

The Project Gutenberg eBook of Scott Greenwood and Co. Catalogue of Special Technical Works, 1903, by Greenwood & Co. Scott

This ebook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this ebook or online at www.gutenberg.org. If you are not located in the United States, you'll have to check the laws of the country where you are located before using this eBook.

Title: Scott Greenwood and Co. Catalogue of Special Technical Works, 1903

Author: Greenwood & Co. Scott

Release date: January 31, 2013 [EBook #41952]

Language: English

Credits: Produced by Chris Curnow, Diane Monico, and the Online Distributed Proofreading Team at <http://www.pgdp.net> (This file was produced from images generously made available by The Internet Archive)

*** START OF THE PROJECT GUTENBERG EBOOK SCOTT GREENWOOD AND CO. CATALOGUE OF SPECIAL TECHNICAL WORKS, 1903 ***

JUNE, 1903. Catalogue OF *Special Technical Works* FOR Manufacturers, Students, and Technical Schools BY EXPERT WRITERS

INDEX TO SUBJECTS.

	PAGE
Agricultural Chemistry	10
Air, Industrial Use of	11
Alum and its Sulphates	9
Ammonia	9
Aniline Colours	3
Animal Fats	6
Anti-corrosive Paints	4
Architecture, Terms in	30
Architectural Pottery	16
Artificial Perfumes	7
Balsams	10
Bleaching	23
Bone Products	8
Bookbinding	31
Brick-making	15, 16
Burnishing Brass	27
Carpet Yarn Printing	21
Ceramic Books	14, 15
Charcoal	8

Chemical Essays	9
Chemistry of Pottery	17
Chemistry of Dye-stuffs	23
Clay Analysis	16
Coal-dust Firing	26
Colliery Recovery Work	25
Colour Matching	21
Colour-mixing for Dyers	21
Colouring Pottery	15
Colour Theory	22
Combing Machines	24
Compounding Oils	6
Condensing Apparatus	26
Cosmetics	7
Cotton Dyeing	22
Cotton Spinning	24
Damask Weaving	20
Dampness in Buildings	29
Decorators' Books	28
Decorative Textiles	20
Dental Metallurgy	27
Dictionary of Paint Materials	3
Drying Oils	5
Drying with Air	11
Dyeing Marble	30
Dyeing Woollen Fabrics	22
Dyers' Materials	23
Dye-stuffs	23
Enamelling Metal	19, 20
Enamels	18
Engraving	31
Essential Oils	7
Evaporating Apparatus	26
External Plumbing	27
Fats	5, 6
Faults in Woollen Goods	21
Gas Firing	26
Glass-making Recipes	17
Glass Painting	18
Glue Making and Testing	8
Greases	5
History of Staffs Potteries	17
Hops	28
Hot-water Supply	28
India-rubber	13
Inks	3, 11
Iron-corrosion	4
Iron, Science of	26
Japanning	28
Lacquering	27
Lake Pigments	3
Lead and its Compounds	11
Leather Industry	13
Leather-working Materials	14
Lithography	31
Lubricants	5, 6
Manures	8, 10
Mineral Pigments	2
Mine Ventilation	25
Mine Haulage	25
Oil and Colour Recipes	3
Oil Boiling	4
Oils	5
Ozone, Industrial Use of	12

Paint Manufacture	2
Paint Materials	3
Paint-material Testing	4
Paper-pulp Dyeing	18
Petroleum	6
Pigments, Chemistry of	2
Plumbers' Work	27
Porcelain Painting	18
Pottery Clays	16
Pottery Manufacture	14
Power-loom Weaving	20
Preserved Foods	30
Printing Inks	3
Recipes for Oilmen, etc.	3
Resins	10
Risks of Occupations	12
Rivetting China, etc.	16
Scheele's Essays	9
Sealing Waxes	11
Silk Dyeing	23
Silk Throwing	19
Smoke Prevention	25
Soaps	7
Spinning	20
Staining Marble, and Bone	30
Steam Drying	11
Sugar Refining	31
Steel Hardening	26
Sweetmeats	30
Terra-cotta	16
Testing Paint Materials	4
Testing Yarns	20
Textile Fabrics	20
Textile Materials	19, 20
Timber	29
Varnishes	4
Vegetable Fats	7
Waste Utilisation	10
Water, Industrial Use	12
Water-proofing Fabrics	32
Weaving Calculations	32
Wood Waste Utilisation	29
Wood Dyeing	30
Wool Dyeing	22
Writing Inks	11
X-Ray Work	13
Yarn Testing	20

SCOTT, GREENWOOD & CO.,
 19 LUDGATE HILL, LONDON, E.C.
 Tel. Address: "PRINTERIES, LONDON".
 Tel. No. 5403, Bank

Paints, Colours and Printing Inks.

[Pg 2]

THE CHEMISTRY OF PIGMENTS. By ERNEST J. PARRY, B.Sc. (Lond.), F.I.C., F.C.S., and J. H. COSTE, F.I.C., F.C.S. Demy 8vo. Five Illustrations. 285 pp. 1902. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Introductory. Light—White Light—The Spectrum—The Invisible Spectrum—Normal Spectrum—Simple Nature of Pure Spectral Colour—The Recomposition of White Light—Primary and Complementary Colours—Coloured Bodies—Absorption Spectra—**The Application of Pigments.** Uses of Pigments: Artistic, Decorative, Protective—Methods of Application of Pigments: Pastels and Crayons, Water Colour, Tempera Painting, Fresco, Encaustic Painting, Oil-colour Painting, Ceramic Art, Enamel, Stained and Painted Glass, Mosaic—**Inorganic Pigments.** White Lead—Zinc White—Enamel White—Whitening—Red Lead—Litharge—Vermilion—Royal Scarlet—The Chromium Greens—Chromates of Lead, Zinc, Silver and Mercury—Brunswick Green—The Ochres—Indian Red—Venetian Red—Siennas and Umbers—Light Red—Cappagh Brown—Red Oxides—Mars Colours—Terre Verte—Prussian Brown—Cobalt Colours—Cœruleum—Smalt—Copper Pigments—Malachite—Bremen Green—Scheele's Green—Emerald Green—Verdigris—Brunswick Green—Non-arsenical Greens—Copper Blues—Ultramarine—Carbon Pigments—Ivory Black—Lamp Black—Bistre—Naples Yellow—Arsenic Sulphides: Orpiment, Realgar—Cadmium Yellow—Vandyck Brown—**Organic Pigments.** Prussian Blue—Natural Lakes—Cochineal—Carmine—Crimson—Lac Dye—Scarlet—Madder—Alizarin—Campeachy—Quercitron—Rhamnus—Brazil Wood—Alkanet—Santal Wood—Archil—Coal-tar Lakes—Red Lakes—Alizarin Compounds—Orange and Yellow Lakes—Green and Blue Lakes—Indigo—Dragon's Blood—Gamboge—Sepia—Indian Yellow, Puree—Bitumen, Asphaltum, Mummy—**Index.**

THE MANUFACTURE OF PAINT. A Practical Handbook for Paint Manufacturers, Merchants and Painters. By J. CRUICKSHANK SMITH, B.Sc. Demy 8vo. 1901. 200 pp. Sixty Illustrations and One Large Diagram. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Preparation of Raw Material—Storing of Raw Material—Testing and Valuation of Raw Material—Paint Plant and Machinery—The Grinding of White Lead—Grinding of White Zinc—Grinding of other White Pigments—Grinding of Oxide Paints—Grinding of Staining Colours—Grinding of Black Paints—Grinding of Chemical Colours—Yellows—Grinding of Chemical Colours—Blues—Grinding Greens—Grinding Reds—Grinding Lakes—Grinding Colours in Water—Grinding Colours in Turpentine—The Uses of Paint—Testing and Matching Paints—Economic Considerations—Index.

THE MANUFACTURE OF MINERAL AND LAKE PIGMENTS. Containing Directions for the Manufacture of all Artificial, Artists and Painters' Colours, Enamel, Soot and Metallic Pigments. A Text-book for Manufacturers, Merchants, Artists and Painters. By Dr. JOSEF BERSCH. Translated by A. C. WRIGHT, M.A. (Oxon.), B.Sc. (Lond.). Forty-three Illustrations. 476 pp., demy 8vo. 1901. Price 12s. 6d.; India and Colonies 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

Introduction—Physico-chemical Behaviour of Pigments—Raw Materials Employed in the Manufacture of Pigments—Assistant Materials—Metallic Compounds—The Manufacture of Mineral Pigments—The Manufacture of White Lead—Enamel White—Washing Apparatus—Zinc White—Yellow Mineral Pigments—Chrome Yellow—Lead Oxide Pigments—Other Yellow Pigments—Mosaic Gold—Red Mineral Pigments—The Manufacture of Vermilion—Antimony Vermilion—Ferric Oxide Pigments—Other Red Mineral Pigments—Purple of Cassius—Blue Mineral Pigments—Ultramarine—Manufacture of Ultramarine—Blue Copper Pigments—Blue Cobalt Pigments—Smalts—Green Mineral Pigments—Emerald Green—Verdigris—Chromium Oxide—Other Green Chromium Pigments—Green Cobalt Pigments—Green Manganese Pigments—Compounded Green Pigments—Violet Mineral Pigments—Brown Mineral Pigments—Brown Decomposition Products—Black Pigments—Manufacture of Soot Pigments—Manufacture of Lamp Black—The Manufacture of Soot Black without Chambers—Indian Ink—Enamel Colours—Metallic Pigments—Bronze Pigments—Vegetable Bronze Pigments.

[Pg 3]

PIGMENTS OF ORGANIC ORIGIN—Lakes—Yellow Lakes—Red Lakes—Manufacture of Carmine—The Colouring Matter of Lac—Safflower or Carthamine Red—Madder and its Colouring Matters—Madder Lakes—Manjit (Indian Madder)—Lichen Colouring Matters—Red Wood Lakes—The Colouring Matters of Sandal Wood and Other Dye Woods—Blue Lakes—Indigo Carmine—The Colouring Matter of Log Wood—Green Lakes—Brown Organic Pigments—Sap Colours—Water Colours—Crayons—Confectionery Colours—The Preparation of Pigments for Painting—The Examination of Pigments—Examination of Lakes—The Testing of Dye-Woods—The Design of a Colour Works—Commercial Names of Pigments—Appendix: Conversion of Metric to English Weights and Measures—Centigrade and Fahrenheit Thermometer Scales—Index.

DICTIONARY OF CHEMICALS AND RAW PRODUCTS USED IN THE MANUFACTURE OF PAINTS, COLOURS, VARNISHES AND ALLIED PREPARATIONS. By GEORGE H. HURST, F.C.S. Demy 8vo. 380 pp. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

THE MANUFACTURE OF LAKE PIGMENTS FROM ARTIFICIAL COLOURS.

By FRANCIS H. JENNISON, F.I.C., F.C.S. **Sixteen Coloured Plates, showing Specimens of Eighty-nine Colours, specially prepared from the Recipes given in the Book.** 136 pp. Demy 8vo. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

The Groups of the Artificial Colouring Matters—The Nature and Manipulation of Artificial Colours—Lake-forming Bodies for Acid Colours—Lake-forming Bodies' Basic Colours—Lake Bases—The Principles of Lake Formation—Red Lakes—Orange, Yellow, Green, Blue, Violet and Black Lakes—The Production of Insoluble Azo Colours in the Form of Pigments—The General Properties of Lakes Produced from Artificial Colours—Washing, Filtering and Finishing—Matching and Testing Lake Pigments—Index.

RECIPES FOR THE COLOUR, PAINT, VARNISH, OIL, SOAP AND DRY-SALTERY TRADES. Compiled by AN ANALYTICAL CHEMIST. 350 pp. 1902. Demy 8vo. Price 7s. 6d.; India and British Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Pigments or Colours for Paints, Lithographic and Letterpress Printing Inks, etc.—Mixed Paints and Preparations for Paint-making, Painting, Lime-washing, Paperhanging, etc.—Varnishes for Coach-builders, Cabinetmakers, Wood-workers, Metal-workers, Photographers, etc.—Soaps for Toilet, Cleansing, Polishing, etc.—Perfumes—Lubricating Greases, Oils, etc.—Cements, Pastes, Glues and Other Adhesive Preparations—Writing, Marking, Endorsing and Other Inks—Sealing-wax and Office Requisites—Preparations for the Laundry, Kitchen, Stable and General Household Uses—Disinfectant Preparations—Miscellaneous Preparations—Index.

OIL COLOURS AND PRINTING INKS. By LOUIS EDGAR ANDÉS. Translated from the German. 215 pp. Crown 8vo. 56 Illustrations. 1903. Price 5s.; India and British Colonies, 5s. 6d.; Other Countries, 6s.; strictly Net.

Contents.

Linseed Oil—Poppy Oil—Mechanical Purification of Linseed Oil—Chemical Purification of Linseed Oil—Bleaching Linseed Oil—Oxidizing Agents for Boiling Linseed Oil—Theory of Oil Boiling—Manufacture of Boiled Oil—Adulterations of Boiled Oil—Chinese Drying Oil and Other Specialities—Pigments for House and Artistic Painting and Inks—Pigment for Printers' Black Inks—Substitutes for Lampblack—Machinery for Colour Grinding and Rubbing—Machines for mixing Pigments with the Vehicle—Paint Mills—Manufacture of House Oil Paints—Ship Paints—Luminous Paint—Artists' Colours—Printers' Inks:—VEHICLES—Printers' Inks:—PIGMENTS and MANUFACTURE—Index.

