A Suffolk Hundred in the Year 1283*. Cambridge, 1910.

Creighton, C. "The Population of Old London." *Blackwood's Edinburgh Magazine*. Vol. 149, p. 477.

A unique and important study.

Estimated Population of England and Wales, 1570-1750. Mr. Rickman. *Census of Population of Great Britain*. 1841. Introductory remarks to the three volumes, p. 43.

These estimates differ slightly from some others but they constitute the most considerable body of material available, and as they are based on the same methods throughout it was deemed wise to use them to the exclusion of other material in the preparation of the density maps published.

Hull, C. H. *The Writings of Sir William Petty*. Cambridge, 1899. 2 vols.

The introduction (pp. lxxxiv ff.) contains the most detailed study of the growth of the registration area in and about London.

Inman, A. H. *Domesday and Feudal Statistics*. London, 1900.

Levasseur, E. *La Population Française*. Paris, 1889-92. 3 vols.

The most considerable of several studies of the population of France.

Collateral Reading.

The material on this subject does not seem suitable to the needs of a class.

CHAPTER V

Critical Discussions.

Gras, N. S. B. *The Evolution of the English Corn Market.* Harvard University Press, Cambridge, 1915.

An important contribution to the early history of marketing which gives an essentially new account of the decay of the manor.

Gray, H. L. *English Field Systems.* Harvard University Press, Cambridge, 1915.

A painstaking and significant study of the agricultural arrangements of the early and later medieval period, supplanting in many ways the older literature on the subject.

Hone, N. J. *The Manor and Manorial Records.* London, 1906.

A description of the general features of manorial life designed to be free from technicalities.

Kaufmann, A. *Beiträge zur Kenntniss der Feldgemeinschaft in Siberien.* Archiv für Sociale Gesetzgebung und Statistik. Vol. IX, p. 108.

The general conclusions of researches carried on for many years in connection with the publication of materials collected in Siberia. In many respects a pioneer work.

Lewinski, Jan de St. *The Origin of Property and the Formation of the Village Community.* London, 1913.

A study based on the Siberian materials, presenting no new facts though the development recognized by Kaufmann and Simkhovitch is made part of a general theory of the origin of property. It would seem that this general thesis must be regarded as a hypothesis, suggested by the Siberian evidence, but needing further confirmation before acceptance as a general principle of historical sociology.

Maitland, F. W. *Domesday Book and Beyond.* Cambridge, 1897.

A critical study of fundamental importance.

Meitzen, A. *Siedelung und Agrarwesen der West- und Ostgermanen.* Berlin, 1895.

A voluminous and careful study based upon the theory that the mode of settlement is essentially associated with "race." The work is the culmination of much German writing, and it seemed that its conclusions were irresistible until new light was thrown upon the subject by the Siberian materials.

Seebohm, Frederick. *The English Village Community.* London, 1883.

Long a standard work, now supplanted in many details by recent works, especially Gray's.

Simkhovitch, V. G. *Die Feldgemeinschaft in Russland.* Jena, 1898.

A comprehensive study of the Russian village community, both in Russia and in Siberia. Much attention is devoted to the criticism of the idealisation of the village community by socialistic writers. The institution is regarded as an essentially primitive arrangement that has already passed the term of its greatest usefulness in Russia.

— "Hay and History." *Political Science Quarterly*, 1913, vol. XXVIII, pp. 385-403.

An application of some of the principles derived from the Siberian material to conditions in medieval Europe.

SELECTED REFERENCES

vii

Vinogradoff, P. *English Society in the Eleventh Century*. Oxford, 1908.
A scholarly and vivid description of England at the time of the Domesday Survey.

— *The Growth of the Manor*. Oxford, 1911.

One of the most important and extended studies of this problem.

Collateral Reading.

Lipson, *op. cit.*, chapters II and III.

Hone, N. J., *op. cit.*

Lewinsky, *op. cit.*

Simkhovitch, "Hay and History."

CHAPTER VI

Critical Discussions.

Ballard, A. *The Domesday Boroughs*, 1904.

Day, C. *History of Commerce*. New York, 1914.

Gross, Charles. *Select Cases on the Law Merchant*. Selden Society. London, 1908. Introduction.

Hall, H. *A History of the Customs Revenue in England*. London, 1885. 2 vols.

Huvelin, P. *Étude Historique sur le Droit des Marchés et des Foires*. Paris, 1897.

Jenckes, A. L. *The Origin, the Organization, and the Location of the Staples of England*. Philadelphia, 1908.

Kitchin, G. W. *A Charter of Edward III confirming and enlarging the Privileges of St. Giles' Fair, Winchester*. London, 1886.

Lingelbach, W. E. *The Merchant Adventurers of England. Their Laws and Ordinances*. Philadelphia, 1902.

Maitland, F. W. *Township and Borough*. Cambridge, 1898.

Mitchell, W. *Early History of the Law Merchant*. Cambridge, 1904.

Schmoller, G. *The Mercantile System*. New York, 1896. A chapter from the study, *Studien über die Wirtschaftliche Politik Friedrichs des Grossen*, 1884. Reprinted separately in *Umrisse und Untersuchungen*.

The specific purpose of the essay gave prominence to Prussian illustrative material which is somewhat unfortunate; it was intended to be a statement of a theory of the development of the modern state, but the scheme suggested is more closely related to the history of Prussia than to the history of other portions of Europe. This essay introduced the idea of the "town economy" into economic history. The publication of essentially the same ideas by Bücher in 1893 was the occasion of no little feeling.

Schultz, F. *Die Hanse und England von Edouard III bis auf Heinrich VIII's Zeit*. Berlin, 1911.

Stein, W. *Die Hanse und England*. Leipzig, 1905.

Collateral Reading.

Lipson, *op. cit.*, chapters V, VI, VII.

Mitchell, *op. cit.*

CHAPTER VII

Critical Discussions.

Brentano, L. *On the History and Development of Guilds and the Origin of Trade Unions.* London, 1870.

Despite the generalizations criticized in the text, Brentano's work is still useful.

Gross, Charles. *The Guild Merchant.* Oxford, 1890. 2 vols.

A fundamental study, directed against certain theories of continental writers. Primarily concerned with constitutional problems. The discussion of the economic policies of the Guild Merchant seems to be rather more literal than the notes and documents of the second volume would warrant.

Herbert, W. *The History of the Twelve Great Livery Companies of London.* London, 1834. 2 vols.

Hibbert, F. A. *Influence and Development of English Guilds.* Cambridge, 1891.

Kramer, S. *English Craft Guilds and the Government.* New York, 1905.

Unwin, G. *The Guilds and Companies of London.* London, 1908.

The best comprehensive study of the guilds of London, based on much documentary material that has recently become available in the archives and in print.

— *Industrial Organization in the Sixteenth and Seventeenth Centuries.* Oxford, 1904.

An important study in the history of the later phases of the craft organizations. The conclusions seem to be obscured by the failure to distinguish sufficiently between the constitutional and industrial aspects of craft activities.

Collateral Reading.

Lipson, *op. cit.*, chapter VIII.

Brentano, *op. cit.*

Unwin, *Guilds and Companies of London.*

CHAPTER VIII

Critical Discussions.

Ashley, W. J. *Early History of the English Woollen Industry.* Publications of the American Economic Association, vol. II, no. 4. 1887 (*Introduction to the Economic History of England*, II, chapter III.)

Bischoff, J. *A Comprehensive History of the Woollen and Worsted Manufactures.* London, 1842.

James, J. *History of the Worsted Manufacture in England.* London, 1857

Lohmann, F. *Die Staatliche Regelung der englischen Wollindustrie vom XV^{ten} bis zum XVIII^{ten} Jahrhundert.* 1900.

Unwin, G. "Woollen and Worsted Industries of Suffolk." *Victorian County History of Suffolk*, vol. II, pp. 254 ff.

The most important of many local studies.

Collateral Reading.

Lipson, *op. cit.*, chapter IX.

Ashley, *op. cit.*

Saltzman, L. F. *English Industries in the Middle Ages.* London, 1913 Chapter VIII.

CHAPTER IX

Critical Discussions.

Bradley, H. *English Enclosures*. New York, 1918.

An important study of the early enclosure movement, attributing the changes in agricultural methods to soil exhaustion rather than to the supposedly high price of wool. The study seems to be not inconsistent with the view expressed in the text, but it would perhaps explain more completely the circumstances leading to the establishment of the Midland System of mixed arable and pasture.

The views in the text were based largely upon suggestions from Gray's studies of the field systems: the field systems were deemed to be capable of more improvement of agricultural technique than Miss Bradley assumes. It was intended, however, to represent the transition as a change towards a more refined technique; so general a formulation that it has not seemed necessary to introduce any changes in a text that was complete before this excellent piece of work came into my hands.

Collings, J. *Land Reform. Occupying Ownership, Peasant Proprietary, and Rural Education*. London, 1908.

A statement of the problem by the chief advocate of small holdings.

Evershed, H. Allotments. *National Review*, vol. x, p. 25.

Description of early experiments.

Fortescue, E. Poor Men's Gardens. *The Nineteenth Century*, 1888, vol. xxiii, p. 394.

Gay, E. F. Inclosures in England in the Sixteenth Century. *Quarterly Journal of Economics*, 1903. Vol. xvii, pp. 576-97.

— and Leadham, I. S. The Inquisitions of Depopulation in 1517 and the "Domesday of Enclosures." *Transactions of the Royal Historical Society*, 1900, vol. xiv, pp. 231-303.

A discussion of the critical problems in the interpretation of the inquiries of the early sixteenth century, chiefly with reference to the proportion of enclosure devoted respectively to arable and pasture.

Gonner, E. C. K. *Common Land and Enclosure*. London, 1912.

