

BRITISH MANUFACTURING INDUSTRIES

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British Manufacturing Industries by G. Phillips Bevan

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G. PHILLIPS BEVAN

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EDITED BY
G. PHILLIPS BEVAN, F.G.S

XII.

**SALT, PRESERVATION OF FOOD,
BREAD AND BISCUITS,**
By J. J. MANLEY, M.A.

SUGAR REFINING,
By C. HAUGHTON GILL (late Assist. Exam. in Chemistry, Univ. of London).

BUTTER AND CHEESE,
By MORGAN EVANS (late Editor of the 'Milk Journal').

BREWING, DISTILLING,
By T. A. POOLEY, B.Sc., F.C.S.

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PREFACE.

THE object of this series is to bring into one focus the leading features and present position of the most important industries of the kingdom, so as to enable the general reader to comprehend the enormous development that has taken place within the last twenty or thirty years. It is evident that the great increase in education throughout the country has tended largely to foster a simultaneous interest in technical knowledge, as evinced by the spread of Art and Science Schools, Trade Museums, International Exhibitions, &c.; and this fact is borne out by a perusal of the daily papers, in which the prominence given to every improvement in trade or machinery attests the desire of the reading public to know more about these matters. Here, however, the difficulty commences, for the only means of acquiring this information are from handbooks to the various manufactures (which are usually too minute in detail for general instruction), from trade journals, and the reports of scientific societies; and to obtain and systematize these scattered details is a labour and a tax upon time and patience

which comparatively few persons care to surmount. In these volumes all these facts are gathered together and presented in as readable a form as is compatible with accuracy and a freedom from superficiality; and though they do not lay claim to being a technical guide to each industry, the names of the contributors are a sufficient guarantee that they are a reliable and standard work of reference. Great stress is laid on the progressive developments of the manufactures, and the various applications to them of the collateral arts and sciences; the history of each is truly given, while present processes and recent inventions are succinctly described.

BRITISH MANUFACTURING INDUSTRIES.

SALT.

By J. J. MANLEY, M.A.

SALT, one of the most important of British minerals, is known chemically as *chloride of sodium*, its two constituents being united in the proportion of thirty-six parts by weight of chlorine to twenty-four of the metal of sodium. If a piece of the latter be heated and plunged into a bottle containing chlorine, it burns vividly, unites with the chlorine in the above-mentioned proportions, and forms chloride of sodium, which may be made artificially by adding muriatic acid. Salt crystallizes in colourless transparent cubes, which are anhydrous, soluble in about three parts of cold water, and scarcely more soluble in boiling water. A saturated solution has a specific gravity of 1.205, the specific gravity of the salt being 2.125. It is inodorous, insoluble in pure alcohol, and has a purely saline taste, unmingled with bitterness, unless chloride of magnesium be present in it. At a red heat, it fuses, and becomes converted into a transparent brittle mass. The well-known crepitation which occurs when salt is thrown on the fire or otherwise strongly heated,