(See also *Writing Inks*, p. [11](#).)

[Pg 4]

SIMPLE METHODS FOR TESTING PAINTERS' MATERIALS. By A. C. WRIGHT, M.A. (Oxon.), B.Sc. (Lond.). Crown 8vo. 160 pp. 1903. Price 5s.; India and British Colonies, 5s. 6d.; Other Countries, 6s.; strictly Net.

Contents.

Necessity for Testing—Standards—Arrangement—The Apparatus—The Reagents—Practical Tests—Dry Colours—Stiff Paints—Liquid and Enamel Paints—Oil Varnishes—Spirit Varnishes—Driers—Putty—Linseed Oil—Turpentine—Water Stains—The Chemical Examination—Dry Colours and Paints—White Pigments and Paints—Yellow Pigments and Paints—Blue Pigments and Paints—Green Pigments and Paints—Red Pigments and Paints—Brown Pigments and Paints—Black Pigments and Paints—Oil Varnishes—Linseed Oil—Turpentine.

IRON-CORROSION, ANTI-FOULING AND ANTI-CORROSIVE PAINTS. Translated from the German of LOUIS EDGAR ANDÉS. Sixty-two Illustrations. 275 pp. Demy 8vo. 1900. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Iron-rust and its Formation—Protection from Rusting by Paint—Grounding the Iron with Linseed Oil, etc.—Testing Paints—Use of Tar for Painting on Iron—Anti-corrosive Paints—Linseed Varnish—Chinese Wood Oil—Lead Pigments—Iron Pigments—Artificial Iron Oxides—Carbon—Preparation of Anti-corrosive Paints—Results of Examination of Several Anti-corrosive Paints—Paints for Ship's Bottoms—Anti-fouling Compositions—Various Anti-corrosive and Ship's Paints—Official Standard Specifications for Ironwork Paints—Index.

THE TESTING AND VALUATION OF RAW MATERIALS USED IN PAINT

AND COLOUR MANUFACTURE. By M. W. JONES, F.C.S. A Book for the Laboratories of Colour Works. 88 pp. Crown 8vo. 1900. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Aluminium Compounds—China Clay—Iron Compounds—Potassium Compounds—Sodium Compounds—Ammonium Hydrate—Acids—Chromium Compounds—Tin Compounds—Copper Compounds—Lead Compounds—Zinc Compounds—Manganese Compounds—Arsenic Compounds—Antimony Compounds—Calcium Compounds—Barium Compounds—Cadmium Compounds—Mercury Compounds—Ultramarine—Cobalt and Carbon Compounds—Oils—Index.

STUDENTS' MANUAL OF PAINTS, COLOURS, OILS AND VARNISHES. By JOHN FURNELL. Crown 8vo. 10 Illustrations.

[*IN THE PRESS.*]

Contents.

Plant—Chromes—Blues—Greens—Earth Colours—Blacks—Reds—Lakes—Whites—Painters' Oils—Turpentine—Oil Varnishes—Spirit Varnishes—Liquid Paints—Enamel Paints.

Varnishes and Drying Oils.

THE MANUFACTURE OF VARNISHES, OIL REFINING AND BOILING, AND KINDRED INDUSTRIES. Translated from the French of ACH. LIVACHE, Ingénieur Civil des Mines. Greatly Extended and Adapted to English Practice, with numerous Original Recipes by JOHN GEDDES MCINTOSH. 27 Illustrations. 400 pp. Demy 8vo. 1899. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

[Pg 5]

Resins—Solvents: Natural, Artificial, Manufacture, Storage, Special Use—Colouring: Principles, Vegetable, Coal Tar, Coloured Resinates, Coloured Oleates and Linoleates—Gum Running: Melting Pots, Mixing Pans—Spirit Varnish Manufacture: Cold Solution Plant, Mechanical Agitators, Storage Plant—Manufacture, Characteristics and Uses of the Spirit Varnishes—Manufacture of Varnish Stains—Manufacture of Lacquers—Manufacture of Spirit Enamels—Analysis of Spirit Varnishes—Physical and Chemical Constants of Resins—Table of Solubility of Resins in different Menstrua—Systematic qualitative Analysis of Resins, Hirschop's tables—Drying Oils—Oil Refining: Processes—Oil Boiling—Driers—Liquid Driers—Solidified Boiled Oil—Manufacture of Linoleum—Manufacture of India Rubber Substitutes—Printing Ink Manufacture—Lithographic Ink Manufacture—Manufacture of Oil Varnishes—Running and Special Treatment of Amber, Copal, Kauri, Manilla—Addition of Oil to Resin—Addition of Resin to Oil—Mixed Processes—Solution in Cold of previously Fused Resin—Dissolving Resins in Oil, etc., under pressure—Filtration—Clarification—Storage—Ageing—Coachmakers' Varnishes and Japans—Oak Varnishes—Japanners' Stoving Varnishes—Japanners' Gold Size—Brunswick Black—Various Oil Varnishes—Oil-Varnish Stains—Varnishes for "Enamels"—India Rubber Varnishes—Varnishes Analysis: Processes, Matching—Faults in Varnishes: Cause, Prevention—Experiments and Exercises.

DRYING OILS, BOILED OIL AND SOLID AND LIQUID DRIERS. By L. E. ANDÉS. Expressly Written for this Series of Special Technical Books, and the Publishers hold the Copyright for English and Foreign Editions. Forty-two Illustrations. 342 pp. 1901. Demy 8vo. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

Properties of the Drying Oils; Cause of the Drying Property; Absorption of Oxygen; Behaviour towards Metallic Oxides, etc.—The Properties of and Methods for obtaining the Drying Oils—Production of the Drying Oils by Expression and Extraction; Refining and Bleaching; Oil Cakes and Meal; The Refining and Bleaching of the Drying Oils; The Bleaching of Linseed Oil—The Manufacture of Boiled Oil; The Preparation of Drying Oils for Use in the Grinding of Paints and Artists' Colours and in the Manufacture of Varnishes by Heating over a Fire or by Steam, by the Cold Process, by the Action of Air, and by Means of the Electric Current; The Driers used in Boiling Linseed Oil; The Manufacture of Boiled Oil and the Apparatus therefor; Livache's Process for Preparing a Good Drying Oil and its Practical Application—The Preparation of Varnishes for Letterpress, Lithographic and Copperplate Printing, for Oilcloth and Waterproof Fabrics; The Manufacture of Thickened Linseed Oil, Burnt Oil, Stand Oil by Fire Heat, Superheated Steam, and by a Current of Air—Behaviour of the Drying Oils and Boiled Oils towards Atmospheric Influences, Water, Acids and Alkalies—Boiled Oil Substitutes—The Manufacture of Solid and Liquid Driers from Linseed Oil and Rosin; Linolic Acid Compounds of the Driers—The Adulteration and Examination of the Drying Oils and Boiled Oil.

Oils, Fats, Soaps and Perfumes.

LUBRICATING OILS, FATS AND GREASES: Their Origin, Preparation, Properties, Uses and Analyses. A Handbook for Oil Manufacturers, Refiners and Merchants, and the Oil and Fat Industry in General. By GEORGE H. HURST, F.C.S. Second Revised and Enlarged Edition. Sixty-five Illustrations. 317 pp. Demy 8vo. 1902. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Introductory. Oils and Fats, Fatty Oils and Fats, Hydrocarbon Oils, Uses of Oils—**Hydrocarbon Oils.** Distillation, Simple Distillation, Destructive Distillation, Products of Distillation, Hydrocarbons, Paraffins, Olefins, Naphthenes—**Scotch Shale Oils.** Scotch Shales, Distillation of Scotch Oils, Shale Retorts, Products of Distilling Shales, Separating Products, Treating Crude Shale Oil, Refining Shale Oil, Shale Oil Stills, Shale Naphtha Burning Oils, Lubricating Oils, Wax—**Petroleum.** Occurrence, Geology, Origin, Composition, Extraction, Refining, Petroleum Stills, Petroleum Products, Cylinder Oils, Russian Petroleum, Deblooming Mineral Oils—**Vegetable and Animal Oils.** Introduction, Chemical Composition of Oils and Fats, Fatty Acids, Glycerine, Extraction of Animal and Vegetable Fats and Oils, Animal Oils, Vegetable Oils, Rendering, Pressing, Refining, Bleaching, Tallow, Tallow Oil, Lard Oil, Neatsfoot Oil, Palm Oil, Palm Nut Oil, Coconut Oil, Castor Oil, Olive Oil, Rape and Colza Oils, Arachis Oil, Niger Seed Oil, Sperm Oils, Whale Oil, Seal Oil, Brown Oils, Lardine, Thickened Rape Oil—**Testing and Adulteration of Oils.** Specific Gravity, Alkali Tests, Sulphuric Acid Tests, Free Acids in Oils, Viscosity Tests, Flash and Fire Tests, Evaporation Tests, Iodine and Bromide Tests, Elaidin Test, Melting Point of Fat, Testing Machines—**Lubricating Greases.** Rosin Oil, Anthracene Oil, Making Greases, Testing and Analysis of Greases—**Lubrication.** Friction and Lubrication, Lubricant, Lubrication of Ordinary Machinery, Spontaneous Combustion of Oils, Stainless Oils, Lubrication of Engine Cylinders, Cylinder Oils—**Appendices.** A. Table of Baume's Hydrometer—B. Table of Thermometric Degrees—C. Table of Specific Gravities of Oils—**Index.**

[Pg 6]

TECHNOLOGY OF PETROLEUM: Oil Fields of the World—Their History, Geography and Geology—Annual Production and Development—Oil-well Drilling—Transport. By HENRY NEUBERGER and HENRY NOALHAT. Translated from the French by J. G. McINTOSH. 550 pp. 153 Illustrations. 26 Plates. Super Royal 8vo. 1901. Price 21s.; India and Colonies, 22s.; Other Countries, 23s. 6d.; strictly net.

Contents.

Study of the Petroliferous Strata—Petroleum—Definition—The Genesis or Origin of Petroleum—The Oil Fields of Galicia, their History—Physical Geography and Geology of the Galician Oil Fields—Practical Notes on Galician Land Law—Economic Hints on Working, etc.—Roumania—History, Geography, Geology—Petroleum in Russia—History—Russian Petroleum (*continued*)—Geography and Geology of the Caucasian Oil Fields—Russian Petroleum (*continued*)—The Secondary Oil Fields of Europe, Northern Germany, Alsace, Italy, etc.—Petroleum in France—Petroleum in Asia—Transcaspian and Turkestan Territory—Turkestan—Persia—British India and Burmah—British Burmah or Lower Burmah—China—Chinese Thibet—Japan, Formosa and Saghalien—Petroleum in Oceania—Sumatra, Java, Borneo—Isle of Timor—Philippine Isles—New Zealand—The United States of America—History—Physical Geology and Geography of the United States Oil Fields—Canadian and other North American Oil Fields—Economic Data of Work in North America—Petroleum in the West Indies and South America—Petroleum in the French Colonies.

Excavations—Hand Excavation or Hand Digging of Oil Wells.

Methods of Boring—Methods of Oil-well Drilling or Boring—Boring Oil Wells with the Rope—Drilling with Rigid Rods and a Free-fall—Fabian System—Free-fall Drilling by Steam Power—Oil-well Drilling by the Canadian System—Drilling Oil Wells on the Combined System—Comparison between the Combined Fauck System and the Canadian—The American System of Drilling with the Rope—Hydraulic Boring with the Drill by Hand and Steam Power—Rotary Drilling of Oil Wells, Bits, Steel-crowned Tools, Diamond Tools—Hand Power and Steam Power—Hydraulic Sand-pumping—Improvements in and different Systems of Drilling Oil Wells.

Accidents—Boring Accidents—Methods of preventing them—Methods of remedying them—Explosives and the use of the "Torpedo" Levigation—Storing and Transport of Petroleum—General Advice—Prospecting, Management and carrying on of Petroleum Boring Operations.

General Data—Customary Formulæ—Memento. Practical Part. General Data bearing on Petroleum—Glossary of Technical Terms used in the Petroleum Industry—Copious Index.