A praiseworthy attempt to write a comprehensive history of the enclosure movement; necessarily uneven in quality.

Hasbach, W. *A History of the English Agricultural Laborer*. London, 1908.

A careful and discriminating study.

Jebb, L. *The Small Holdings of England. A Survey of various existing systems*. London, 1907.

— *The Working of the Small Holdings Act*. London, 1907.

Johnson, A. H. *The Disappearance of the Small Landowner*. 1909.

Shows by use of the land-tax assessments that the yeoman farmer disappeared nearly a century earlier than was currently supposed.

Leadham, I. S. *The Domesday of Enclosures. 1517-18*. Introduction. Royal Historical Society. 1897.

Levy, H. *Large and Small Holdings*.

Prothero, R. E. *English Farming Past and Present*. London, 1912.

SELECTED REFERENCES

Slater, G. *The English Peasantry and the Enclosure of the Common Fields*. London, 1907.

A study of the enclosure movement, primarily in the eighteenth century. In many ways the most readable of the accounts now available.

Collateral Reading.

Gonner, E. C. K., *op. cit.*

Slater, G., *op. cit.*

Collings, J., *op. cit.*

Jebb, L., both books.

CHAPTER X

Critical Discussions.

Ashley, W. J. *Economic Organization of England*. London, 1914. Chapter VII.

A relatively conservative account, which embodies many of the elements of interpretation criticized in the text.

Jevons, W. S. *The Coal Question*. 1st edition, London, 1865. 2nd edition, London, 1906. Chapters IX, X, XI.

The entire change is interpreted in terms of the volume of the production of coal. It would seem that this extreme emphasis upon a single source of power leads to exaggeration. Even to-day we are in position to foresee a development of other sources of power which may well invalidate certain of the conclusions of this stimulating work.

Mantoux, P. *La Révolution Industrielle au XVIII^e siècle*. Paris, 1906.

The most careful study of the beginnings of the Industrial Revolution. Already long out of print.

Wood, Sir H. T. *Industrial England in the Middle of the Eighteenth Century*. London, 1910.

CHAPTER XI

Anon. (presumed to have been edited by Defoe). *The British Merchant*. London, 1720. 3 vols.

A polemic inspired by the discussion of the commercial treaty with France projected in 1713.

Barbon, Nicholas. *A Discourse on Trade*. 1690. 1696.

Reprinted by Hollander, *Economic Reprints*.

Bruce, J. *Annals of the Honorable East India Company*. London, 1810. 3 vols.

A collection of documents that is important in connection with the development of the trade in cottons.

Child, Sir Josia. *A New Discourse on Trade*. 1681.

D'Avenant, Charles. *Essay on the East Indian Trade. Political and Commercial Writings of D'Avenant*. London, 1771. Vol. 1, p. 83.

Hewins, W. A. S. *English Trade and Finance*, chiefly in the seventeenth century. London, 1892. Chapter v. Three Commercial Treaties.

Hunter, W. W. *A History of British India*. London, 1899-1900. 2 vols.

The most complete account of the early history of the company.

Mun, Thomas. *England's Treasure by her Forraign Trade*. London, 1664. Reprint: Economic Classics, New York, 1892.

Smith, J. *Chronicon Rusticum-Commerciale, or Memoirs of Wool*. London, 1747. 2 vols.

Wright, Arnold. *Early English Adventurers in the East*. London, 1917.

Narrative of early travel in the East leading up to the East India Company and chapters from the early history of the company.

Collateral Reading.

Hunter, *op. cit.*, vol. II, chapter VIII.

Hewins, *op. cit.*, chapter V.

CHAPTER XII

Critical Discussions.

Baines, Edward, Jr. *History of the Cotton Manufacture*. London, 1835.

Still the most comprehensive account.

Chapman, S. J. *The Cotton Industry and Trade*. London, 1905.

Recent history and description of the present condition of the industry.

— *The Lancashire Cotton Industry*. Manchester, 1904.

A careful history of the rise of the factory system in the industry and of the development of organisation among the workers.

Ellison, Thomas. *The Cotton Trade of Great Britain*. London, 1886.

A study of the trade by a member of a famous Liverpool firm. The most complete study of the trade statistics.

French, G. J. *Life and Times of Samuel Crompton*. Manchester, 1860.

Contains also an appendix on the development of spinning by rollers, documents connected with the claims of Paul to the invention.

Guest, Richard. *History of the Cotton Manufacture, with a disproval of the Sir Richard Arkwright's claim to his Inventions*. 1823.

An important near contemporary account, provided with illustrations of the early machines which are the basis of most of the modern cuts.

Marsden, R. *Cotton Spinning, its development, principles, and practice*. London, 1886.

The least technical of the treatises on spinning.

Schultze-Gaevernitz, G. von. *Der Grossbetrieb: Ein Wirtschaftlicher und socialer Fortschritt: Eine Studie auf dem Gebiete der Baumwollindustrie*. 1892. Translation: *The Cotton Trade in England and on the Continent*. Manchester, 1895.

An excellent study in the rise of the factory system and certain aspects of international competition.

Taggart, W. S. *Cotton Spinning*. London, 1902. 3 vols.

A more elaborate treatise than that of Marsden, designed for technical students.

Wood, G. H. *The History of Wages in the Cotton Trade during the last Hundred Years.* London, 1910.

Collateral Reading.

Baines, *op. cit.*

Marsden, *op. cit.*

CHAPTER XIII

Critical Discussions.

Beck, L. *Die Geschichte des Eisens in technischer und kulturgeschichtlicher Beziehung.* Braunschweig, 1884-1903. 5 vols.

The most important single work on the iron industry, combining the technical and historical points of view with unusual success.

Bessemer, Sir H. *An Autobiography.* London, 1905.

A record that conveys the personality of the man as well as the external events of his career as an inventor. Absorbingly interesting.

Grantham, J. *Iron Ship-building.* London, 1868.

Jeans, W. T. *The Creators of the Age of Steel.* New York, 1884.

Biographical essays on Bessemer, Siemens, Whitworth, Brown, Thomas, and Snelus.

Muirhead, J. P. *The Origin and Progress of the Mechanical Inventions of James Watt.* London, 1854. 3 vols.

The most complete of the biographies of Watt.

Percy, J. *Metallurgy: The Art of Extracting Metals from their Ores, and of Adapting them to Various Purposes of Manufacture. Iron and Steel.* London, 1864.

A technical treatise that includes more historical material than any other treatise in English.

Scrivenor, H. *A Comprehensive History of the Iron Trade throughout the world, from the earliest records to the present.* London, 1841. Revised and enlarged, 1854.

Not very useful.

Smiles, S. *Industrial Biography: Iron Workers and Tool-makers.* London, 1863.

Important.

— *Lives of Boulton and Watt*, from the original Soho MSS. London, 1865.

Thurston, R. H. *A History of the Growth of the Steam Engine.* New York, 1902.

An account written by an engineer for the general public.

Trevithick, Francis. *Life of Richard Trevithick.* London, 1872. 2 vols.

Collateral Reading.

Bessemer, *op. cit.*

Jeans, *op. cit.*

Smiles, *Industrial Biography.*

CHAPTER XIV

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INDEX

- Accidents in industry, risk of, placed by insurance upon consumers, 423.
- Acquittaine, grants to wine merchants from, 151.
- Administrative nihilism, Webb's allegation of, 370.
- Administrative system, lack of a centralised, 388.
- Aggregation, of free and of unfree workers, 67.
- Agriculture, basis of prosperity in the Middle Ages, 262; capitalistic farming, 227; the midland system, 226; no ideal system, 228; relation to industry, 208, 251; relative importance of, to industry, 260-61; size of farms, 227; yeoman farming, 227.
- Algeria, French land policy in, 111.
- Aliens, charters to a. craftsmen, 177; grants of privileges to merchant a., 151.
- Alien merchants, royal privileges granted to, 146.
- Allotment, definition of, 240.
- Allotments, accomplishment of legislation on, 243; acts of 1882 and 1887, 242; compulsory provision of land for, 242; early experiments with, 241; origin of, in the village community, 118-19; provision for, in the Poor Laws, 241; to villagers in the open fields, 115.
- Amalgamated Society of Engineers, the, constitution and organisation of, 523-24; decline of its power, 527; grants during the builders' strike, 525; the model for craft unions, 523; policy of, 524.
- Amalgamation of railways, projects for, in 1853, 454.
- Amboyna, massacre at, 278.
- Ancient Trades Decayed and Repaired Again*, the, 279.
- Antiquity, parallels with the Middle Ages, 41.
- Apprentices, 72; pauper, 360; significance of the restriction of numbers of, 353.
- Apprentices, the Statute of, attempts to enforce, about 1800, 354; distinguished three groups of crafts, 192; implies the existence of a wage-earning class, 193; later significance of, 368; purposes of, 192; purpose of the wage-fixing clauses, 367; wage-fixing clauses, 193.
- Apprenticeship, 73; attempts to enforce legal provisions on, 353; decay of the system, 353; in Mesopotamia, 37; regulations of, in the *Book of the Crafts*, 82.
- Arable land, development of communal use of, 118.
- Aristocracy, the, control of land by, curtailed, 242; its demand for agricultural products, 20; development of a Germanic, 122; disappearance of Roman, 122; factors creating an, 122; the feudal, 29; indirect participation in industry, 47; its place in the medieval village, 120; position of, in the ancient city, 26; its relation to agrarian history, 109.
- Arkwright, R., development of the water frame, 295; early career, 294; manufactures stockings and calicoes, 295; his patent suits, 296; relations with Kay and Higs, 294; secures repeal of the Calico Act, 295; his water frame contrasted with Paul's machine, 293.
- Artisans, in antiquity, 8; during the dark ages, 55; in Greece, 45; obligations of, under the late Roman Empire, 54; position of, in Egypt, 33; position of, in the nineteenth century, 503; status in Mesopotamia, 35.
- Ashley, W. J., 165; conception of the town economy, 134; interpretation of sixteenth-century legislation in the woolen industry, 224.
- Aulnager, his functions and his accounts, 216.
- Ballif, duties of a manorial, 129.
- Balance of power, the, influence of economic changes on, 268.
- Balance of trade, the, use of the conception in the seventeenth century, 282.
- Basic process, for application of the converter to acid ores, 344; extension of, in the iron trade, 345.
- Beloch, discussion of slavery in antiquity, 8; estimates of population, 28, 42.
- Benefit societies, in Rome, 48. *See also* Conifère.
- Bessemer, Sir H., 274; the bronze powder episode, 335-39; criticism of, by