THE PRACTICAL COMPOUNDING OF OILS, TALLOW AND GREASE FOR LUBRICATION, ETC. By AN EXPERT OIL REFINER. 100 pp. 1898. Demy 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Introductory Remarks on the General Nomenclature of Oils, Tallow and Greases suitable for Lubrication—**Hydrocarbon Oils—Animal and Fish Oils—Compound Oils—Vegetable Oils—Lamp Oils—Engine Tallow, Solidified Oils and Petroleum Jelly—Machinery Greases: Loco and Anti-friction—Clarifying and Utilisation of Waste Fats, Oils, Tank Bottoms, Drainings of Barrels and Drums, Pickings Up, Dregs, etc.—The Fixing and Cleaning of Oil Tanks, etc.—Appendix and General Information.**

ANIMAL FATS AND OILS: Their Practical Production, Purification and Uses for a great Variety of Purposes. Their Properties, Falsification and Examination. Translated from the German of LOUIS EDGAR ANDÉS. Sixty-two Illustrations. 240 pp. 1898. Demy 8vo. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

[Pg 7]

Introduction—Occurrence, Origin, Properties and Chemical Constitution of Animal Fats—Preparation of Animal Fats and Oils—Machinery—Tallow-melting Plant—Extraction Plant—Presses—Filtering Apparatus—Butter: Raw Material and Preparation, Properties, Adulterations, Beef Lard or Remelted Butter, Testing—Candle-fish Oil—Mutton-Tallow—Hare Fat—Goose Fat—Neatsfoot Oil—Bone Fat: Bone Boiling, Steaming Bones, Extraction, Refining—Bone Oil—Artificial Butter: Oleomargarine, Margarine Manufacture in France, Grasso's Process, "Kaiser's Butter," Jahr & Münzberg's Method, Filbert's Process, Winter's Method—Human Fat—Horse Fat—Beef Marrow—Turtle Oil—Hog's Lard: Raw Material—Preparation, Properties, Adulterations, Examination—Lard Oil—Fish Oils—Liver Oils—Artificial Train Oil—Wool Fat: Properties, Purified Wool Fat—Spermaceti: Examination of Fats and Oils in General.

VEGETABLE FATS AND OILS: Their Practical Preparation, Purification and Employment for Various Purposes, their Properties, Adulteration and Examination. Translated from the German of LOUIS EDGAR ANDÉS. Ninety-four Illustrations. 340 pp. Second Edition. 1902. Demy 8vo. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

General Properties—Estimation of the Amount of Oil in Seeds—The Preparation of Vegetable Fats and Oils—Apparatus for Grinding Oil Seeds and Fruits—Installation of Oil and Fat Works—Extraction Method of Obtaining Oils and Fats—Oil Extraction Installations—Press Moulds—Non-drying Vegetable Oils—Vegetable drying Oils—Solid Vegetable Fats—Fruits Yielding Oils and Fats—Wool-softening Oils—Soluble Oils—Treatment of the Oil after Leaving the Press—Improved Methods of Refining—Bleaching Fats and Oils—Practical Experiments on the Treatment of Oils with regard to Refining and Bleaching—Testing Oils and Fats.

SOAPS. A Practical Manual of the Manufacture of Domestic, Toilet and other Soaps. By GEORGE H. HURST, F.C.S. 390 pp. 66 Illustrations. 1898. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

Introductory—Soap-maker's Alkalies—Soap Fats and Oils—Perfumes—Water as a Soap Material—Soap Machinery—Technology of Soap-making—Glycerine in Soap Lyes—Laying out a Soap Factory—Soap Analysis—Appendices.

THE CHEMISTRY OF ESSENTIAL OILS AND ARTIFICIAL PERFUMES. By ERNEST J. PARRY, B.Sc (Lond.), F.I.C., F.C.S. 411 pp. 20 Illustrations. 1899. Demy 8vo. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

The General Properties of Essential Oils—Compounds occurring in Essential Oils—The Preparation of Essential Oils—The Analysis of Essential Oils—Systematic Study of the Essential Oils—Terpeneless Oils—The Chemistry of Artificial Perfumes—Appendix: Table of Constants—Index.

Cosmetical Preparations.

COSMETICS: MANUFACTURE, EMPLOYMENT AND TESTING OF ALL COSMETIC MATERIALS AND COSMETIC SPECIALITIES. Translated from the German of Dr. THEODOR KOLLER. Crown 8vo. 262 pp. 1902. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s. net.

Contents.

Purposes and Uses of, and Ingredients used in the Preparation of Cosmetics—Preparation of Perfumes by Pressure, Distillation, Maceration, Absorption or Enfleurage, and Extraction Methods—Chemical and Animal Products used in the Preparation of Cosmetics—Oils and Fats used in the Preparation of Cosmetics—General Cosmetic Preparations—Mouth Washes and Tooth Pastes—Hair Dyes, Hair Restorers and Depilatories—Cosmetic Adjuncts and Specialities—Colouring Cosmetic Preparations—Antiseptic Washes and Soaps—Toilet and Hygienic Soaps—Secret Preparations for Skin, Complexion, Teeth, Mouth, etc.—Testing and Examining the Materials Employed in the Manufacture of Cosmetics—Index.

Glue, Bone Products and Manures.

[Pg 8]

GLUE AND GLUE TESTING. By SAMUEL RIDEAL, D.Sc. (Lond.), F.I.C. Fourteen Engravings. 144 pp. Demy 8vo. 1900. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Constitution and Properties: Definitions and Sources, Gelatine, Chondrin and Allied Bodies, Physical and Chemical Properties, Classification, Grades and Commercial Varieties—**Raw Materials and Manufacture:** Glue Stock, Lining, Extraction, Washing and Clarifying, Filter Presses, Water Supply, Use of Alkalies, Action of Bacteria and of Antiseptics, Various Processes, Cleansing, Forming, Drying, Crushing, etc., Secondary Products—**Uses of Glue:** Selection and Preparation for Use, Carpentry, Veneering, Paper-Making, Bookbinding, Printing Rollers, Hectographs, Match Manufacture, Sandpaper, etc., Substitutes for other Materials, Artificial Leather and Caoutchouc—**Gelatine:** General Characters, Liquid Gelatine, Photographic Uses, Size, Tanno-, Chrome and Formo-Gelatine, Artificial Silk, Cements, Pneumatic Tyres, Culinary, Meat Extracts, Isinglass, Medicinal and other Uses, Bacteriology—**Glue Testing:** Review of Processes, Chemical Examination, Adulteration, Physical Tests, Valuation of Raw Materials—**Commercial Aspects.**

BONE PRODUCTS AND MANURES: An Account of the most recent Improvements in the Manufacture of Fat, Glue, Animal Charcoal, Size, Gelatine and Manures. By THOMAS LAMBERT, Technical and Consulting Chemist. Illustrated by Twenty-one Plans and Diagrams. 162 pp. Demy 8vo. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Chemical Composition of Bones—Arrangement of Factory—Crushing of Bones—Treatment with Benzene—Benzene in Crude Fat—Analyses of Clarified Fats—Mechanical Cleansing of Bones—Animal Charcoal—Tar and Ammoniacal Liquor, Char and Gases, from good quality Bones—Method of Retorting the Bones—Analyses of Chars—"Spent" Chars—Cooling of Tar and Ammoniacal Vapours—Value of Nitrogen for Cyanide of Potash—Bone Oil—Marrow Bones—Composition of Marrow Fat—Premier Juice—Buttons—Properties of Glue—Glutin and Chondrin—Skin Glue—Liming of Skins—Washing—Boiling of Skins—Clarification of Glue Liquors—Acid Steeping of Bones—Water System of Boiling Bones—Steam Method of Treating Bones—Nitrogen in the Treated Bones—Glue-Boiling and Clarifying-House—Plan showing Arrangement of Clarifying Vats—Plan showing Position of Evaporators—Description of Evaporators—Sulphurous Acid Generator—Clarification of Liquors—Section of Drying-House—Specification of a Glue—Size—Uses and Preparation and Composition of Size—Concentrated Size—Properties of Gelatine—Preparation of Skin Gelatine—Washing—Bleaching—Boiling—Clarification—Evaporation—Drying—Bone Gelatine—Selecting Bones—Crushing—Dissolving—Bleaching—Boiling—Properties of Glutin and Chondrin—Testing of Glues and Gelatines—The Uses of Glue, Gelatine and Size in Various Trades—Soluble and Liquid Glues—Steam and Waterproof Glues—**Manures**—Importation of Food Stuffs—Soils—Germination—Plant Life—**Natural Manures**—Water and Nitrogen in Farmyard Manure—Full Analysis of Farmyard Manure—Action on Crops—Water-Closet System—Sewage Manure—Green Manures—**Artificial Manures**—**Mineral Manures**—Nitrogenous Matters—Shoddy—Hoofs and Horns—Leather Waste—Dried Meat—Dried Blood—Superphosphates—Composition—Manufacture—Section of Manure-Shed—First and Ground Floor Plans of Manure-Shed—Quality of Acid Used—Mixings—Special Manures—Potato Manure—Dissolved Bones—Dissolved Bone Compound—Enriched Peruvian Guano—Special Manure for Garden Stuffs, etc.—Special Manures—Analyses of Raw and Finished Products—Common Raw Bones—Degreased Bones—Crude Fat—Refined Fat—Degelatinised Bones—Animal Charcoal—Bone Superphosphates—Guanos—Dried Animal Products—Potash Compounds—Sulphate of Ammonia—Extraction in Vacuo—French and British Gelatines compared—Index.

Chemicals, Waste Products and Agricultural Chemistry.

[Pg 9]

REISSUE OF **CHEMICAL ESSAYS OF C. W. SCHEELE**. First Published in English in 1786. Translated from the Academy of Sciences at Stockholm, with Additions. 300 pp. Demy 8vo. 1901. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Memoir: C. W. Scheele and his work (written for this edition by J. G. McIntosh)—On Fluor Mineral and its Acid—On Fluor Mineral—Chemical Investigation of Fluor Acid, with a View to the Earth which it Yields, by Mr. Wiegler—Additional Information Concerning Fluor Minerals—On Manganese, Magnesium, or Magnesia Vitrariorum—On Arsenic and its Acid—Remarks upon Salts of Benzoin—On Silex, Clay and Alum—Analysis of the Calculus Vesical—Method of Preparing Mercurius Dulcis Via Humida—Cheaper and more Convenient Method of Preparing Pulvis Algarothi—Experiments upon Molybdæna—Experiments on Plumbago—Method of Preparing a New Green Colour—Of the Decomposition of Neutral Salts by Unslaked Lime and Iron—On the Quantity of Pure Air which is Daily Present in our Atmosphere—On Milk and its Acid—On the Acid of Saccharum Lactis—On the Constituent Parts of Lapis Ponderosus or Tungsten—Experiments and Observations on Ether—Index.

THE MANUFACTURE OF ALUM AND THE SULPHATES AND OTHER SALTS OF ALUMINA AND IRON. Their Uses and Applications as Mordants in Dyeing and Calico Printing, and their other Applications in the Arts, Manufactures, Sanitary Engineering, Agriculture and Horticulture. Translated from the French of LUCIEN GESCHWIND. 195 Illustrations. 400 pp. Royal 8vo. 1901. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

Theoretical Study of Aluminium, Iron, and Compounds of these Metals—Aluminium and its Compounds—Iron and Iron Compounds.

Manufacture of Aluminium Sulphates and Sulphates of Iron—Manufacture of Aluminium Sulphate and the Alums—Manufacture of Sulphates of Iron.

Uses of the Sulphates of Aluminium and Iron—Uses of Aluminium Sulphate and Alums—Application to Wool and Silk—Preparing and using Aluminium Acetates—Employment of Aluminium Sulphate in Carbonising Wool—The Manufacture of Lake Pigments—Manufacture of Prussian Blue—Hide and Leather Industry—Paper Making—Hardening Plaster—Lime Washes—Preparation of Non-inflammable Wood, etc.—Purification of Waste Waters—**Uses and Applications of Ferrous Sulphate and Ferric Sulphates**—Dyeing—Manufacture of Pigments—Writing Inks—Purification of Lighting Gas—Agriculture—Cotton Dyeing—Disinfectant—Purifying Waste Liquors—Manufacture of Nordhausen Sulphuric Acid—Fertilising.

Chemical Characteristics of Iron and Aluminium—Analysis of Various Aluminous or Ferruginous Products—Aluminium—**Analysing Aluminium Products**—Alunite Alumina—Sodium Aluminate—Aluminium Sulphate—**Iron**—Analytical Characteristics of Iron Salts—Analysis of Pyritic Lignite—Ferrous and Ferric Sulphates—Rouil Mordant—Index.

AMMONIA AND ITS COMPOUNDS: Their Manufacture and Uses. By CAMILLE VINCENT, Professor at the Central School of Arts and Manufactures, Paris. Translated from the French by M. J. SALTER. Royal 8vo. 114 pp. 1901. Thirty-two Illustrations. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

General Considerations: Various Sources of Ammoniacal Products; Human Urine as a Source of Ammonia—**Extraction of Ammoniacal Products from Sewage—Extraction of Ammonia from Gas Liquor—Manufacture of Ammoniacal Compounds from Bones, Nitrogenous Waste, Beetroot Wash and Peat—Manufacture of Caustic Ammonia, and Ammonium Chloride, Phosphate and Carbonate—Recovery of Ammonia from the Ammonia-Soda Mother Liquors—Index.**

ANALYSIS OF RESINS AND BALSAMS. Translated from the German of Dr. KARL DIETERICH. Demy 8vo. 340 pp. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Definition of Resins in General—Definition of Balsams, and especially the Gum Resins—External and Superficial Characteristics of Resinous Bodies—Distinction between Resinous Bodies and Fats and Oils—Origin, Occurrence and Collection of Resinous Substances—Classification—Chemical Constituents of Resinous Substances—Resinols—Resinot Annols—Behaviour of Resin Constituents towards the Cholesterine Reactions—Uses and Identification of Resins—Melting-point—Solvents—Acid Value—Saponification Value—Resin Value—Ester and Ether Values—Acetyl

and Corbonyl Value—Methyl Value—Resin Acid—Systematic Résumé of the Performance of the Acid and Saponification Value Tests.

Balsams—Introduction—Definitions—Canada Balsam—Copaiba Balsam—Angostura Copaiba Balsam—Babia Copaiba Balsam—Carthagenia Copaiba Balsam—Maracaibo Copaiba Balsam—Maturin Copaiba Balsam—Gurjum Copaiba Balsam—Para Copaiba Balsam—Surinam Copaiba Balsam—West African Copaiba Balsam—Mecca Balsam—Peruvian Balsam—Tolu Balsam—Acaroid Resin—Amine—Amber—African and West Indian Kino—Bengal Kino—Labdanum—Mastic—Pine Resin—Sandarach—Scammonium—Shellac—Storax—Adulteration of Styrax Liquidus Crudus—Purified Storax—Styrax Crudus Colatus—Tacamahac—Thapsia Resin—Turpentine—Chios Turpentine—Strassburg Turpentine—Turpeth Turpentine. **Gum Resins**—Ammoniacum—Bdellium—Euphorbium—Galbanum—Gamboge—Lactucarium—Myrrh—Opopanax—Sagapenum—Olibanum or Incense—Acaroid Resin—Amber—Thapsia Resin—Index.

MANUAL OF AGRICULTURAL CHEMISTRY. By HERBERT INGLE, F.I.C., Lecturer on Agricultural Chemistry, the Yorkshire College; Lecturer in the Victoria University. 388 pp. 11 Illustrations. 1902. Demy 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d. net.

Contents.

Introduction—The Atmosphere—The Soil—The Reactions occurring in Soils—The Analysis of Soils—Manures, Natural—Manures (continued)—The Analysis of Manures—The Constituents of Plants—The Plant—Crops—The Animal—Foods and Feeding—Milk and Milk Products—The Analysis of Milk and Milk Products—Miscellaneous Products used in Agriculture—Appendix—Index.

THE UTILISATION OF WASTE PRODUCTS. A Treatise on the Rational Utilisation, Recovery and Treatment of Waste Products of all kinds. By Dr. THEODOR KOLLER. Translated from the Second Revised German Edition. Twenty-two Illustrations. Demy 8vo. 280 pp. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

The Waste of Towns—**Ammonia and Sal-Ammoniac**—Rational Processes for Obtaining these Substances by Treating Residues and Waste—Residues in the Manufacture of Aniline Dyes—Amber Waste—Brewers' Waste—Blood and Slaughter-House Refuse—Manufactured Fuels—Waste Paper and Bookbinders' Waste—Iron Slags—Excrement—Colouring Matters from Waste—Dyers' Waste Waters—Fat from Waste—Fish Waste—Calamine Sludge—Tannery Waste—Gold and Silver Waste—India-rubber and Caoutchouc Waste—Residues in the Manufacture of Rosin Oil—Wood Waste—Horn Waste—Infusorial Earth—Iridium from Goldsmiths' Sweepings—Jute Waste—Cork Waste—Leather Waste—Glue Makers' Waste—Illuminating Gas from Waste and the By-Products of the Manufacture of Coal Gas—Meerschum—Molasses—Metal Waste—By-Products in the Manufacture of Mineral Waters—Fruit—The By-Products of Paper and Paper Pulp Works—By-Products in the Treatment of Coal Tar Oils—Fur Waste—The Waste Matter in the Manufacture of Parchment Paper—Mother of Pearl Waste—Petroleum Residues—Platinum Residues—Broken Porcelain, Earthenware and Glass—Salt Waste—Slate Waste—Sulphur—Burnt Pyrites—Silk Waste—Soap Makers' Waste—Alkali Waste and the Recovery of Soda—Waste Produced in Grinding Mirrors—Waste Products in the Manufacture of Starch—Stearic Acid—Vegetable Ivory Waste—Turf—Waste Waters of Cloth Factories—Wine Residues—Tinplate Waste—Wool Waste—Wool Sweat—The Waste Liquids from Sugar Works—Index.

Writing Inks and Sealing Waxes.

[Pg 11]

INK MANUFACTURE: Including Writing, Copying, Lithographic, Marking, Stamping, and Laundry Inks. By SIGMUND LEHNER. Three Illustrations. Crown 8vo. 162 pp. 1902. Translated from the German of the Fifth Edition. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; net.

Contents.

Varieties of Ink—Writing Inks—Raw Materials of Tannin Inks—The Chemical Constitution of the Tannin Inks—Recipes for Tannin Inks—Logwood Tannin Inks—Ferric Inks—Alizarine Inks—Extract Inks—Logwood Inks—Copying Inks—Hektographs—Hektograph Inks—Safety Inks—Ink Extracts and Powders—Preserving Inks—Changes in Ink and the Restoration of Faded Writing—Coloured Inks—Red Inks—Blue Inks—Violet Inks—Yellow Inks—Green Inks—Metallic Inks—Indian Ink—Lithographic Inks and Pencils—Ink Pencils—Marking Inks—Ink Specialities—Sympathetic Inks—Stamping Inks—Laundry or Washing Blue—Index.

SEALING-WAXES, WAFERS AND OTHER ADHESIVES FOR THE HOUSEHOLD, OFFICE, WORKSHOP AND FACTORY. By H. C. STANDAGE.

Crown 8vo. 96 pp. 1902. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Materials Used for Making Sealing-Waxes—The Manufacture of Sealing-Waxes—Wafers—Notes on the Nature of the Materials Used in Making Adhesive Compounds—Cements for Use in the Household—Office Gums, Pastes and Mucilages—Adhesive Compounds for Factory and Workshop Use.

Lead Ores and Compounds.

LEAD AND ITS COMPOUNDS. By THOS. LAMBERT, Technical and Consulting Chemist. Demy 8vo. 226 pp. Forty Illustrations. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; net. Plans and Diagrams.

Contents.

History—Ores of Lead—Geographical Distribution of the Lead Industry—Chemical and Physical Properties of Lead—Alloys of Lead—Compounds of Lead—Dressing of Lead Ores—Smelting of Lead Ores—Smelting in the Scotch or American Ore-hearth—Smelting in the Shaft or Blast Furnace—Condensation of Lead Fume—Desilverisation, or the Separation of Silver from Argentiferous Lead—Cupellation—The Manufacture of Lead Pipes and Sheets—Protoxide of Lead—Litharge and Massicot—Red Lead or Minium—Lead Poisoning—Lead Substitutes—Zinc and its Compounds—Pumice Stone—Drying Oils and Siccatives—Oil of Turpentine Resin—Classification of Mineral Pigments—Analysis of Raw and Finished Products—Tables—Index.

NOTES ON LEAD ORES: Their Distribution and Properties. By JAS. FAIRIE, F.G.S. Crown 8vo. 1901. 64 pages. Price 2s. 6d.; Abroad, 3s.; strictly net.

Industrial Uses of Air, Steam and Water.

DRYING BY MEANS OF AIR AND STEAM. Explanations, Formulæ, and Tables for Use in Practice. Translated from the German of E. HAUSBRAND. Two folding Diagrams and Thirteen Tables. Crown 8vo. 1901. 72 pp. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

[Pg 12]

British and Metric Systems Compared—Centigrade and Fahr. Thermometers—Estimation of the Maximum Weight of Saturated Aqueous Vapour which can be contained in 1 kilo. of Air at Different Pressure and Temperatures—Calculation of the Necessary Weight and Volume of Air, and of the Least Expenditure of Heat, per Drying Apparatus with Heated Air, at the Atmospheric Pressure: *A*, With the Assumption that the Air is *Completely Saturated* with Vapour both before Entry and after Exit from the Apparatus—*B*, When the Atmospheric Air is Completely Saturated *before entry*, but at its *exit* is *only* 3/4, 1/2 or 1/4 Saturated—*C*, When the Atmospheric Air is *not* Saturated with Moisture before Entering the Drying Apparatus—Drying Apparatus, in which, in the Drying Chamber, a Pressure is Artificially Created, Higher or Lower than that of the Atmosphere—Drying by Means of Superheated Steam, without Air—Heating Surface, Velocity of the Air Current, Dimensions of the Drying Room, Surface of the Drying Material, Losses of Heat—Index.

(See also "*Evaporating, Condensing and Cooling Apparatus*," p. 26.)

PURE AIR, OZONE AND WATER. A Practical Treatise of their Utilisation and Value in Oil, Grease, Soap, Paint, Glue and other Industries. By W. B. COWELL. Twelve Illustrations. Crown 8vo. 85 pp. 1900. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Atmospheric Air; Lifting of Liquids; Suction Process; Preparing Blown Oils; Preparing Siccative Drying Oils—Compressed Air; Whitewash—Liquid Air; Retrocession—Purification of Water; Water Hardness—Fleshings and Bones—Ozonised Air in the Bleaching and Deodorising of Fats, Glues, etc.; Bleaching Textile Fibres—Appendix: Air and Gases; Pressure of Air at Various Temperatures; Fuel; Table of Combustibles; Saving of Fuel by Heating Feed Water; Table of Solubilities of Scale Making Minerals; British Thermal Units Tables; Volume of the Flow of Steam into the Atmosphere; Temperature of Steam—Index.

THE INDUSTRIAL USES OF WATER. COMPOSITION—EFFECTS—TROUBLES—REMEDIES—RESIDUARY WATERS—PURIFICATION—ANALYSIS. By H. DE LA COUX. Royal 8vo. 400 pp. 135 Illustrations. Translated from the French.

[IN THE PRESS.]

Contents.

Chemical Action of Water in Nature and in Industrial Use—Composition of Waters—Solubility of Certain Salts in Water Considered from the Industrial Point of View—Effects on the Boiling of Water—Effects of Water in the Industries—Difficulties with Water—Feed Water for Boilers—Water in Dyeworks, Print Works, and Bleach Works—Water in the Textile Industries and in Conditioning—Water in Soap Works—Water in Laundries and Washhouses—Water in Tanning—Water in Preparing Tannin and Dyewood Extracts—Water in Papermaking—Water in Photography—Water in Sugar Refining—Water in Making Ices and Beverages—Water in Cider Making—Water in Brewing—Water in Distilling—Preliminary Treatment and Apparatus—Substances Used for Preliminary Chemical Purification—Commercial Specialities and their Employment—Precipitation of Matters in Suspension in Water—Apparatus for the Preliminary Chemical Purification of Water—Industrial Filters—Industrial Sterilisation of Water—Residuary Waters and their Purification—Soil Filtration—Purification by Chemical Processes—Analyses—Index.

(See Books on Smoke Prevention, Engineering and Metallurgy, p. 26, etc.)

Industrial Hygiene.

THE RISKS AND DANGERS TO HEALTH OF VARIOUS OCCUPATIONS AND THEIR PREVENTION. By LEONARD A. PARRY, M.D., B.S. (Lond.). 196 pp. Demy 8vo. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Occupations which are Accompanied by the Generation and Scattering of Abnormal Quantities of Dust—Trades in which there is Danger of Metallic Poisoning—Certain Chemical Trades—Some Miscellaneous Occupations—Trades in which Various Poisonous Vapours are Inhaled—General Hygienic Considerations—Index.

X Rays.

[Pg 13]

PRACTICAL X RAY WORK. By FRANK T. ADDYMAN, B.Sc. (Lond.), F.I.C., Member of the Roentgen Society of London; Radiographer to St. George's Hospital; Demonstrator of Physics and Chemistry, and Teacher of Radiography in St. George's Hospital Medical School. Demy 8vo. Twelve Plates from Photographs of X Ray Work. Fifty-two Illustrations. 200 pp. 1901. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Historical—Work leading up to the Discovery of the X Rays—The Discovery—**Apparatus and its Management**—Electrical Terms—Sources of Electricity—Induction Coils—Electrostatic Machines—Tubes—Air Pumps—Tube Holders and Stereoscopic Apparatus—Fluorescent Screens—**Practical X Ray Work**—Installations—Radioscopy—Radiography—X Rays in Dentistry—X Rays in Chemistry—X Rays in War—Index.

List of Plates.

Frontispiece—Congenital Dislocation of Hip-Joint.—I., Needle in Finger.—II., Needle in Foot.—III., Revolver Bullet in Calf and Leg.—IV., A Method of Localisation.—V., Stellate Fracture of Patella showing shadow of "Strapping".—VI., Sarcoma.—VII., Six-weeks-old Injury to Elbow showing new Growth of Bone.—VIII., Old Fracture of Tibia and Fibula badly set.—IX., Heart Shadow.—X., Fractured Femur showing Grain of Splint.—XI., Barrell's Method of Localisation.

India-Rubber and Gutta Percha.

INDIA-RUBBER AND GUTTA PERCHA. Translated from the French of T.

SEELIGMANN, G. LAMY TORVILHON and H. FALCONNET by JOHN GEDDES MCINTOSH. Royal 8vo. Eighty-six Illustrations. Three Plates. 412 pages. 1903. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

India-Rubber—Botanical Origin—Climatology—Soil—Rational Culture and Acclimation of the Different Species of India-Rubber Plants—Methods of Obtaining the Latex—Methods of Preparing Raw or Crude India-Rubber—Classification of the Commercial Species of Raw Rubber—Physical and Chemical Properties of the Latex and of India-Rubber—Mechanical Transformation of Natural Caoutchouc into Washed or Normal Caoutchouc (Purification) and Normal Rubber into Masticated Rubber—Softening, Cutting, Washing, Drying—Preliminary Observations—Vulcanisation of Normal Rubber—Chemical and Physical Properties of Vulcanised Rubber—General Considerations—Hardened Rubber or Ebonite—Considerations on Mineralisation and other Mixtures—Coloration and Dyeing—Analysis of Natural or Normal Rubber and Vulcanised Rubber—Rubber Substitutes—Imitation Rubber.