- English iron masters, 343; early career of, 334; experiments in middle life, 339; the steel-making inventions, 340-43.
- Black Death, the, extent of its ravages uncertain, 96; presumed effect on population, 92; relation to commutation, 132.
- Blacksmith, in early Egypt, 31; in early Greece, 43; on the Kasai, 4-5.
- Blanqui, use of the phrase "Industrial Revolution," 247.
- Blast, artificial, its influence on smelting, 316; produced by falling water, 317-18.
- Blowing machinery, Smeaton's, 322; vital importance of, 322-23.
- Board of Health, the first, 398; nature of opposition to, 399.
- Board of Trade, exercised regulatory functions over railways, 466; functions of, in connection with railways, 463; participation in the preparation of rate schedules, 470; supervision of railway projects, 461.
- Bolton, Lancashire, climate of, 265.
- Book of the Crafts*, the, 59; 60; 70; 77; regulations of apprenticeship, 82; regulations common in craft statutes, 82; status of journeymen, 83; status of masters, 84.
- Boon days, 128.
- Booth, proposed the multitubular boiler for the locomotive, 442.
- Bordarii (crofters), 123.
- Boroughs, as county seats, 160; definition of, 158; features of, 161; population of, 104-05; trade and industry in, 159.
- Boston, Mass., climate of, 265.
- Boulton, partnership with Watt, 327.
- Bourgeois, E., 78.
- Bowley, A. L., 505; studies of wages, 502.
- Brentano, L., *Origin and Development of Guilds*, 166-67; his theory of gild development, 167.
- British New Guinea, coastal trade of the natives of, 6.
- Brown and Company, Sheffield, activities of the firm, 484-85.
- Bücher, K., 217; conception of the dawn of history, 24; concept of household industry criticized, 36, 45; conception of town economy, 134; discussion of the household in antiquity, 8; *Industrial Evolution*, 3; underestimates the importance of commerce, 39.
- Bullion, export of, to India, 281.
- Burgesses, obligations of, 159-60.
- Butchers, craft of, said to have persisted at Paris since Roman times, 63.
- Calais, the staple at, 154.
- Calico Act, the, 284; repealed, 286; repealed at the instance of Arkwright, 295.
- Cambridge, 161; early history of, 159; occupational groups in, 185.
- Candle-makers, at Paris, wage and craft work, 11.
- Capital, source of, for early railways, 443.
- Capitalism, early rise of, 218.
- Capitalist employer, functions of, 13; his new functions in the factory, 16.
- Capitalistic control, beginnings of, 13; of industry at Paris, 1300, 72; its rise, in the woolen industries, 208.
- Carding machines, 288.
- Cardwell, chairman of the Committee on Railways, in 1853, 454.
- Cardwell's Committee, policy on competition adopted by, 454.
- Carlyle, T., *Past and Present*, 249.
- Carpenters, their connection with the Royal Household, 80.
- Carta Mercatoria, 146; 151; its provisions, 152.
- Cartel, the, 481-82.
- Cartwright, invention of the power loom, 301.
- Cast iron, conditions essential to its production, 316; produced in the bloomery furnace, 318.
- Centralization, opposed by Toulmin Smith and his group, 390.
- Cesspools, in early towns, 395-96.
- Chadwick, Edwin, career and characterization, 392-94; plan for reform of the Poor-Law, 420; policies unpopular, 399; proposals for improved sanitary conveniences, 397.
- Changes in population, 88.
- Charcoal, scarcity of, 319.
- Charter of Liberties, of the railways, 464.
- Charter, the People's, 516.
- Charters, hearings on the applications of railways for, 461; parliamentary expense incurred by railways for, 459; procedure for acquisition of, 460-61; provisions of early railway, 462.
- Chartism, aims of the London group, 514; the Birmingham group, 517; constitutionalist tendencies of, 514; drafting of the Charter, 516; failure of the great petition, 518; genesis of the program, 514; importance of, 512; influence of anti-poor-law agitation on, 516; London Working Men's Association, 514, 516; the petition and the six points, 515; relation to the Reform agitation of 1832, 514; socialistic background of, 513; threatened violence, 517.

- Child, Sir J., changed the politics of the East India Company, 290; defense of the East India Company, 279.
- Cholesbury, parish abandoned to the poor, 417.
- City, the ancient, 26; the modern, 29; technical meaning of, in England, 158. *See also* Towns; Urban life; Boroughs.
- Class consciousness, among London artisans, 1833-36, 514.
- Classes of society, about 1086, 123.
- Classical Economists, the, 513.
- Cleave, John, 514.
- Climate, relation of a humid climate to textile manufacture, 263; relation to textile manufacture (table), 267. *See also* Humidity.
- Cloth, market for Suffolk, 220.
- Cloth manufacture. *See* Woolen industry.
- Clothiers, activities restricted by the Weavers' Act, 212; become capitalists, 208; certain poor, 222; at Colchester, 217; as employers of weavers, 211; in the Suffolk woolen industry, 218; in the west of England, 213. *See also* Drapers.
- Coal, significance of its use in the metal trades, 314; use of, by Dudley, 320.
- Coal trade, combinations in Germany and the United States, 478.
- Coats, J. & P. Ltd., history of the firm, 489-90.
- Coke, influence on the use of the bloomery furnace, 319.
- Colchester, occupational groups in, 185; putting-out system established, 217.
- Collective bargaining, beginnings at Coventry, 374-75; in Gloucestershire, 1756, 370.
- Collegia, in Rome, 48.
- Collings, Jesse, advocates small holdings, 245.
- Cologne, 149.
- Coloni (tenant farmers), 121.
- Combination, tendency toward, 475; horizontal, in the textile trades, 489; in the thread trade, 490; vertical, advantages of, 484; vertical, advantages in the steel trade, 485-87; vertical, does not destroy competition, 488-89.
- Combination Laws, the, 377; aspirations of laborers following the repeal of, 519; the committee of 1823 on, 382.
- Combinations, among railways, 468; causes of late development of, 476; causes of, in the steel trade, 478; forms of permanent, 483; legal classification of, 479; in the Newcastle coal trade, 476-77; temporary, 482; vertical and horizontal, 483.
- Combinations of working men, the act of 1825, on, 385.
- Commerce, expansion of, 22; expansion during the Middle Ages, 22; expansion leading to the Industrial Revolution, 23; importance of, in France after the invasions, 53; relative order of emergence as compared with industry, 39; of Rome, 27.
- Commercial theory, of Greek development, 40.
- Commercial treaty, with France, proposed in 1713, 283.
- Commission system, 14. *See also* Putting-out system.
- Common carriers, development of tram lines to serve as, 432.
- Common pasture, effect of destruction of, on the diet of the poor, 239; Young's proposals, 239; contemporary dissatisfaction with, 238; consequences of their destruction, 238; policy concerning, 237.
- Common, rights of, 232.
- Communal use of arable land, 118.
- Communal use of meadow land, 118.
- Communism, traces of, among craftsmen, 85; not practiced in the village community, 115.
- Commutation, its influence upon the status of tenant farmers, 131; of manorial dues, 131; mutual advantages of, 132; progress of, 132.
- Companies, nature of companies for foreign trade, 147.
- Compensation Laws, adopted in England, 425; act of 1897, 425; amendments, 1900, 1906, 425; opposition of organized labor to, 426.
- Competition, the essence of, 496; not destroyed by vertical combination, 488; a relative term, 495; unfair, among craftsmen, 84.
- Competition among railways, disadvantages of limited, 467-68; nature and advantages of, 467; policy adopted by Cardwell's committee, 454; policy adopted in regard to, 466-67.
- Composition, the, at Norwich, 179.
- Concentration of wealth, the form more important than the amount, 510; meaning of, 508.
- Confrérie, 166; perhaps connected with Roman collegia, 63.
- Congested areas, provision for reorganization of, 405.
- Conspiracy, doctrine of, 380.
- Constable, the village, 130.
- Constantinople, autonomous crafts in, 50; Prefect of, 50.
- Consumer, seldom in direct contact with the craft producer, 12.

- Consumption, standardized, 21.
- Converter, the, genesis of Bessemer's idea, 341; limitations of the use of, 343; mode of operation of, 341.
- Copyhold tenure, 132.
- Cordwainer, 63.
- Corporate personality, development of the concept, 162.
- Corporation, the large, advantages of, 483.
- Cort, H., his inventions, 331.
- Cosmopolitanism, 21; during the Middle Ages, 164.
- Cottage industry, exemptions in the Weavers' Act in favor of, 213; woolen weaving, 211.
- Cottagers (crofters), injured by enclosure, 238; obligations of, on a manor, 128; Young's proposals in their behalf, 239.
- Cottarii. *See above*, under Cottagers.
- Cotton, use of, in medieval Europe, 276.
- Cotton industry, effect of the Industrial Revolution on, 254; growth of, in Great Britain, 303; importance of protection to, 286; protected by the Manchester Act, 285; rise of, 308-09.
- Cotton spinning, effect of humidity on, 263.
- Cotton trade, early history of, 276.
- Cottons, East Indian, compete with woolens, 215; competition with European textiles, 278; effect of their introduction in Europe, 252; effect of prohibitions against their importation, 253; introduction of, in Europe, 278; not an original purpose of the East India Companies, 277; prohibition of importation, by the Calico Act, 284; as trade goods in the islands, 277; use of, in England, 279.
- Courts, at fairs, 143.
- Coventry, labor troubles at, 374-77.
- Craft guilds, characteristics of, 74; at Constantinople, 50; feudal influences on, 78; origins of sworn crafts at Paris, 76; problems of origins, 75; Roman and Teutonic influences, 75; a spontaneous outgrowth, 50.
- Craft industry, 9.
- Craft specialization, based on physical limitations, 38.
- Craft unions. *See* Trade unions; *also* Amalgamated Society of Engineers.
- Craft work, beginnings of, 4-5; in early Egypt, 33; in Mesopotamia, 36; notion of, 10; a short-lived form, 217.
- Craft workers, relations with the consumer, 68.
- Crafts, administrative organization absent during the dark ages, 54; in antiquity and the Middle Ages, 29; autonomy at Constantinople, 50; chains of correlated, 13; chartered, 75; content of statutes of, 81; delimitations of their activities, 85; develop early, 7-8; in the eleventh century, 56; in early Egypt, 31; engaged in export trade, 61; engaged in finishing of woolens, 204; engaged in the preparation of foods, at Rome, 49; in the feudal household, 79; free, 75; groups distinguished in the Statute of Apprentices, 192; groups of, in the Middle Ages, 60; ideals not achieved, 81; importance of lists of, 10; no lists possible for early Greece, 44; lists of, at Paris in the eleventh century, 62; lists of in Rome, 48; in Mesopotamia, 35; not always organized as guilds, 187; in the ninth century, 56; numbers of, at Norwich, 185; numbers at Paris, 60; numbers of, in various English towns, 186; obligations of members of, 82; organization in antiquity, 27; organization at Rome, 48; persistence of, in the dark ages, 55; process of specialization gradual, 8; records for Paris, 59; specialization by processes in Greece, 43; stages in the development of, 11-12; subordinate importance of textile, in Rome, 49; sworn, 76; traces of communism among, 85; unions of smaller and larger crafts at Norwich, 180.
- Craftsmen, regulations of status of, 82.
- Cranege, Thomas and George, 330.
- Crofters. *See* Cottagers.
- Crompton, invention of the mule, 298; poverty of, 300; various names given his spinning machine, 298.
- Cross Act, 1875, 405.
- Crown and Anchor Tavern, the, meeting of Chartists at, 515.
- Culture of antiquity, 41.
- Cunningham, W., 96; *Growth of English Industry and Commerce*, 250.
- Danes, effect of their invasions, 122.
- Darby, relation of the family to the iron industry, 321.
- Darby, Abraham, experiments with coke, 321.
- Darby, A., 2d, success with coke as fuel, 321.
- Dark ages, the, 25; industrial conditions in, 54; persistence of crafts, 55.
- D'Avenant, C., *Essay on the East Indian Trade*, 284.
- Death rates, decline in, 499.
- Delimitation of crafts, 85.
- Density of population, normal, 89; relative changes in, among English counties, 98; significance of deviation from the mean, 100.

- Dependent classes, on a manor, 128.
Dictionary of Jean de Garlande, 59.
 Direct contact, between producer and consumer, 60, 69.
 Direct process, in the iron industry, generality of its use in the early period, 314, 315.
 Disintegration, of industrial processes, 12, 66.
 Dispersion of population, characteristic of the Middle Ages, 102.
 Distress, complex causes of, in the early nineteenth century, 364.
 Distribution of wealth, changes in, 511; concept of normal, 509; equality of, 508; implications of normal, 509.
 Division of labor, geographical, 6; horizontal, 15; vertical, 9; relation to industrial forms, 18.
 Domesday Book, 125; social classifications in, 123-24; evidence of dispersion of population in, 103.
 Domestic system, 13. *See also* Putting-out system.
 Dorsetshire laborers, the, case of, 521.
 Drapers, 61; as capitalists, 71; become capitalists, 208; at Paris, eleventh century, 64; of Shrewsbury, 211. *See also* Clothiers.
Draper's Dictionary, the, 199.
 Dublin, 173, 174; occupational groups in, 185.
 Dudley, D., experiments with coal, 320; purposes of his experiments, 253.
 Dutch, the, their struggle for the Spice Islands, 277.
 Dyeing, a speciality of some Flemish and Italian towns, 202.
 Dyers, early emergence of, 12; conflicts with the drapers at Paris, 71; precede weavers in Egypt, 34.
 East India Company, its early trading policy, 277; export of bullion, 281; its first factories in India, 277; its hold upon the Government, 284; Mun's defense of its trade, 281; its politics, 280.
 East Indian textiles, bill to prohibit the use of, 1696-97, 279.
 Eberstadt, 78.
 Economic equilibrium, disturbances of, 268.
 Edward I, grants to foreign merchants, 151.
 Edward VI, statute of, confiscating the endowments of the gilds, 190.
 Egypt, character of records, 30; early culture of, 24.
 Employer, authority of, in the factory, 348; early functions, 13. *See also* Capitalist employer.
 Enclosure, by act of Parliament, 231; by agreement, 233; and changes of proprietorship, 228; continuity of, 229; effect on the diet of the poor, 239; errors of policy, 238; forms of, 225; Lord Thurlow's criticism of procedure in Parliament on, 236; meaning of, 225; partial in the early period, 230-31; policy towards commons in the acts of Parliament, 237; poorer villagers hostile to, 233; precedents for Parliamentary acts, 234; problems of title raised by, 237; procedure under act of Parliament, 235; progress of, 230; purposes of, 226; relative areas to arable and pasture, 231; rights of common an obstacle, 232; theory of Parliamentary acts for, 235; of waste, 232.
 England, dependence upon Continental influences, 102; a frontier province of Europe, 102; growth of population in, 88; population prior to the Black Death, 92, 97; under-populated in the Middle Ages, 90.
 English Sewing Cotton Company, financial difficulties of, 492; its pool with Coats, 491.
 Enumerations of population, in the Middle Ages, 87; deficiencies of French figures, 91; poll-tax returns, 93; subsidy rolls, 93.
 Evolution of industry, not merely a matter of typical forms, 45-46.
 Factory, the, common definitions, 346-47; development checked by legislation, 352; development opposed by the workmen, 348; essential features of, 347; legislative definitions, 413; primitive forms in Greece, 44; probable dates of its introduction in various textile trades, 358-59; reasons for the slow growth of, 349; relation of machinery to, 350; rise of, in the cotton industry, 356; a rudimentary, 36; social problems of, 359; without machinery, 350.
 Factory (trading post), at Surat, 277.
 Factory Act, of 1802, 410; of 1819, 410; of 1833, 411; of 1844, 412; of 1847, 413; of 1864, 414; of 1867, 413-14; of 1878, 413, 415; of 1883, 415; of 1889, 415; of 1898, 415; amended and codified in 1901, 415; dangerous trades regulated, 414; early history of, 410; extension of principles, 413.
 Factory inspectors, created by the act of 1833, 411; defects of their returns, 414; limitations of their reports, 361.
 Factory legislation, based on the police power, 408; inquiries of 1831-33, 411.
 Factory system, the, essential features

- of, 16; experimentation with in France, 224; growth of, 362; hostility of workmen to, 16; legal definitions inadequate, 17; in the sixteenth century woolen industry, 223; tendencies toward, in antiquity, 46.
- Factories, first tendencies toward, 355; not confined to the period of the Industrial Revolution, 46; proportions of men, women, and children in, 357; rudimentary, 57, 73. *See also* Mills.
- Fagnies, on the survival of Roman institutions, 53-54.
- Fairs, 136; business of, 141; their courts, 142, 143; cycles of, 140; devoted to wholesale trade, 138-39; dues levied, 142; freedom of, 142-43; not sharply distinguished from markets, 137; number of, 138; procedure in their courts, 144; regulations of St. Giles' Fair at Winchester, 142; trade characteristic of the English, 142.
- Fallowing, benefits from, 113; medieval use of, 114.
- Farms, scattered, 112.
- Farming. *See* Agriculture.
- Felt-makers of London, organization of journeymen, 368.
- Feudal household, crafts in, 79.
- Feudal theory of guilds, 78.
- Field system, the open, 114-15; the three, 114; the two, 113.
- Flach, J., on the survival of Roman institutions, 53.
- Foods, crafts preparing, early development of, in Rome, 49.
- Formalism, in the Middle Ages, 135.
- Forms of industrial organization, 4; craft work in the east counties, 217; putting-out system, 216; putting-out system in the west of England clothing industry, 213. *See also* Putting-out system; Factory; Factory system.
- Forms of settlement, in England, 116.
- Fortrey, S., *England's Interest and Improvement*, 282.
- Fortunes, large, the problem of, 506, 510.
- France, growth of population, 88; importance of her economic influence during the dark ages, 53; population in the fourteenth century, 59; proposed commercial treaty with, 1713, 283; Roman influences, 52; stationary population of, 270.
- Francotte, H., 41; 44; timidity in classifying industrial forms in Greece, 45.
- Fraternity. *See* Guilds, religious.
- Freeman, obligations of, to the manor, 129.
- Free trade policy, origin of, 280; Tory support of, 280.
- Free trade theory, developed by the defenders of the East India Company, 283.
- Friendship, the basis of primitive trade, 5.
- Fullers, employed by Suffolk clothiers, 220; low repute of, 205.
- Fulling, appliances for, 205-06; character of the process, 205.
- Furnace, the bloomery, 318; coke used in the bloomery, 319; low open hearth, in Sweden, 317; the reverberatory, 329-30.
- Gaskell, P., pessimism of, 248.
- Gasquet, 92; 96.
- Gay, E. F., on the extent of early enclosures, 230; judgment of the purposes of early enclosing, 231.
- Gentlemen's agreements, 481.
- Geographical division of labor, among the peoples of New Guinea, 6.
- Germanic customs, described by Tacitus, 119.
- Gibbins, H. de B., on the Industrial Revolution, 249.
- Giffen, Sir Robert, 505.
- Gig mills, 206.
- Gilchrist, P. C., partnership with Thomas, 344.
- Gild, meanings of the word, 165; types of, 165.
- Gild merchant, its alleged monopoly of trade, 173; its control of craftsmen, 171; decline of, 181; its enfranchisement of trade, 174; its functions, 173; its monopoly inclusive, 175; non-resident members, 173-74; organization, 176; its place in municipal development, 163; sharing of bargains, 175; struggles with the craft guilds in Germany, 172.
- Gilds, adulterine, 178; charter incorporating the Tailors of Salisbury, 188; craft organizations less conspicuous than religious organizations, 187; employing and wage-earning classes distinguished in, 191; French terms for the various types, 166; influence of pageantry upon, 183; membership of religious and craft organizations, 182; numbers of, in various English towns, 186; relations between religious and craft guilds, 182; relative size of religious and craft organizations, 182. *See also* Craft guilds.
- Gilds, craft, a spontaneous outgrowth, 50; become companies when chartered by the King, 177; at Constantinople, 50; essential features of, 176; at London, 178; métier in French, 167; at Norwich, 179; organized within the gild merchant, 172; position after