Gutta Percha—Botanical Origin—Climatology—Soil—Rational Culture—Methods of Collection—Classification of the Different Species of Commercial Gutta Percha—Physical and Chemical Properties—Mechanical Transformation—Methods of Analysing—Gutta Percha Substitutes—Index.

Leather Trades.

PRACTICAL TREATISE ON THE LEATHER INDUSTRY. By A. M. VILLON. Translated by FRANK T. ADDYMAN, B.Sc. (Lond.), F.I.C., F.C.S.; and Corrected by an Eminent Member of the Trade. 500 pp., royal 8vo. 1901. 123 Illustrations. Price 21s.; India and Colonies, 22s.; Other Countries, 23s. 6d.; strictly net.

Contents.

Preface—Translator's Preface—List of Illustrations.

Part I., **Materials used in Tanning**—Skins: Skin and its Structure; Skins used in Tanning; Various Skins and their Uses—Tannin and Tanning Substances: Tannin; Barks (Oak); Barks other than Oak; Tanning Woods; Tannin-bearing Leaves; Excrescences; Tan-bearing Fruits; Tan-bearing Roots and Bulbs; Tanning Juices; Tanning Substances used in Various Countries; Tannin Extracts; Estimation of Tannin and Tannin Principles.

Part II., **Tanning**—The Installation of a Tannery: Tan Furnaces; Chimneys, Boilers, etc.; Steam Engines—Grinding and Trituration of Tanning Substances: Cutting up Bark; Grinding Bark; The Grinding of Tan Woods; Powdering Fruit, Galls and Grains; Notes on the Grinding of Bark—Manufacture of Sole Leather: Soaking; Sweating and Unhairing; Plumping and Colouring; Handling; Tanning; Tanning Elephants' Hides; Drying; Striking or Pinning—Manufacture of Dressing Leather: Soaking; Depilation; New Processes for the Depilation of Skins; Tanning; Cow Hides; Horse Hides; Goat Skins; Manufacture of Split Hides—On Various Methods of Tanning: Mechanical Methods; Physical Methods; Chemical Methods; Tanning with Extracts—Quantity and Quality; Quantity; Net Cost; Quality of Leather—Various Manipulations of Tanned Leather: Second Tanning; Grease Stains; Bleaching Leather; Waterproofing Leather; Weighting Tanned Leather; Preservation of Leather—Tanning Various Skins.

[Pg 14]

Part III., **Currying**—Waxed Calf: Preparation; Shaving; Stretching or Slicking; Oiling the Grain; Oiling the Flesh Side; Whitening and Graining; Waxing; Finishing; Dry Finishing; Finishing in Colour; Cost—White Calf: Finishing in White—Cow Hide for Upper Leathers: Black Cow Hide; White Cow Hide; Coloured Cow Hide—Smooth Cow Hide—Black Leather—Miscellaneous Hides: Horse; Goat; Waxed Goat Skin; Matt Goat Skin—Russia Leather: Russia Leather; Artificial Russia Leather.

Part IV., **Enamelled, Hungary and Chamoy Leather, Morocco, Parchment, Furs and Artificial Leather**—Enamelled Leather: Varnish Manufacture; Application of the Enamel; Enamelling in Colour—Hungary Leather: Preliminary; Wet Work or Preparation; Aluming; Dressing or Loft Work; Tallowing; Hungary Leather from Various Hides—Tawing: Preparatory Operations; Dressing; Dyeing Tawed Skins; Rugs—Chamoy Leather—Morocco: Preliminary Operations, Morocco Tanning; Mordants used in Morocco Manufacture; Natural Colours used in Morocco Dyeing; Artificial Colours; Different Methods of Dyeing; Dyeing with Natural Colours; Dyeing with Aniline Colours; Dyeing with Metallic Salts; Leather Printing; Finishing Morocco; Shagreen; Bronzed Leather—Gilding and Silvering: Gilding; Silvering; Nickel and Cobalt—Parchment—Furs and Furriery: Preliminary Remarks; Indigenous Furs; Foreign Furs from Hot Countries; Foreign Furs from Cold Countries; Furs from Birds' Skins; Preparation of Furs; Dressing; Colouring; Preparation of Birds' Skins; Preservation of Furs—Artificial Leather: Leather made from Scraps; Compressed Leather; American Cloth; Papier Mâché; Linoleum; Artificial Leather.

Part V., **Leather Testing and the Theory of Tanning**—Testing and Analysis of Leather:

Physical Testing of Tanned Leather; Chemical Analysis—The Theory of Tanning and the other Operations of the Leather and Skin Industry: Theory of Soaking; Theory of Unhairing; Theory of Swelling; Theory of Handling; Theory of Tanning; Theory of the Action of Tannin on the Skin; Theory of Hungary Leather Making; Theory of Tawing; Theory of Chamoy Leather Making; Theory of Mineral Tanning.

Part VI., **Uses of Leather**—Machine Belts: Manufacture of Belting; Leather Chain Belts; Various Belts, Use of Belts—Boot and Shoe making: Boots and Shoes; Laces—Saddlery: Composition of a Saddle; Construction of a Saddle—Harness: The Pack Saddle; Harness—Military Equipment—Glove Making—Carriage Building—Mechanical Uses.

Appendix, **The World's Commerce in Leather**—Europe; America; Asia; Africa; Australasia—Index.

THE LEATHER WORKER'S MANUAL. Being a Compendium of Practical Recipes and Working Formulæ for Curriers, Bootmakers, Leather Dressers, Blacking Manufacturers, Saddlers, Fancy Leather Workers. By H. C. STANDAGE. 165 pp. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Blackings, Polishes, Glosses, Dressings, Renovators, etc., for Boot and Shoe Leather—Harness Blackings, Dressings, Greases, Compositions, Soaps, and Boot-top Powders and Liquids, etc., etc.—Leather Grinders' Sundries—Currier's Seasonings, Blacking Compounds, Dressings, Finishes, Glosses, etc.—Dyes and Stains for Leather—Miscellaneous Information—Chrome Tannage—Index.

Books on Pottery, Bricks, Tiles, Glass, etc.

THE MANUAL OF PRACTICAL POTTING. Compiled by Experts, and Edited by CHAS. F. BINNS. Revised Third Edition and Enlarged. 200 pp. 1901. Price 17s. 6d.; India and Colonies, 18s. 6d.; Other Countries, 20s.; strictly net.

Contents.

Introduction. The Rise and Progress of the Potter's Art—**Bodies.** China and Porcelain Bodies, Parian Bodies, Semi-porcelain and Vitreous Bodies, Mortar Bodies, Earthenwares Granite and C.C. Bodies, Miscellaneous Bodies, Sagger and Crucible Clays, Coloured Bodies, Jasper Bodies, Coloured Bodies for Mosaic Painting, Encaustic Tile Bodies, Body Stains, Coloured Dips—**Glazes.** China Glazes, Ironstone Glazes, Earthenware Glazes, Glazes without Lead, Miscellaneous Glazes, Coloured Glazes, Majolica Colours—**Gold and Gold Colours.** Gold, Purple of Cassius, Marone and Ruby, Enamel Coloured Bases, Enamel Colour Fluxes, Enamel Colours, Mixed Enamel Colours, Antique and Vellum Enamel Colours, Underglaze Colours, Underglaze Colour Fluxes, Mixed Underglaze Colours, Flow Powders, Oils and Varnishes—**Means and Methods.** Reclamation of Waste Gold, The Use of Cobalt, Notes on Enamel Colours, Liquid or Bright Gold—**Classification and Analysis.** Classification of Clay Ware, Lord Playfair's Analysis of Clays, The Markets of the World, Time and Scale of Firing, Weights of Potter's Material, Decorated Goods Count—Comparative Loss of Weight of Clays—Ground Felspar Calculations—The Conversion of Slop Body Recipes into Dry Weight—The Cost of Prepared Earthenware Clay—**Forms and Tables.** Articles of Apprenticeship, Manufacturer's Guide to Stocktaking, Table of Relative Values of Potter's Materials, Hourly Wages Table, Workman's Settling Table, Comparative Guide for Earthenware and China Manufacturers in the use of Slop Flint and Slop Stone, Foreign Terms applied to Earthenware and China Goods, Table for the Conversion of Metrical Weights and Measures on the Continent and South America—**Index.**

[Pg 15]

CERAMIC TECHNOLOGY: Being some Aspects of Technical Science as Applied to Pottery Manufacture. Edited by CHARLES F. BINNS. 100 pp. Demy 8vo. 1897. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

Preface—The Chemistry of Pottery—Analysis and Synthesis—Clays and their Components—The Biscuit Oven—Pyrometry—Glazes and their Composition—Colours and Colour-making—Index.

COLOURING AND DECORATION OF CERAMIC WARE. By ALEX. BRONGNIART. With Notes and Additions by ALPHONSE SALVETAT. Translated from the French. 200 pp. 1898. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

A TREATISE ON THE CERAMIC INDUSTRIES. A Complete Manual for Pottery, Tile and Brick Works. By EMILE BOURRY. Translated from the French by WILTON P. RIX, Examiner in Pottery and Porcelain to the City and Guilds of London Technical Institute, Pottery Instructor to the Hanley School Board. Royal 8vo. 1901. Over 700 pp. Price 21s.; India and Colonies, 22s.; Other Countries, 23s. 6d.; strictly net.

Contents.

Part I., **General Pottery Methods.** Definition and History. Definitions and Classification of Ceramic Products—Historic Summary of the Ceramic Art—Raw Materials of Bodies. Clays: Pure Clay and Natural Clays—Various Raw Materials: Analogous to Clay—Agglomerative and Agglutinative—Opening—Fusible—Refractory—Trials of Raw Materials—Plastic Bodies. Properties and Composition—Preparation of Raw Materials: Disaggregation—Purification—Preparation of Bodies: By Plastic Method—By Dry Method—By Liquid Method—Formation. Processes of Formation: Throwing—Expression—Moulding by Hand, on the Jolley, by Compression, by Slip Casting—Slapping—Slipping—Drying. Drying of Bodies—Processes of Drying: By Evaporation—By Aeration—By Heating—By Ventilation—By Absorption—Glazes. Composition and Properties—Raw Materials—Manufacture and Application—Firing. Properties of the Bodies and Glazes during Firing—Description of the Kilns—Working of the Kilns—Decoration. Colouring Materials—Processes of Decoration.

Part II., **Special Pottery Methods.** Terra Cottas. Classification: Plain Ordinary, Hollow, Ornamental, Vitrified, and Light Bricks—Ordinary and Black Tiles—Paving Tiles—Pipes—Architectural Terra Cottas—Vases, Statues and Decorative Objects—Common Pottery—Pottery for Water and Filters—Tobacco Pipes—Lustre Ware—Properties and Tests for Terra Cottas—Fireclay Goods. Classification: Argillaceous, Aluminous, Carboniferous, Silicious and Basic Fireclay Goods—Fireclay Mortar (Pug)—Tests for Fireclay Goods—Faïences. Varnished Faïences—Enamelled Faïences—Silicious Faïences—Pipeclay Faïences—Pebble Work—Feldspathic Faïences—Composition, Processes of Manufacture and General Arrangements of Faïence Potteries—Stoneware. Stoneware Properly So-called: Paving Tiles—Pipes—Sanitary Ware—Stoneware for Food Purposes and Chemical Productions—Architectural Stoneware—Vases, Statues and other Decorative Objects—Fine Stoneware—Porcelain. Hard Porcelain for Table Ware and Decoration, for the Fire, for Electrical Conduits, for Mechanical Purposes; Architectural Porcelain, and Dull or Biscuit Porcelain—Soft Phosphated or English Porcelain—Soft Vitreous Porcelain, French and New Sèvres—Argillaceous Soft or Seger's Porcelain—Dull Soft or Parian Porcelain—Dull Feldspathic Soft Porcelain—**Index.**

[Pg 16]

ARCHITECTURAL POTTERY. Bricks, Tiles, Pipes, Enamelled Terra-cottas, Ordinary and Incrusted Quarries, Stoneware Mosaics, Faïences and Architectural Stoneware. By LEON LEFÈVRE. With Five Plates. 950 Illustrations in the Text, and numerous estimates. 500 pp., royal 8vo. 1900. Translated from the French by K. H. BIRD, M.A., and W. MOORE BINNS. Price 15s.; India and Colonies, 16s.; Other Countries, 17s. 6d.; strictly net.

Contents.