- the Reformation, 190; the pure type, 178; and the Reformation, 177; types of, 177-78; view of the craft, 177; wardens of, at Norwich, 179.
- Gilda, religious, 166; a charter of incorporation, 188; denied right to endowments, 187; endowments confiscated, 190; the French term, 166; influence of incorporation, 188; the inquiry of 1389, 168-69; maintained grammar schools, 190; membership of, 169; organisation, 170; purposes, 169; purposes of incorporation, 189; secure charters of incorporation, 188.
- Gini, Professor C., 509.
- Gladstone award, the, 451.
- Grand National Consolidated Trades Union, activities in the case of the Dorsetshire laborers, 521; failure in the organisation of strikes, 521; its organisation, 519-20.
- Graa, N. S. B., 132.
- Great Northern Railway, the, genesis of, 450; relations with the Midland, 456.
- Great Western Railway, the, Brunel's conception of, 446.
- Greece, free artisans in, 45; primitive factories, 44; proportions of free and slave laborers, 47; stages of industrial development in, 43; vase painters in, 45.
- Grocers, 61.
- Gross, C., 172; 181; *the Guild Merchant*, 173.
- Guild. *See* Guild.
- Gynecœum, 55; at Saint-Germain des Prés, 56.
- Hall, Hubert, 151.
- Hall-in-the-Wood machine, early name for the mule, 298.
- Hamburg, 149.
- Hammurabi, list of crafts in his reign, 35.
- Hammurabi, Code of, 24; 37.
- Hand-loom weaving, reasons for persistence of, 349-50.
- Hansards, the, origins, 147; at times citizens of London, 148.
- Hanse, the, its decline, 153; defined, 147 establishment called the Steelyard, 150; fiscal privileges of, 151; government of, 149; origins of, 147; privileges of, recognized by the City, 149, its struggle to maintain its privileges, 153; subordinate corporations, 149, trade of, 150.
- Hargreaves, description of his jenny, 297-98.
- Harrison, F., 526.
- Hasbach, 242.
- Haskins, C., *Ancient Trade Guilds and Companies of Salisbury*, 189.
- Hayward, duties of, 129.
- Health, Ministry of, 403. *See* Board of Health; Public Health; Local Government Act; Local Government Board.
- Health administration, development of principles of, 400.
- Health insurance, act of 1911, 426.
- Health and Morals of Apprentices Act, 1802, 410.
- Hetherington, H., 514.
- Higs, spinning inventions, 294.
- Hilton-Simpson, M. W., *The Land and Peoples of the Kasai*, 4.
- Hobson, J. A., characterization of sweatshops, 18.
- Horrocks, loom patents, 302.
- Hours for work, defined by acts of 1844, 1847, and 1850, 412-13; regulation of, 409.
- House waste, early modes of disposal, 395.
- Household, industry in the feudal, 55; the industrial unit, 74.
- Household industry, based on slave labor, 8; Bücher's concept criticized, 45; undiversified, 4; undiversified, of rare occurrence, 7; in the feudal period, 57.
- Household, royal, in Egypt, 33; influence on craft guilds, 79.
- Housing, the Cross Act, 1875, 405; difficulties of securing adequate regulation of, 404; present problem, 406; the Torrens Act, 1867-68, 404; Town Planning Act, 1909, 405.
- Hudson and Tingey, *Select Records of Norwich*, 179.
- Hull, its charter of 1437, 162.
- Hume, J., association with Place in the repeal of the Combination Laws, 381-82.
- Humidification, artificial, requisite, 264.
- Humidity, effect of, in cotton spinning, 263; effect on the strength of yarn, 264; of twelve selected regions, 265-67.
- Hutchins and Harrison, *History of Factory Legislation*, 408.
- Incomes, distribution of, in England; 506; in the United Kingdom, difficulties of estimating, 505.
- Independent Labor Party, the, 519.
- India, cost of cotton spinning in, compared with costs of mule yarn in England, 312-13.
- Indirect process of iron production, 315.
- Industry, conditioned by commerce, 39; dependence upon agriculture, 208, dependence upon agriculture in the

- Middle Ages, 262; in the feudal household, 57; present dependence upon mineral resources and climate, 262-63; relation to agriculture, 251; relative importance of industry and agriculture, 260-61.
- Industrial development, primarily a matter of industrial specialization, 54; stages of, in Greece, 43.
- Industrial evolution, not merely a matter of typical forms, 45-46.
- Industrial groups, at Paris, in 1300, 64.
- Industrial history, beginnings of systematic study of, 1; stages in, 247; socialistic interpretations of, 2.
- Industrial organization, typical forms, 4.
- Industrial Revolution, changes in industrial groupings, 258; chronology of, 271; the close of the period, 276; the close of the period in the cotton trade, 305-06; defined in terms of capitalism, 250; early English writers on, 248; its essential features, 251; Gibbins' view, 249; importance of the changes in the metal industries, 253; misleading connotations of the phrase, 249; not primarily characterized by the emergence of the factory, 46; tables showing the varying relations between industry and agriculture, 260-61; primary causes of, 252; Toynbee's view, 250.
- Industrial specialization, conditioned by commercial expansion, 22; conditioned by the market, 19.
- Instinct of workmanship, 2.
- Integration in the control of industry, at Paris, in 1300, 71.
- Interstate Commerce Act, compared with English statutes, 465.
- Invention, conditions requisite to securing large profits from, 339; stages in, 272.
- Inventions, conditions of commercial success, 273; not complete in themselves, 272; not suddenly perfected, 251; their relation to the growth of the cotton industry, 287; a result of commercial expansion in the cotton trade, 305.
- Inventors, rewards of, 273.
- Iron, cast, 314; introduction of sheet, 332; malleable, 314; products of, 314.
- Iron ships, early history of, 332.
- Jack of Newbury, his woolen factory, 223.
- Jenckes, A. L., *The Origin, the Organization and the Location of the Staple of England*, 155.
- Jenny, the, description of, 297-98.
- Journymen, 72; 74; regulations concerning, in the *Book of the Crafts*, 83.
- Journymen Steam-Engine and Machine-Makers and Millwrights' Society, 523.
- Junta, the, 526; 527; 528.
- Kasai, the, peoples of, 4.
- Kay, relations with Arkwright, 294-95.
- Kenworthy and Bullough, loom patent, 302.
- Kersies, difficulty of classification, 199.
- King, Dr., 509.
- King, G., attempted forecast of the growth of population, 269.
- King's merchants, 154. *See also* Merchants of the staple.
-
- Labor movement, the, elements of current discontent in, 529; many-sided, 518.
- Labor representation, 528.
- Laborer, the agricultural, distress of, in the early nineteenth century, 503.
- Laborers, the Dorsetshire, case of, 521.
- Laborers, relative position of skilled and unskilled, 501.
- Laborer's Friend Society, its campaign for allotments, 242.
- Laissez-faire* theory, not a genuine obstacle to reform, 387; not of substantial importance in the development of factory legislation, 408.
- Lake Superior ores, discovery and utilization, 266.
- Land, significance of relative scarcity of, 118.
- Land policy, of England in Nigeria, 111-12; of France in Algeria, 111.
- Land tenure, related to economic conditions, 111; the Roman system, 121.
- Large scale production, in antiquity, 9; relation to standardized consumption, 21.
- Lathe, the, development of, 328.
- Law merchant, the, 136; 146; administered in fair courts, 144; application extended by the *Carta Mercatoria*, 152; in the court of the staple, 155; essence of its principles and procedure, 144; extension to municipal courts, 145.
- Lawrence, Edward, *Duty of a Steward to his Lord*, 233.
- Le Mans, crafts at, 56.
- Leaf, W., interpretation of the Trojan War, 40.
- Leeds, opposition to capitalist employers and their factories at, 354.
- Leet, the court, 129; 130; its records of land tenure, 131.
- Leicester, 174; occupational groups in, 185.
- Levi, L., 505.

- Levy, Professor**, explanation of the tendency toward combinations, 476.
- Lewinaki, Jan de St.**, 119.
- Liebig, J. von**, 269.
- Lille, France**, climate of, 266.
- Lipson, E.**, 175-76.
- List, Frederick**, *The National System of Political Economy*, 39; scheme of periodisation, 39.
- List of crafts**, analysis of, 65; Egypt, 31; importance of, 10; Mesopotamia, 35; none possible for early Greece, 44; at Paris, in the eleventh century, 62; at Rome, 48.
- Liverpool**, untoward sanitary conditions in, about 1840, 396.
- Liverpool and Manchester Railway**, the first project, 441; profits of the early years, 442-43.
- Livery**, becomes a class distinction, 191; of craftsmen, 180; of guild members, 170.
- Local Government**, influence of the old system of, 388; act of 1858, 400; act of 1871, 401.
- Locomotive**, the, contest at Liverpool, 441-42; invented by Trevithick, 433; northern designs, 437.
- London**, about equal to Paris in size in the seventeenth century, 108; area for which the population is recorded, 107-08; craft organisations at, 178; growth of, 108; the plague at, 108; relation between the City and the Hanse, 149.
- London builders**, strike of 1858, 525.
- London coal trade**, history of, 476.
- London and North Western Railway**, agreement of 1908 with the Midland, 474; amalgamations proposed in 1853 by, 454; hostility to the Great Northern, 450; joint purse agreement with the Midland, 456.
- London Working-Men's Association**, the, 514; decline of, 518.
- Lorens, Dr.**, 509.
- Lorimers**, 70.
- Lorraine ores**, development of, 345; their utilisation, 266.
- Lovett, W.**, 514; 516.
- Low Countries**, trade with, 156.
- Lübeck**, 149.
- Luxuries**, dependence of the wealthy upon specialized production of, 69; disappearance of, after the fall of Rome, 55.
- Machinery**, relation to the factory system, 16, 350; effect of its introduction upon the artisan, 363.
- Macrosty, H. W.**; *Trusts and the State*, 493; *The Trust Movement in British Industry*, 491.
- Magnates**, their place in medieval society, 121.
- Maitland, F. W.**, *Township and Borough*, 161.
- Malleable iron**, 314.
- Malthusians**, pessimism not justified by events, 269.
- Malynes, The Canker of England's Commonwealth**, 281.
- Manchester Act**, the, 285.
- Manchester, Sheffield and Lincolnshire Railway**, the strategic position of, 452.
- Manor**, the, the administrative type, 126; as a capitalistic organisation, 125; its court leet, 129, 130; essential features of, 124-25; general aspect of, 128; obligations of the tenants, 128; officers of, 129; origins of, 123; principal types found in Domesday, 125; royal, 126; varying degrees of its economic independence, 130.
- Manufacture**, for export, in antiquity, 37.
- Market**, difference between fairs and markets, 138; in the Vth Dynasty of Egypt, 32; production for, in antiquity, 9; territorial and social limitations, 19; for Mesopotamian industry, 37; the world, 22.
- Marketing conditions**, relation of, to combinations, 479.
- Marsden, R.**, *Cotton Spinning*, 298.
- Marshall, A.**, 226.
- Marx, K.**, 513; on the tendency toward combinations, 493; view of the Industrial Revolution, 250.
- Master Combers**, capitalists, 208; in the worsted districts, 222.
- Master craftsman**, 72; conditions of becoming a, 74.
- Masterpiece**, an isolated reference in the *Book of the Crafts*, 84.
- Masters**, definition of status in the *Book of the Crafts*, 84.
- Maudsley**, 328.
- Maximum tolls**; provided for in early railway charters, 462.
- Meadows**, development of communal use of, 118.
- Mercantile class**, the, source of the employing class, 2.
- Mercantilism**, fallacies associated with, 281.
- Mercers**, 61.
- Merchery**, 152.
- Merchandizing crafts**, 60.
- Merchant Adventurers**, 155; charters of 1462 and 1505, 156; origin of, 156; struggle with the Hansards, 157; trade of the company, 157.
- Merchants of the Staple**, 153; organiza-

- tion and government, 155; origin of the company, 154.
- Merino sheep, spread of the stock, 196.
- Mesopotamia, character of records, 34; early culture of, 24.
- Metal industries, abrupt changes in, 266; factors in their transformation, 253; position before and after the Industrial Revolution, 254.
- Metal trades, character of their transformation, 314.
- Methuen treaty, purpose of, 282.
- Matics, 58.
- Métier, juré, 167; libre, 166.
- Meyer, Edouard, 3; discussion of slavery in antiquity, 8.
- Midland Railway, agreement of 1908 with the London and North Western, 474; alliance with the London and North Western, 452; effect of the decision of 1853 upon, 454; extensions to London and Scotland, 454; final form of, 455; genesis of, 444-46; joint purse agreement with the London and North Western, 456; the London terminal opened, 456; policy towards third-class passengers, 457; Scotch connections developed, 456; traffic difficulties, 1857-68, 456.
- Midland system (of agriculture), description of, 226.
- Milk, poor unable to obtain, 239.
- Mill, Arkwright's cotton, 295.
- Mills, first cotton spinning in, 294.
- Mineral deposits, significance of concentration of, in Germany and the United States, 476; significance of dispersion of, in Great Britain, 476.
- Mineral resources, availability affected by technique, 266.
- Ministry of Health Act, 1919, 403.
- Money, Chiosza; 505, 507.
- Monopoly, alleged transition from, to socialization, 493; conservative attitude towards, 497; of London coal trade by the Newcastle area, 477; never absolute, 495; railways found to be "by nature a m.," 462; tendencies in legislative control of, 498.
- Monopoly, Welsh, of steam coal, 478.
- Moors, use of cotton, 276.
- Morning talks, 176.
- Morrison, J., proposed regulation of railways, 1836; 463.
- Mortmain, statute of, applied to the religious gilds, 187.
- Muirhead, *Watt's Mechanical Inventions*, 327.
- Mule, the, accomplishments of, 300; description of, 298-99; its importance, 300.
- Mun, T., *England's Treasure by her Foreign Trade*, 281.
- Municipal constitution, the, an obstacle to trade, 136.
- Muslin wheel, early name for the mule, 298.
- Muslims, beginnings of the manufacture, 297.
- Nasmyth, comment on the slide rest; 328.
- National Association of United Trades, formation and decline of, 522.
- National minimum, guaranteed by Elizabethan statutes, 415.
- Negligence, common-law doctrine of, 424.
- New drapery, as competitor of woollens, 215; meaning of the term, 199.
- New Lanark, policy at, 360.
- Newcastle coal trade, combinations in, 477.
- Nigeria, English land policy in, 111-12.
- Non-discriminatory practices among railways, definition of, 464.
- Normal density of population, 89; in the orient, 90; relative only, 90.
- Norman Conquest, its effect on the growth of the manor, 123.
- Norwich, craft organization at, 179; numbers of crafts at, 185.
- Obligations of craftsmen, 82.
- Occupations, at Paris, in 1300, 66; at Paris, classified according to size, 65; statistics of, in medieval England, 183.
- Occupational specialization, at Paris, 60.
- Occupational statistics, for British India, in 1901, 255-56; general features of industrial groupings, 1850-55, 259; Germany, in 1907, 259; not significant prior to the Industrial Revolution, 209; recent figures, 258; tables, England and Prussia, 1851 and 1855, British India, 1901, 257; tables showing the relations between industry and agriculture, 260-61; United Kingdom, 1907, 258; United States, 1909, 259.
- Octuple agreement, 451.
- Old age insurance, 428.
- Onions, P., puddling patent, 330.
- Open fields, grazing rights over, 233; relation to enclosure, 225.
- Osborne case, the, 528.
- Owen, R., 523; his ideals, 519; mills at New Lanark, 360.
- Ownership, not always preferable to tenures based on use, 111.
- Oxford, occupational groups in, 185.
- Oxfordshire, extent of seventeenth-century enclosure, 230.