Part I. **Plain Undecorated Pottery.—Clays:** Classification; General Properties and Composition; Working of Clay-Pits—Open Pits—Underground Pits. Preparation of the Clay. **Bricks:** Hand and Machine Moulding—Expression Machines—Dies—Cutting-tables—General Remarks on the Choice of Machines—Types of Installations—Estimates—Plenishing, Hand and Steam Presses—Drying, by Exposure to Air, Without Shelter, and Under Sheds—Drying-rooms in Tiers, Closed Drying-rooms, in Tunnels, in Galleries—Detailed Estimates of the Various Drying-rooms, Comparison of Prices—Transport from the Machines to the Drying-rooms—Firing—In Clamps—In Intermittent Kilns—Continuous Kilns: with Solid Fuel: Round Kiln, Rectangular Kiln, Chimneys (Plans and Estimates)—With Gas Fuel, Fillard Kiln (Plans and Estimates), Water-gas Kiln—Heat Production of the Kilns; Dimensions, Shapes, Colours, Decoration, and Quality of Bricks—Hollow Bricks, Dimensions and Prices of Bricks, Various Shapes, Qualities—Use of Bricks—Walls, Arches, Pavements, Flues, Cornices—Facing with Coloured Bricks—Balustrades. **Tiles:** Manufacture—Moulding, by Hand, by Machinery: Preparation of the Clay—Preparation of the Slabs, Transformation into Flat Tiles, into Jointed Tiles—Screw, Cam and Revolver Presses—Particulars of Tile-presses—Drying—Planchettes, Shelves, Drying-barrows and Trucks—Firing—Divided Kilns—Installation of Mechanical Tileworks—Estimates; Shapes, Dimensions and Uses of the Principal Types of Tile—Ancient Tiles—Foreign Tiles—Special Tiles—Ridge Tiles, Coping Tiles, Border Tiles, Frontons, Gutters, Antefixes, Membron, Angular—Roofing Accessories: Chimney-pots, Mitrons, Lanterns, Chimneys—Qualities of Tiles—Black Tiles—Stoneware Tiles—Particulars of Tiles. **Pipes:** Conduit Pipes—Manufacture—Moulding: Horizontal Machines, Vertical Machines—Drying—Firing—**Chimney Flues**—Ventiducts and "Boisseaux," "Waggon"—Particulars of these Products. Quarries: Plain Quarries of Ordinary Clay; of Cleaned Clay—Machines, Cutting, Mixing, Polishing—Drying and Firing—Applications—Particulars of Quarries. **Terra-cotta:** History—Manufacture—Application: Balustrades, Columns, Pilasters, Capitals, Friezes, Frontons, Medallions, Panels, Rose-windows, Ceilings—Appendix: Official Methods of Testing Terra-cottas.

Part II. **Made-up or Decorated Pottery.**—General Remarks on the Decoration of Pottery: Dips—Glazes: Composition, Colouring, Preparation, Harmony with Pastes—Special Processes of Decoration—Enamels, Opaque, Transparent, Colours, Underglaze, Over-glaze—Other Processes:

Crackling, Mottled, Flashing, Metallic Iridescence, Lustres. Glazed and Enamelled Bricks—History: Glazing—Enamelling—Applications: Ordinary Enamelled Bricks, Glazed Stoneware, Enamelled Stoneware—Enamelled Tiles. Decorated Quarries: Paving Quarries—Decorated with Dips—Stoneware: Applications—Plain or Incrusted Stoneware; Manufacture—Application—Colouring, Manufacture, Moulding, Drying, Firing—Applications—Facing Quarries—in Faïence—of Glazed Stoneware—of Porcelain—Applications of Facing Quarries—Stove Quarries—Preparation of the Pastes, Moulding, Firing, Enamelling, Decoration—Applications—Faïences for Fireplaces. Architectural Decorated Pottery: Faïences; Stoneware; Porcelain. Sanitary Pottery: Stoneware Pipes: Manufacture, Firing—Applications—Sinks—Applications—Urinals, Seats and Pans—Applications—Drinking-fountains, Washstands—Index.

THE ART OF RIVETING GLASS, CHINA AND EARTHENWARE. By J. HOWARTH. Second Edition. 1900. Paper Cover. Price 1s. net; by post, home or abroad, 1s. 1d.

HOW TO ANALYSE CLAY. Practical Methods for Practical Men. By HOLDEN M. ASHBY, Professor of Organic Chemistry, Harvey Medical College, U.S.A. Twenty Illustrations. 1898. Price 2s. 6d.; Abroad, 3s.; strictly net.

NOTES ON POTTERY CLAYS. Their Distribution, Properties, Uses and Analyses of Ball Clays, China Clays and China Stone. By JAS. FAIRIE, F.G.S. 1901. 132 pp. Crown 8vo. Price 3s. 6d.; India and Colonies, 4s.; Other Countries, 4s. 6d.; strictly net.

[Pg 17]

A Reissue of

THE HISTORY OF THE STAFFORDSHIRE POTTERIES; AND THE RISE AND PROGRESS OF THE MANUFACTURE OF POTTERY AND PORCELAIN. With References to Genuine Specimens, and Notices of Eminent Potters. By SIMEON SHAW. (Originally Published in 1829.) 265 pp. 1900. Demy 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Introductory Chapter showing the position of the Pottery Trade at the present time (1899) —**Preliminary Remarks—The Potteries**, comprising Tunstall, Brownhills, Greenfield and New Field, Golden Hill, Latebrook, Green Lane, Burslem, Longport and Dale Hall, Hot Lane and Cobridge, Hanley and Shelton, Etruria, Stoke, Penkhull, Fenton, Lane Delph, Foley, Lane End —**On the Origin of the Art**, and its Practice among the early Nations—**Manufacture of Pottery**, prior to 1700—**The Introduction of Red Porcelain** by Messrs. Elers, of Bradwell, 1690—**Progress of the Manufacture** from 1700 to Mr. Wedgwood's commencement in 1760 —**Introduction of Fluid Glaze**—Extension of the Manufacture of Cream Colour—Mr. Wedgwood's Queen's Ware—Jasper, and Appointment of Potter to Her Majesty—Black Printing —**Introduction of Porcelain.** Mr. W. Littler's Porcelain—Mr. Cookworthy's Discovery of Kaolin and Petuntse, and Patent—Sold to Mr. Champion—resold to the New Hall Com.—Extension of Term—**Blue Printed Pottery.** Mr. Turner, Mr. Spode (1), Mr. Baddeley, Mr. Spode (2), Messrs. Turner, Mr. Wood, Mr. Wilson, Mr. Minton—Great Change in Patterns of Blue Printed —**Introduction of Lustre Pottery.** Improvements in Pottery and Porcelain subsequent to 1800.

A Reissue of

THE CHEMISTRY OF THE SEVERAL NATURAL AND ARTIFICIAL HETEROGENEOUS COMPOUNDS USED IN MANUFACTURING PORCELAIN, GLASS AND POTTERY. By SIMEON SHAW. (Originally published in 1837.) 750 pp. 1900. Royal 8vo. Price 14s.; India and Colonies, 15s.; Other Countries, 16s. 6d.; strictly net.

Contents.

PART I., ANALYSIS AND MATERIALS.—**Introduction:** Laboratory and Apparatus; **Elements—Temperature—Acids and Alkalies—The Earths—Metals.**

PART II., SYNTHESIS AND COMPOUNDS.—**Science of Mixing—Bodies:** Porcelain—Hard, Porcelain—Fritted Bodies, Porcelain—Raw Bodies, Porcelain—Soft, Fritted Bodies, Raw Bodies, Stone Bodies, Ironstone, Dry Bodies, Chemical Utensils, Fritted Jasper, Fritted Pearl, Fritted Drab, Raw Chemical Utensils, Raw Stone, Raw Jasper, Raw Pearl, Raw Mortar, Raw Drab, Raw Brown, Raw Fawn, Raw Cane, Raw Red Porous, Raw Egyptian, Earthenware, Queen's Ware, Cream Colour, Blue and Fancy Printed, Dipped and Mocha, Chalky, Rings, Stilts, etc.—**Glazes:** Porcelain—Hard Fritted Porcelain—Soft Fritted Porcelain—Soft Raw, Cream Colour Porcelain, Blue Printed Porcelain, Fritted Glazes, Analysis of Fritt, Analysis of Glaze, Coloured Glazes, Dips, Smears and Washes; **Glasses:** Flint Glass, Coloured Glasses, Artificial Garnet, Artificial Emerald, Artificial Amethyst, Artificial Sapphire, Artificial Opal, Plate Glass, Crown Glass, Broad Glass, Bottle Glass, Phosphoric Glass, British Steel Glass, Glass-Staining and Painting, Engraving on

Glass, Dr. Faraday's Experiments—**Colours:** Colour Making, Fluxes or Solvents, Components of the Colours; **Reds, etc., from Gold,** Carmine or Rose Colour, Purple, Reds, etc., from Iron, Blues, Yellows, Greens, Blacks, White, Silver for Burnishing, Gold for Burnishing, Printer's Oil, Lustres.

TABLES OF THE CHARACTERISTICS OF CHEMICAL SUBSTANCES.

Glassware, Glass Staining and Painting.

RECIPES FOR FLINT GLASS MAKING. By a British Glass Master and Mixer. Sixty Recipes. Being Leaves from the Mixing Book of several experts in the Flint Glass Trade, containing up-to-date recipes and valuable information as to Crystal, Demi-crystal and Coloured Glass in its many varieties. It contains the recipes for cheap metal suited to pressing, blowing, etc., as well as the most costly crystal and ruby. Price for United Kingdom, 10s. 6d.; Abroad, 15s.; United States, \$4; strictly net.

Contents.

[Pg 18]

Ruby—Ruby from Copper—Flint for using with the Ruby for Coating—A German Metal—Cornelian, or Alabaster—Sapphire Blue—Crysothis—Opal—Turquoise Blue—Gold Colour—Dark Green—Green (common)—Green for Malachite—Blue for Malachite—Black for Malachite—Black—Common Canary Batch—Canary—White Opaque Glass—Sealing-wax Red—Flint—Flint Glass (Crystal and Demi)—Achromatic Glass—Paste Glass—White Enamel—Firestone—Dead White (for moons)—White Agate—Canary—Canary Enamel—Index.

A TREATISE ON THE ART OF GLASS PAINTING. Prefaced with a Review of Ancient Glass. By ERNEST R. SUFFLING. With One Coloured Plate and Thirty-seven Illustrations. Demy 8vo. 140 pp. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d. net.

Contents.

A Short History of Stained Glass—Designing Scale Drawings—Cartoons and the Cut Line—Various Kinds of Glass Cutting for Windows—The Colours and Brushes used in Glass Painting—Painting on Glass, Dispersed Patterns—Diapered Patterns—Aciding—Firing—Fret Lead Glazing—Index.

PAINTING ON GLASS AND PORCELAIN AND ENAMEL PAINTING. A Complete Introduction to the Preparation of all the Colours and Fluxes used for Painting on Porcelain, Enamel, Faïence and Stoneware, the Coloured Pastes and Coloured Glasses, together with a Minute Description of the Firing of Colours and Enamels. By FELIX HERMANN, Technical Chemist. With Eighteen Illustrations. 300 pp. Translated from the German second and enlarged Edition. 1897. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

History of Glass Painting—The Articles to be Painted: Glass, Porcelain, Enamel, Stoneware, Faïence—Pigments: Metallic Pigments: Antimony Oxide, Naples Yellow, Barium Chromate, Lead Chromate, Silver Chloride, Chromic Oxide—Fluxes: Fluxes, Felspar, Quartz, Purifying Quartz, Sedimentation, Quenching, Borax, Boracic Acid, Potassium and Sodium Carbonates, Rocaille Flux—Preparation of the Colours for Glass Painting—The Colour Pastes—The Coloured Glasses—Composition of the Porcelain Colours—The Enamel Colours: Enamels for Artistic Work—Metallic Ornamentation: Porcelain Gilding, Glass Gilding—Firing the Colours: Remarks on Firing: Firing Colours on Glass, Firing Colours on Porcelain: The Muffle—Accidents occasionally Supervening during the Process of Firing—Remarks on the Different Methods of Painting on Glass, Porcelain, etc.—Appendix: Cleaning Old Glass Paintings.

Paper Staining.

THE DYEING OF PAPER PULP. A Practical Treatise for the use of Papermakers, Paperstainers, Students and others. By Julius Erfurt, Manager of a Paper Mill. Translated into English and Edited with Additions by JULIUS HÜBNER, F.C.S., Lecturer on Papermaking at the Manchester Municipal Technical School. With Illustrations and **157 patterns of paper dyed in the pulp.** Royal 8vo, 180 pp. 1901. Price 15s.; India and Colonies, 16s.; Other Countries, 20s.; strictly net. Limited edition.

Contents.

Behaviour of the Paper Fibres during the Process of Dyeing, Theory of the Mordant—Colour Fixing Mediums (Mordants)—Influence of the Quality of the Water Used—Inorganic Colours—Organic Colours—Practical Application of the Coal Tar Colours according to their Properties and their Behaviour towards the Different Paper Fibres—Dyed Patterns on Various Pulp Mixtures—Dyeing to Shade—Index.

Enamelling on Metal.