- Pageantry, its influence on gild life, 183.
- Pains of transition, 363; not responsible for distress in the early nineteenth century, 418.
- Paper mills, early factories in the Rhone Valley, 224.
- Pareto, 509.
- Paris, industrial groups, in 1300, 64; occupations in 1300, 66; transition from the free to the sworn craft at, 76.
- Parliament, the People's, 517; acts for enclosure, 234.
- Parliamentary, expenses of railway companies, 559; procedure in grant of charters, 460-61; trains, 457.
- Parliamentary History of England, The*, 236.
- Passenger traffic, accommodations for third class, 457; policy of the Midland Railway, 457.
- Paul, L., 290; covenant with Wyatt, 292; defects of his spinning machine, 292; patents of 1748 and 1758, 292; relations with Wyatt, 291; his spinning machine compared with the water frame, 293.
- Pauperism, growth of, 416.
- Pearson, 510.
- Peasant holdings, average acreage, 91.
- Peasant proprietorship, advocated, 244; not always best, 228; Young's view, 244.
- Pen-y-darvan, Trevithick's locomotive trials at, 435.
- Phosphorus, elimination of, by the basic process, 344; importance of its presence in iron ore, 343.
- Pie-powder courts, 144; jurisdiction gradually merged with municipal courts, 145.
- Pig iron, conversion of, 329.
- Place, F., 514; 516; agitation against the Combination Laws, 381; early career, 380; expectation of the results of repeal of the Combination Laws, 383.
- Plague, the, limited the growth of London, 108.
- Podmore, F., *Life of Robert Owen*, 300.
- Police power, the basis of factory legislation, 408.
- Poll-tax returns, defects of, as enumerations of the population, 93.
- Pools, among railways, 481; purpose of, 481.
- Poor-Law, the Elisabethan, 415.
- Poor-Laws, allotment policy of, 241; a cause of much distress, 365; Chadwick's plan for the reform of, 420; defective administration of, 1750-1830, 417; inquiry of 1909, 421; Majority report, 1909, 422; out-relief, prior to 1834, 419; recent reforms, 421; re-
- forms of 1834, 420; systems of relief prior to 1834, 419; a parish abandoned to the poor, 418; protests against the law of 1834, 516.
- Population, in ancient cities, 27-28; of boroughs in 1086 and 1327, 104-05; changes in the mass of, during the Middle Ages, 88; concentration of, in towns, 160; deficiencies of French enumerations of, 91; deviations from the mean density of, 100; differences in growth of, in England and in France, 88; dispersion of, in the Middle Ages, 102; dispersion of, in 1086, 103-04; effect of an increase in, on the form of settlement, 117; of England about 1327, 93-95; in England and Wales, 1700-1911, 270; of France, in the fourteenth century, 59; King's estimates of, 269; increase of, subsequent to the Industrial Revolution, 269; an index of prosperity, 59; of London and of Paris, 108; medieval enumerations, 87; movement of, in England, 100; proportions of, living in various sizes of settlements, 104; Prussian towns in the eighteenth century compared with ancient Greek cities, 42; Rogers' estimates of, for England prior to the Black Death, 97; stationary in France, 270; of towns in 1377, 106.
- Poverty, likened to a preventable disease, 423; Mr. Money's use of the term, 507.
- Poverty line, the, artisans now above, 512; Rowntree's definition of, 501.
- Power loom, description of Cartwright's, 301; perfection of, 301-02; number in use at various dates, 302.
- Predatory civilisations, 27.
- Prefect, of Constantinople, regulates crafts, 50.
- Price associations, 480.
- Price-fixing, a remedy for excessive competition, 481.
- Prise, 151.
- Producer, not usually in direct contact with the consumer even during the craft stage, 12, 60, 68.
- Progress, the reality of, 499.
- Proletariat, formation of an agricultural, 239.
- Proportions of the population in various sizes of settlements, 104.
- Proprietary rights, in open field villages, 237.
- Protection, demand for, by the woolen interest, 279; the vested interest principle in England, 280.
- Protective policy, beginnings of, 279.
- Provost of Paris, supervisor of industry, 76.

- Prussia, cities of, in the eighteenth century compared with antiquity, 42; occupational groups in 1855, 257.
- Public Health, codification of laws, 1875, 402; inquiry of 1868, 400; statute of 1848, 398.
- Public Health Office, practically suppressed in 1871, 401.
- Puddling, contributions by Cort uncertain, 331; description of, 330; early history of, 330.
- Purnell, development of a rolling mill, 331-32.
- Putting-out system, the, beginnings of, in the woolen industry, 216; at Colchester, 217; economically superior to the factory system in the early period, 224; essential features of, 14-15; extent of capitalistic control in, 347; not represented by sweat-shops, 18; various forms in the woolen industries, 221; in the west of England clothing district, 213; in the woolen industry, 218.
- Race, alleged to be a factor in settlement, 120.
- Radcliffe, loom patents, 302.
- Rails, development of, 432.
- Railway, the, essential elements of, 431; the Great Western's broad gauge, 447; Stephenson's conception of, 439; the Stockton and Darlington project, 439.
- Railway Clearing House, the, 468.
- Railway Commissioners, first provision for, 1846, 465; functions of, 466; provision for, in 1873, 466.
- Railway legislation, beginnings of, 463.
- Railways, beginnings of the struggle between the Great Northern and the London and North Western, 450; their charter of liberties, 464; competitive traffic areas, 448; completion of the Scotch connections, 448-49; costs of construction in various countries, 459; early development dominated by local interests, 443; early development non-competitive, 448; early provision for through traffic, 444; first regulatory acts, 463; the first trunk line, 446; the Gladstone award, 451; high costs of construction in England, 459-60; hostility of traders to, 469; likelihood of Government control or supervision of, 474; London and York projects, 449; by nature a monopoly, 462; the Octuple agreement, 451; opposition to Parliamentary declaration of rates, 471; recent combinations among, 468, 473; recent financial pressure upon, 473; regulation proposed in 1836, 463; relations between, in early years, 443; significance of the Great Northern Railway, 450; source of capital for early railways, 443; traffic conferences among, 469.
- Rates, railway, adjusted by traffic conferences, 469; definition of unreasonable, 472; demands for Parliamentary regulation of, 470; power of railways to vary, 464; provision for maximum, 470; schedules of 1893, 472.
- Ratio charts, special uses of, 303.
- Redlich, J., *English Local Government*, 391.
- Reeve, the, functions of the village, 130.
- Reform, social, general causes of slow progress of, 387.
- Reform, two schools of, 390.
- Reform Bill, disappointment of artisans over, 514.
- Report from the Poor-Law Commissioners on an Inquiry into the Sanitary Condition of the Labouring Population of Great Britain*, 397.
- Reyce, *Breviary of Suffolk*, 221.
- Richardson, *The Health of Nations, a Review of the Works of Edwin Chadwick*, 392-93.
- Robertson, W. A., *Combination among Railway Companies*, 468.
- Rocket, the, success of, 442.
- Rodbertus, 1, 3; discussion of the household in antiquity, 8.
- Rogers, Thorold, 97.
- Rolling mills, Cort's development of, 331; Purnell's, 331-32.
- Roman influences, in Gaul, 52.
- Roman institutions, survival of, in France, 53.
- Roman land system, essentially aristocratic, 121.
- Rome, collegia, 48.
- Rowing (fulling), nature of the process, 205.
- Royal Household, influence on the craft guilds, 70.
- Ruhr Basin, importance of its coal to the German cartel, 478.
- Saint Riquier, Abbey of, as nucleus of a settlement, 56.
- Scab, the, attitude of the Amalgamated Society of Engineers towards, 525.
- Schmoller, G., 162-63; conception of town economy, 134.
- Schools, endowments of guilds not transferred to, 190.
- Scotland, rail connections with, 248-49.
- Scribe, of the XIIth Dynasty, description of craftsmen, 30-31.
- Seebohm, F., 92; 96.
- Self-sufficiency, incomplete on the fron-

- tier, 7; local, 21; municipal, 134; not unqualified in the primitive household, 4-6; qualified by inter-tribal trade, 6; qualified on the manor, 130.
- Serfs, not numerous on manors, 129.
- Settlement, Celtic forms of, 116; development of various forms in Siberia, 116-17; forms of, 112; forms of, in England, 116; racial theories of, 116; Roman forms, 116.
- Settlement and Removal, law of, 1662, 416.
- Settlements, characteristic sizes of, about 1086, 104; characteristic sizes, about 1327, 105; combination of racial and economic factors determining forms of, 120.
- Sewage removal, Chadwick's proposals for the improvement of, 397.
- Sewers, defective, in Liverpool in 1840, 396; defects of early, 395.
- Shaftesbury, the seventh Earl of, characterisation, 391.
- Sharp and Roberts, loom patents, 302.
- Sheep, important breeds of, 196.
- Sheet iron, introduction of, 332.
- Shop looms, 351; numbers of, 352.
- Siberia, development of land systems in, 118; forms of settlement, 116-17.
- Silks, East Indian, importation prohibited, 1697 and 1700, 284. *See also* East Indian textiles.
- Silk mills, early history of, 355.
- Simon, Sir John, abolished the private cesspool in the City of London, 395-96; characterisation of Chadwick, 393-94; criticism of Chadwick's attitude toward local authorities, 394.
- Size of farm, profitable a. relative to market conditions, 228.
- Slaves, attached to villas, 121; in Egypt, 33; in Greek factories, 44; number of, in antiquity, 8, 28; proportions of freemen and slaves, in Greece, 47.
- Small holdings, acts of 1892 and 1907, 245; advocated by Jesse Collings, 245; agitation for, 243; definition of, 240; extent of present need of, 246.
- Small holdings Commissioners, duties of, 245.
- Smeaton, J., comment on Watt's engine, 272, 326; blowing engine, 322.
- Smiles, S., *Industrial Biography*, 328.
- Soc-men, of an administrative manor, 126. *See also* Yeomen.
- Social insurance, 422; Health Insurance Act of 1911, 426; old age, 428; probable results of, 429; some contingencies not genuinely insurable, 423; unemployment, 427.
- Social ladder, the, break in, 227.
- Socialism, an influence in the recent labor movement, 528; relation to Chartism, 513.
- Socialists, current aspirations of, 529; interests of, in economic history, 1.
- Socialistic, interpretation of industrial history, 2, 3, 494; views on combinations, 493.
- Sociology, adopts a new point of view in agrarian history, 111.
- Southampton, 175.
- Specialisation, among leather workers at Paris, 70; degree of, at Paris, in the eleventh century, 63; of crafts, in early Greece, 43; in industry, conditioned by the market, 19; of industry, by regions, 61; of occupations, 57.
- Spice Islands, the, early importance of, 277; the struggle for, 277.
- Spinners, working on their own wool, 221.
- Spinning, continuous and intermittent processes, 288; deficiencies of, in cottages, 219; an occupation for the poor, 219; organisation of, uncertain in the early period, 203; process of, 288; by use of rollers, 290; use of rollers not really accomplished by Paul, 293.
- Spitalfields Act, 1773, its application, 373; a form of compulsory arbitration, 373; petition for its extension to Coventry, 376; provisions of, 372.
- Spitalfields riots, 371.
- Squatters. *See* Cottagers.
- Standing orders, committee on, 461.
- Staple, length of, of various wools, 195.
- Staple, the, at Calais, 154; location of, 154; meaning of the term, 153. *See also* Merchants of the staple.
- Status of craftsmen, defined, 82.
- Steam coaches, on the highways, 436.
- Steam engine, the, defects of, in the early days, 328; Newcomen's, 323; the non-condensing type, 434; principle of Newcomen's, 324; Watt's conception of, 325; Watt's difficulties in making, 326.
- Steel, costs about 1850, 340; early processes and their limitations, 340; produced by the direct process, 316.
- Steel trade, the, conditions tending to monopoly in, 478.
- Steelyard, the, establishment of the \odot Hanse at London, 150.
- Stephenson, George, conception of the nature of railway works, 439; early career, 438; experiments on grade resistance, 438; his principles of railway construction adopted in England, 460.
- Stephenson, Robert, joins with Booth in building the Rocket, 442.

- Steward, duties of a manorial, 129.
- Stockton and Darlington Railway, 439-40; provisions for passenger traffic, 462.
- Strangers, medieval laws for, 135.
- Struggles of inventors, in early stages of the Industrial Revolution, 272.
- Stump, his factory near Oxford, 223.
- Subsidy rolls, afford evidence of population, about 1327, 93.
- Suffolk, putting-out system in, 218.
- Surnames, derived from occupations, 183.
- Sweat-shops, classification of, 17.
- Tacitus, Germania of, 119.
- Taff Vale case, 527.
- Tailors of Salisbury, the, charter of, 188.
- Tapestry, manufacture at the Gobelins, 224.
- Tax rolls, as basis for occupational statistics, 183.
- Tea, becomes a staple for the poor, 239.
- Temples, work in, in Egypt, 33; work in, in Mesopotamia, 35-36.
- Ten Hours Act, 409.
- Tenants, obligations to cart produce, 130; obligations of, on a manor, 128.
- Tenant farmers, of the Roman Empire, 121; status changed by the commutation of labor dues, 131; status of the *villani* about 1086.
- Tenure of land, adapted to economic conditions, 111; sociological definition of the problem, 111.
- Teutonic customs, during the invasions, 119.
- Teutonic invasions, not incompatible with the survival of Roman institutions, 52.
- Textile crafts, at Paris, in the eleventh century, 64; subordinate importance of, in Rome, 49.
- Textile industries, dependence upon humidity, 263; dislocations occurring during the Industrial Revolution, 254; general changes in, 254; relative growth of, during the Industrial Revolution, 307-08.
- Textile trades, changes in, during the Industrial Revolution, 252; no recent tendency toward vertical integration, 439.
- Third Estate, the, 29; rise of, 2, 58.
- Thomas, development of the basic process, 344.
- Throstle, the, limitations of, 290; its principle, 288; sectional-view of, 289.
- Thurlow, Lord, criticism of procedure on enclosure bills, 236.
- Thurston, R. H., *The History and Growth of the Steam Engine*, 325, 436.
- Tool-making machinery, importance of, 328.
- Torrens Act, 1867-68, the, 404.
- Town, distinguished from city and borough, 158; distinguished from rural settlements, 158.
- Town and country, relations in different periods, 29.
- Town economy, the, described, 134; as embodied in the gild merchant, 173; superficiality of the conception, 135.
- Town Planning Act, 1909, 405.
- Towns, acquire corporate privileges, 162; growth of, 162; military theory of their origin, 159; rise of, 58; in the Saxon period, 159.
- Toynbee, A., *Lectures on the Industrial Revolution*, 250.
- Trade, associations for foreign, 147; characteristic of English fairs, 142; with continental India, 277; crafts engaged in, 60; development of, in finished and in unfinished cloth, 204; on the East Coast of India, 278; among Egyptian artisans, 32; enfranchisement of medieval, 136; foreign, 20; of Greeks and Phœnicians, 40; hindered by municipal law, 136; local, 21; with Low Countries, 156; in the Middle Ages, 28; in primitive society, 6; in woolen yarn, 204. *See also* Market.
- Trade agreements, 480.
- Trade unions, based on crafts, 523; Royal Commission of 1868 on, 526; status of, in 1871, 386; status presumed under the statute of 1871, 527.
- Trader, the, as capitalist, 2.
- Trades Councils, genesis of, 525; Parliamentary activities of, 526.
- Trades Union, a, notion of, 519.
- Tradesmen, 60.
- Traffic conferences, 469.
- Tram lines, as common carriers, 432; in the northern collieries, 431.
- Transformations, great social, 247.
- Transportation, not an obstacle to distant trade in early times, 20.
- Trevithick, R., experiments with the non-condensing engine, 434; his first locomotive, 434-35; his use of sheet iron, 334.
- Trojan War, the, Leaf's interpretation of, 40.
- Trust, rare in England, 483.
- Trust Movement, the, definition of, 475; beginnings of, in Great Britain, 475.
- Tucking mills, 206.
- Unemployment insurance, act of 1909, 427.
- Unfair competition, among craftsmen, 84.

- Unrest, the present social, basis of, 512.
- Unwin, G., *Industrial Organization in the Sixteenth and Seventeenth Centuries*, 222; *Guilds and Companies of London*, 170; in the *Victorian County History, Suffolk*, 218.
- Urban Concentration, in antiquity, 27; Prussia and Greece compared, 42.
- Urban development, beginnings of, in the eleventh century, 58.
- Urban life, rise of, among the Greeks, 26; at the dawn of history, 24.
- Urban settlements, beginnings of, in England, 158; forms of, 158.
- Use, land tenures based on, 111.
- Vase painters, in Greece, 45.
- Vertical integration, not present in the textile trades, 489.
- Veeted interests, protection of, in England, 280.
- Victorian County History, Suffolk*, 218.
- View of the craft, the, at Constantinople, 60; importance of, 177.
- Villa, the, probably did not survive the invasions, 121; its organisation, 121.
- Village, agriculture of the medieval, 115; enclosed, 112; officers elected by, 130; the open-field, 112.
- Villages, predominantly small, in 1327, 107; size about 1086, 104.
- Village blacksmith, the, 9; in Greece, 43; on the Kasai, 4-5.
- Village community, the, evolution of, 117; origin of allotments, 118.
- Villagers, allotments of, in the open fields, 115.
- Villein, the, obligations of, 128; acquisition of freedom by, 132.
- Vinogradoff, P., 103.
- Vintners, privileges acquired by, 146.
- Wage-earners, in the Middle Ages, 71.
- Wage-earning class, implied by the Statute of Apprentices, 192.
- Wage-fixing, provision for, in the Statute of Apprentices, 193.
- Wage work, among the early Egyptians, 32; in Mesopotamia, 36; notion of, 10.
- Wages, important differences in, 501; importance of discovering relative changes in, 500.
- Walker, J., *Report to the Directors of the Liverpool and Manchester Railway*, 441.
- Wardens, functions of, 76; modes of choice, at Paris, 77.
- Waste, enclosure of, 225, 232.
- Water frame, the, compared with Paul's machine, 293; patent declared void, 296; story of the invention, 295. *See also*, Throstle.
- Watson, J., 514.
- Watt, J., conception of the steam engine, 325; description of the first trials of the engine, 326; early career, 324; struggles of, 272; partnership with Boulton, 327.
- Wealth, distribution of, in England, 506.
- Weavers, position in the Suffolk woolen industry, 220; position of worsted, 222; probably emerge later than dyers, 12.
- Weaver's Act, the, exceptions, 212-13; provisions, 212.
- Weaver's clubs, Spitalfields, 371; in the west of England, 1727, 369.
- Weaving, as a cottage industry, 211; degrees of skill required, 351; diffusion of in the rural districts, 211; rates for, 370; in towns, 209-10.
- Weaving house, the, of early Mesopotamian temples, 36.
- Week works, 128.
- West of England Clothier System, 221.
- Wool, classification of, 195; exported by the Hanse, 150; exported through staple ports, 153; properties of, 196; purchased by poor people to spin, 221; put out by the Suffolk clothier, 219.
- Woolen industry, broad-cloth districts exempted from the Weaver's Act, 213; its concern with the Methuen treaty, 282; cottage weaving exempted from the Weaver's Act, 213; its decline in the East Counties, 215; essential processes of manufacture, 202-03; finishing not notably developed in England, 202; location of the broad-cloth manufacture, 211; market for Suffolk cloth, 220; position of spinners in Suffolk, 219; position of weavers in Suffolk, 220; proportions of workers, 202; protected against the competition of cottons, 253; scale of, 216; scale of, in Suffolk, 221; stabilized after 1555, 214; suffered from competition in the seventeenth century, 215; weaving in cottages, 211; weaving in towns, 211; numbers of persons occupied in, 1679 and 1741, 208.
- Woolen Report*, the, 1806, 221, 222.
- Woolens, characteristics of, 197; chronology of their history, 198; competition with worsteds, 198; types of, 1551-52, 197.
- Workhouse, the, original conception of, 416; the mixed, prior to 1834, 419.
- Workingmen's Friendly Societies, the,

- Roman collegia similar to, 48. *See also* Confrérie.
- Workshops, 17; regulated under the act of 1867, 414.
- World commerce, in the Middle Ages, 137.
- Worsteds, characteristics of, 198; rise of the industry, 199; types of, 1578 and 1739, 200-01.
- Worsted industry, its competitive strength, 206; master combers, 222; organization of, 222; proportions of workers, 207.
- Wrought iron, produced in the bloomery furnace, 318.
- Wyatt, J., his claims to the spinning invention, 290; covenant with Paul, 292; relations with Paul, 291.
- Xenophon, description of craft industry, 43.
- Yarn, export of worsted, 222; grades of cotton, 290; strength of cotton, under variant humidity conditions, 264; worsted, its manufacture specialized, 207-08; East Indians, imported, 285; labor costs of producing, in England and in India, 312-13; prices and costs of cotton, 312-13; production of, by cottagers in the west of England, 222.
- Yeoman, definition of, about 1086, 124; extended meaning of the term after 1400, 133.
- Yeoman farming, 227.
- Young, Professor A. A., 511; on the concentration of wealth, 508.

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