ENAMELS AND ENAMELLING. For Enamel Makers, Workers in Gold and Silver, and Manufacturers of Objects of Art. By PAUL RANDAU. Translated from the German. With Sixteen Illustrations. 180 pp. 1900. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

[Pg 19]

Composition and Properties of Glass—Raw Materials for the Manufacture of Enamels—Substances Added to Produce Opacity—Fluxes—Pigments—Decolorising Agents—Testing the Raw Materials with the Blow-pipe Flame—Subsidiary Materials—Preparing the Materials for Enamel Making—Mixing the Materials—The Preparation of Technical Enamels, The Enamel Mass—Appliances for Smelting the Enamel Mass—Smelting the Charge—Composition of Enamel Masses—Composition of Masses for Ground Enamels—Composition of Cover Enamels—Preparing the Articles for Enamelling—Applying the Enamel—Firing the Ground Enamel—Applying and Firing the Cover Enamel or Glaze—Repairing Defects in Enamelled Ware—Enamelling Articles of Sheet Metal—Decorating Enamelled Ware—Specialities in Enamelling—Dial-plate Enamelling—Enamels for Artistic Purposes, Recipes for Enamels of Various Colours—Index.

THE ART OF ENAMELLING ON METAL. By W. NORMAN BROWN. Twenty-eight Illustrations. Crown 8vo. 60 pp. 1900. Price 2s. 6d.; Abroad, 3s.; strictly net.

Silk Manufacture.

SILK THROWING AND WASTE SILK SPINNING. By HOLLINS RAYNER. Demy 8vo. 130 Illustrations.

[*IN THE PRESS.*]

Contents.

The Silkworm—Cocoon Reeling and Qualities of Silk—Silk Throwing—Silk Wastes—The Preparation of Silk Waste for Degumming—Silk Waste Degumming, Schapping and Discharging—The Opening and Dressing of Wastes—Silk Waste "Drawing" or "Preparing" Machinery—Long Spinning—Short Spinning—Spinning and Finishing Processes—Utilisation of Waste Products—Noil Spinning—Exhaust Noil Spinning.

Books on Textile and Dyeing Subjects.

THE CHEMICAL TECHNOLOGY OF TEXTILE FIBRES: Their Origin, Structure, Preparation, Washing, Bleaching, Dyeing, Printing and Dressing. By Dr. GEORG VON GEORGIEVICS. Translated from the German by CHARLES SALTER. 320 pp. Forty-seven Illustrations. Royal 8vo. 1902. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s. net.

Contents.

The Textile Fibres—Artificial Fibres—Mineral Fibres—Vegetable Fibres—Cellulose—Cotton—Bombax Cotton—Vegetable Silk—Flax—Hemp—Jute—Ramie, Rhea, China Grass, Nettle Fibre—Distinguishing Tests for the Various Fibres—Animal Fibres: Silk—Animal Hairs—Sheep's Wool—Goat Wool and Camel Wool—Artificial Wool (Wool Substitutes)—Conditioning—**Washing, Bleaching, Carbonising**—Bleaching Agents—Cotton Bleaching—Linen Bleaching—Jute Bleaching—Hemp Bleaching—Ramie Bleaching—Scouring and Bleaching Silk—Washing and Bleaching Wool—Blueing or White Dyeing—Carbonising—**Mordants and Mordanting—Dyeing**—Combination of Colours: Dyeing to Pattern—Theory of Dyeing—Classification of Dye Stuffs: Methods of Dyeing—Application of Acid Dye Stuffs—Application of Basic Dye Stuffs—Application of Direct or Substantive Cotton Dyes—Application of the Mordant Dyes—Application of the Developing Dyes—Dyeing on a Manufacturing Scale: Selection of Dye Stuffs for Dyeing—Silk

Dyeing—Wool Dyeing—Cotton Dyeing—Dyeing Mixed Fabrics—Sample Dyeings, Colorimetric Determinations, Reactions of Dye Stuffs on the Fibre, Tests for Fastness—**Printing**—Hand Printing—Calico Printing: Reproduction of Pattern by Direct Printing: Thickening Agents—Employment of Mordant Dye Stuffs, Basic, Albumin, Direct, Developing, Vat, Acid—Treatment of the Goods when Printed—Combined Printing and Dyeing—Discharge Style Printing—Reserve Style Printing—Topping Printing—Wool Printing—Silk Printing—Printing Yarns, Warps, and Combed Sliver—**Dressing and Finishing**—Dressing and Finishing—Substances used in Finishing—Loading Ingredients—Colouring for the Dressing Preparations—Metals or their Sulphites—Waterproofing—Fireproofing—Antiseptics for Prevention of Mould—Application of Dressings—Drying—Stretching—Finishing: Shearing, Damping, Calendering, Beetling, Moiré or Watered Effects, Stamping—Finishing Woollens—Index.

[Pg 20]

POWER-LOOM WEAVING AND YARN NUMBERING, According to Various Systems, with Conversion Tables. Translated from the German of ANTHON GRUNER. **With Twenty-six Diagrams in Colours.** 150 pp. 1900. Crown 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Power-Loom Weaving in General. Various Systems of Looms—**Mounting and Starting the Power-Loom.** English Looms—Tappet or Treadle Looms—Dobbies—**General Remarks on the Numbering, Reeling and Packing of Yarn—Appendix—Useful Hints.** Calculating Warps—Weft Calculations—Calculations of Cost Price in Hanks.

TEXTILE RAW MATERIALS AND THEIR CONVERSION INTO YARNS. (The Study of the Raw Materials and the Technology of the Spinning Process.) By JULIUS ZIPSER. Translated from German by CHARLES SALTER. 302 Illustrations. 500 pp. Demy 8vo. 1901. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

PART I.—The Raw Materials Used in the Textile Industry.

MINERAL RAW MATERIALS. VEGETABLE RAW MATERIALS. ANIMAL RAW MATERIALS.

PART II.—The Technology of Spinning or the Conversion of Textile Raw Materials into Yarn.

SPINNING VEGETABLE RAW MATERIALS. Cotton Spinning—Installation of a Cotton Mill—Spinning Waste Cotton and Waste Cotton Yarns—Flax Spinning—Fine Spinning—Tow Spinning—Hemp Spinning—Spinning Hemp Tow String—Jute Spinning—Spinning Jute Line Yarn—Utilising Jute Waste.

PART III.—Spinning Animal Raw Materials.

Spinning Carded Woollen Yarn—Finishing Yarn—Worsted Spinning—Finishing Worsted Yarn—Artificial Wool or Shoddy Spinning—Shoddy and Mungo Manufacture—Spinning Shoddy and other Wool Substitutes—Spinning Waste Silk—Chappe Silk—Fine Spinning—Index.

THE TECHNICAL TESTING OF YARNS AND TEXTILE FABRICS. With Reference to Official Specifications. Translated from the German of Dr. J. HERZFELD. Second Edition. Sixty-nine Illustrations. 200 pp. Demy 8vo. 1902. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Yarn Testing. Determining the Yarn Number—Testing the Length of Yarns—Examination of the External Appearance of Yarn—Determining the Twist of Yarn and Twist—Determination of Tensile Strength and Elasticity—Estimating the Percentage of Fat in Yarn—Determination of Moisture (Conditioning)—Appendix.

DECORATIVE AND FANCY TEXTILE FABRICS. By R. T. LORD. Manufacturers and Designers of Carpets, Damask, Dress and all Textile Fabrics. 200 pp. 1898. Demy 8vo. 132 Designs and Illustrations. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

A Few Hints on Designing Ornamental Textile Fabrics—A Few Hints on Designing Ornamental Textile Fabrics (continued)—A Few Hints on Designing Ornamental Textile Fabrics (continued)—A Few Hints on Designing Ornamental Textile Fabrics (continued)—Hints for Ruled-paper Draughtsmen—The Jacquard Machine—Brussels and Wilton Carpets—Tapestry Carpets—Ingrain Carpets—Axminster Carpets—Damask and Tapestry Fabrics—Scarf Silks and Ribbons—Silk Handkerchiefs—Dress Fabrics—Mantle Cloths—Figured Plush—Bed Quilts—Calico Printing.

THEORY AND PRACTICE OF DAMASK WEAVING. By H. KINZER and K. WALTER.
Royal 8vo. Eighteen Plates. Six Illustrations. Translated from the German.

[IN THE PRESS.]

Contents.

The Various Sorts of Damask Fabrics—Drill (Ticking, Handloom-made)—Whole Damask for Tablecloths—Damask with Ground- and Connecting-warp Threads—Furniture Damask—Lampas or Hangings—Church Damasks—**The Manufacture of Whole Damask**—Damask Arrangement with and without Cross-Shedding—The Altered Cone-arrangement—The Principle of the Corner Lifting Cord—The Roller Principle—The Combination of the Jacquard with the so-called Damask Machine—The Special Damask Machine—The Combination of Two Tyings.

[Pg 21]

FAULTS IN THE MANUFACTURE OF WOOLLEN GOODS AND THEIR PREVENTION. By NICOLAS REISER. Translated from the Second German Edition.
Crown 8vo. Sixty-three Illustrations.

[IN THE PRESS.]

Contents.

Improperly Chosen Raw Material or Improper Mixtures—Wrong Treatment of the Material in Washing, Carbonisation, Drying, Dyeing and Spinning—Improper Spacing of the Goods in the Loom—Wrong Placing of Colours—Wrong Weight or Width of the Goods—Breaking of Warp and Weft Threads—Presence of Doubles, Singles, Thick, Loose, and too Hard Twisted Threads as well as Tangles, Thick Knots and the Like—Errors in Cross-weaving—Inequalities, *i.e.*, Bands and Stripes—Dirty Borders—Defective Selvedges—Holes and Buttons—Rubbed Places—Creases—Spots—Loose and Bad Colours—Badly Dyed Selvedges—Hard Goods—Brittle Goods—Uneven Goods—Removal of Bands, Stripes, Creases and Spots.

Dyeing, Colour Printing, Matching and Dye-stuffs.

THE COLOUR PRINTING OF CARPET YARNS. Manual for Colour Chemists and Textile Printers. By DAVID PATERSON, F.C.S. Seventeen Illustrations. 136 pp.
Demy 8vo. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Structure and Constitution of Wool Fibre—Yarn Scouring—Scouring Materials—Water for Scouring—Bleaching Carpet Yarns—Colour Making for Yarn Printing—Colour Printing Pastes—Colour Recipes for Yarn Printing—Science of Colour Mixing—Matching of Colours—"Hank" Printing—Printing Tapestry Carpet Yarns—Yarn Printing—Steaming Printed Yarns—Washing of Steamed Yarns—Aniline Colours Suitable for Yarn Printing—Glossary of Dyes and Dye-wares used in Wood Yarn Printing—Appendix.

THE SCIENCE OF COLOUR MIXING. A Manual intended for the use of Dyers, Calico Printers and Colour Chemists. By DAVID PATERSON, F.C.S. Forty-one Illustrations, **Five Coloured Plates, and Four Plates showing Eleven Dyed Specimens of Fabrics.** 132 pp. Demy 8vo. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Colour a Sensation; Colours of Illuminated Bodies; Colours of Opaque and Transparent Bodies; Surface Colour—Analysis of Light; Spectrum; Homogeneous Colours; Ready Method of Obtaining a Spectrum—Examination of Solar Spectrum; The Spectroscope and Its Construction; Colourists' Use of the Spectroscope—Colour by Absorption; Solutions and Dyed Fabrics; Dichroic Coloured Fabrics in Gaslight—Colour Primaries of the Scientist *versus* the Dyer and Artist; Colour Mixing by Rotation and Lye Dyeing; Hue, Purity, Brightness; Tints; Shades, Scales, Tones, Sad and Sombre Colours—Colour Mixing; Pure and Impure Greens, Orange and Violets; Large Variety of Shades from few Colours; Consideration of the Practical Primaries: Red, Yellow and Blue—Secondary Colours; Nomenclature of Violet and Purple Group; Tints and Shades of Violet; Changes in Artificial Light—Tertiary Shades; Broken Hues; Absorption Spectra of Tertiary Shades—Appendix: Four Plates with Dyed Specimens Illustrating Text—Index.

COLOUR MATCHING ON TEXTILES. A Manual intended for the use of Students of Colour Chemistry, Dyeing and Textile Printing. By DAVID PATERSON, F.C.S. Coloured Frontispiece. Twenty-nine Illustrations and Fourteen Specimens of Dyed Fabrics. Demy 8vo. 132 pp. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Colour Vision and Structure of the Eye—Perception of Colour—Primary and Complementary Colour Sensations—Daylight for Colour Matching—Selection of a Good Pure Light—Diffused Daylight, Direct Sunlight, Blue Skylight, Variability of Daylight, etc., etc.—Matching of Hues—Purity and Luminosity of Colours—Matching Bright Hues—Aid of Tinted Films—Matching Difficulties Arising from Contrast—Examination of Colours by Reflected and Transmitted Lights—Effect of Lustre and Transparency of Fibres in Colour Matching—Matching of Colours on Velvet Pile—Optical Properties of Dye-stuffs, Dichroism, Fluorescence—Use of Tinted Mediums—Orange Film—Defects of the Eye—Yellowing of the Lens—Colour Blindness, etc.—Matching of Dyed Silk Trimmings and Linings and Bindings—Its Difficulties—Behaviour of Shades in Artificial Light—Colour Matching of Old Fabrics, etc.—Examination of Dyed Colours under the Artificial Lights—Electric Arc, Magnesium and Dufton, Gardner Lights, Welsbach, Acetylene, etc.—Testing Qualities of an Illuminant—Influence of the Absorption Spectrum in Changes of Hue under the Artificial Lights—Study of the Causes of Abnormal Modifications of Hue, etc.

[Pg 22]

COLOUR: A HANDBOOK OF THE THEORY OF COLOUR. By GEORGE H. HURST, F.C.S. **With Ten Coloured Plates** and Seventy-two Illustrations. 160 pp. Demy 8vo. 1900. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Colour and Its Production. Light, Colour, Dispersion of White Light, Methods of Producing the Spectrum, Glass Prism and Diffraction Grating Spectroscopes, The Spectrum, Wave Motion of Light, Recomposition of White Light, Hue, Luminosity, Purity of Colours, The Polaroscope, Phosphorescence, Fluorescence, Interference—**Cause of Colour in Coloured Bodies.** Transmitted Colours, Absorption Spectra of Colouring Matters—**Colour Phenomena and Theories.** Mixing Colours, White Light from Coloured Lights, Effect of Coloured Light on Colours, Complementary Colours, Young Helmholtz Theory, Brewster Theory, Supplementary Colours, Maxwell's Theory, Colour Photography—**The Physiology of Light.** Structure of the Eye, Persistence of Vision, Subjective Colour Phenomena, Colour Blindness—**Contrast.** Contrast, Simultaneous Contrast, Successive Contrast, Contrast of Tone, Contrast of Colours, Modification of Colours by Contrast, Colour Contrast in Decorative Design—**Colour in Decoration and Design.** Colour Harmonies, Colour Equivalents, Illumination and Colour, Colour and Textile Fabrics, Surface Structure and Colour—**Measurement of Colour.** Colour Patch Method, The Tintometer, Chromometer.

THE DYEING OF COTTON FABRICS: A Practical Handbook for the Dyer and Student. By FRANKLIN BEECH, Practical Colourist and Chemist. 272 pp. Forty-four Illustrations of Bleaching and Dyeing Machinery. Demy 8vo. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Structure and Chemistry of the Cotton Fibre—Scouring and Bleaching of Cotton—Dyeing Machinery and Dyeing Manipulations—Principles and Practice of Cotton Dyeing—Direct Dyeing; Direct Dyeing followed by Fixation with Metallic Salts; Direct Dyeing followed by Fixation with Developers; Direct Dyeing followed by Fixation with Couplers; Dyeing on Tannic Mordant; Dyeing on Metallic Mordant; Production of Colour Direct upon Cotton Fibres; Dyeing Cotton by Impregnation with Dye-stuff Solution—Dyeing Union (Mixed Cotton and Wool) Fabrics—Dyeing Half Silk (Cotton-Silk, Satin) Fabrics—Operations following Dyeing—Washing, Soaping, Drying—Testing of the Colour of Dyed Fabrics—Experimental Dyeing and Comparative Dye Testing—Index.

The book contains numerous recipes for the production on Cotton Fabrics of all kinds of a great range of colours.

THE DYEING OF WOOLLEN FABRICS. By FRANKLIN BEECH, Practical Colourist and Chemist. Thirty-three Illustrations. Demy 8vo. 228 pp. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d. net.

Contents.

The Wool Fibre—Structure, Composition and Properties—Processes Preparatory to Dyeing—Scouring and Bleaching of Wool—Dyeing Machinery and Dyeing Manipulations—Loose Wool Dyeing, Yarn Dyeing and Piece Dyeing Machinery—The Principles and Practice of Wool Dyeing—Properties of Wool Dyeing—Methods of Wool Dyeing—Groups of Dyes—Dyeing with the Direct Dyes—Dyeing with Basic Dyes—Dyeing with Acid Dyes—Dyeing with Mordant Dyes—Level Dyeing—Blacks on Wool—Reds on Wool—Mordanting of Wool—Orange Shades on Wool—Yellow Shades on Wool—Green Shades on Wool—Blue Shades on Wool—Violet Shades on Wool—Brown Shades on Wool—Mode Colours on Wool—Dyeing Union (Mixed Cotton Wool) Fabrics—Dyeing of Gloria—Operations following Dyeing—Washing, Soaping, Drying—Experimental Dyeing and Comparative Dye Testing—Testing of the Colour of Dyed Fabrics—Index.

DYERS' MATERIALS: An Introduction to the Examination, Evaluation and Application of the most important Substances used in Dyeing, Printing, Bleaching and Finishing. By PAUL HEERMAN, Ph.D. Translated from the German by. A. C. WRIGHT, M.A. (Oxon.), B.Sc. (Lond.). Twenty-four Illustrations. Crown 8vo. 150 pp. 1901. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Indicators—Standard Solutions—Solutions and Reagents in General Use—Water—Textile Fibres—Hydrochloric Acid—Chlorides—Fluorides and Bifluorides—Sulphuric Acid—Sulphates—Nitric Acid and Nitrates—Chlorine-Oxygen Compounds—Sulphite Compounds—Miscellaneous Compounds—Alkalies—Peroxides—Zinc Dust—Fatty Acids and Their Salts—Cyanogen Compounds—Derivatives of the Fats—Tannins—Aniline and Aniline Salts—Thickening and Stiffening Materials: Starch, Prepared and Soluble Starch, Dextrine, Gum Arabic, Gum Senegal, Gum Tragacanth, Glue, Size—Dyes—Appendix: Atomic Weights of the Elements—Molecular Weights of Certain Compounds—Gravimetric Equivalents—Volumetric Equivalents—Plate I., Microscopic Appearance of the Textile Fibres—Plate II., Microscopic Appearance of the Different Varieties of Starch—Index.

Reissue of

THE ART OF DYEING WOOL, SILK AND COTTON. Translated from the French of M. HELLOT, M. MACQUER and M. LE PILEUR D'APLIGNY. First Published in English in 1789. Six Plates. Demy 8vo. 446 pp. 1901. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Part I., **The Art of Dyeing Wool and Woollen Cloth, Stuffs, Yarn, Worsted, etc.** Part II., **The Art of Dyeing Silk.** Part III., **The Art of Dyeing Cotton and Linen Thread, together with the Method of Stamping Silks, Cottons, etc.**

THE CHEMISTRY OF DYE-STUFFS. By Dr. GEORG VON GEORGIEVICS. Translated from the Second German Edition. 412 pp. Demy 8vo. 1903. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Introduction—Coal Tar—Intermediate Products in the Manufacture of Dye-stuffs—The Artificial Dye-stuffs (Coal-tar Dyes)—Nitroso Dye-stuffs—Nitro Dye-stuffs—Azo Dye-stuffs—Substantive Cotton Dye-stuffs—Azoxystilbene Dye-stuffs—Hydrazones—Ketoneimides—Triphenylmethane Dye-stuffs—Rosolic Acid Dye-stuffs—Xanthene Dye-stuffs—Xanthone Dye-stuffs—Flavones—Oxyketone Dye-stuffs—Quinoline and Acridine Dye-stuffs—Quinonimide or Diphenylamine Dye-stuffs—The Azine Group: Eurhodines, Safranines and Indulines—Eurhodines—Safranines—Quinoxalines—Indigo—Dye-stuffs of Unknown Constitution—Sulphur or Sulphine Dye-stuffs—Development of the Artificial Dye-stuff Industry—The Natural Dye-stuffs—Mineral Colours—Index.

Bleaching and Washing.

A PRACTICAL TREATISE ON THE BLEACHING OF LINEN AND COTTON YARN AND FABRICS. By L. TAILFER, Chemical and Mechanical Engineer. Translated from the French by JOHN GEDDES MCINTOSH. Demy 8vo. 303 pp. Twenty Illusts. 1901. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

General Considerations on Bleaching—Steeping—Washing: Its End and Importance—Roller Washing Machines—Wash Wheel (Dash Wheel)—Stocks or Wash Mill—Squeezing—Lye Boiling—Lye Boiling with Milk of Lime—Lye Boiling with Soda Lyes—Description of Lye Boiling Keirs—Operations of Lye Boiling—Concentration of Lyes—Mather and Platt's Keir—Description of the Keir—Saturation of the Fabrics—Alkali used in Lye Boiling—Examples of Processes—Soap—Action of Soap in Bleaching—Quality and Quantity of Soaps to use in the Lye—Soap Lyes or Scalds—Soap Scouring Stocks—Bleaching on Grass or on the Bleaching Green or Lawn—Chemicking—Remarks on Chlorides and their Decolourising Action—Chemicking Cisterns—Chemicking—Strengths, etc.—Sours—Properties of the Acids—Effects Produced by Acids—Souring Cisterns—Drying—Drying by Steam—Drying by Hot Air—Drying by Air—Damages to Fabrics in Bleaching—Yarn Mildew—Fermentation—Iron Rust Spots—Spots from Contact with Wood—Spots incurred on the Bleaching Green—Damages arising from the Machines—Examples of Methods used in Bleaching—Linen—Cotton—The Valuation of Caustic and Carbonated Alkali (Soda) and General Information Regarding these Bodies—Object of Alkalimetry—Titration of

Carbonate of Soda—Comparative Table of Different Degrees of Alkalimetric Strength—Five Problems relative to Carbonate of Soda—Caustic Soda, its Properties and Uses—Mixtures of Carbonated and Caustic Alkali—Note on a Process of Manufacturing Caustic Soda and Mixtures of Caustic and Carbonated Alkali (Soda)—Chlorometry—Titration—Wagner's Chlorometric Method—Preparation of Standard Solutions—Apparatus for Chlorine Valuation—Alkali in Excess in Decolourising Chlorides—Chlorine and Decolourising Chlorides—Synopsis—Chlorine—Chloride of Lime—Hypochlorite of Soda—Brochoki's Chlorozone—Various Decolourising Hypochlorites—Comparison of Chloride of Lime and Hypochlorite of Soda—Water—Qualities of Water—Hardness—Dervaux's Purifier—Testing the Purified Water—Different Plant for Purification—Filters—Bleaching of Yarn—Weight of Yarn—Lye Boiling—Chemicking—Washing—Bleaching of Cotton Yarn—The Installation of a Bleach Works—Water Supply—Steam Boilers—Steam Distribution Pipes—Engines—Keirs—Washing—Machines—Stocks—Wash Wheels—Chemicking and Souring Cisterns—Various—Buildings—Addenda—Energy of Decolourising Chlorides and Bleaching by Electricity and Ozone—Energy of Decolourising Chlorides—Chlorides—Production of Chlorine and Hypochlorites by Electrolysis—Lunge's Process for increasing the intensity of the Bleaching Power of Chloride of Lime—Trilfer's Process for Removing the Excess of Lime or Soda from Decolourising Chlorides—Bleaching by Ozone.

Cotton Spinning and Combing.

COTTON SPINNING (First Year). By THOMAS THORNLEY, Spinning Master, Bolton Technical School. 160 pp. Eighty-four Illustrations. Crown 8vo. 1901. Price 3s.; Abroad, 3s. 6d.; strictly net.

Contents.

Syllabus and Examination Papers of the City and Guilds of London Institute—Cultivation, Classification, Ginning, Baling and Mixing of the Raw Cotton—Bale-Breakers, Mixing Lattices and Hopper Feeders—Opening and Scutching—Carding—Indexes.

COTTON SPINNING (Intermediate, or Second Year). By THOMAS THORNLEY. 180 pp. Seventy Illustrations. Crown 8vo. 1901. Price 5s.; India and British Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Syllabuses and Examination Papers of the City and Guilds of London Institute—The Combing Process—The Drawing Frame—Bobbin and Fly Frames—Mule Spinning—Ring Spinning—General Indexes.

COTTON SPINNING (Honours, or Third Year). By THOMAS THORNLEY. 216 pp. Seventy-four Illustrations. Crown 8vo. 1901. Price 5s.; India and British Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Syllabuses and Examination Papers of the City and Guilds of London Institute—Cotton—The Practical Manipulation of Cotton Spinning Machinery—Doubling and Winding—Reeling—Warping—Production and Costs—Main Driving—Arrangement of Machinery and Mill Planning—Waste and Waste Spinning—Indexes.

COTTON COMBING MACHINES. By THOS. THORNLEY, Spinning Master, Technical School, Bolton. Demy 8vo. 117 Illustrations. 300 pp. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d. net.

Contents.

The Sliver Lap Machine and the Ribbon Cap Machine—General Description of the Heilmann Comber—The Cam Shaft—On the Detaching and Attaching Mechanism of the Comber—Resetting of Combers—The Erection of a Heilmann Comber—Stop Motions: Various Calculations—Various Notes and Discussions—Cotton Combing Machines of Continental Make—Index.

Collieries and Mines.

RECOVERY WORK AFTER PIT FIRES. A Description of the Principal Methods Pursued, especially in Fiery Mines, and of the Various Appliances Employed, such as Respiratory and Rescue Apparatus, Dams, etc. By ROBERT LAMPRECHT, Mining Engineer and Manager. Translated from the German. Illustrated by Six large

Plates containing Seventy-six Illustrations. 175 pp., demy 8vo. 1901. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

Causes of Pit Fires—Preventive Regulations: (1) The Outbreak and Rapid Extension of a Shaft Fire can be most reliably prevented by Employing little or no Combustible Material in the Construction of the Shaft; (2) Precautions for Rapidly Localising an Outbreak of Fire in the Shaft; (3) Precautions to be Adopted in case those under 1 and 2 Fail or Prove Inefficient. Precautions against Spontaneous Ignition of Coal. Precautions for Preventing Explosions of Fire-damp and Coal Dust. Employment of Electricity in Mining, particularly in Fiery Pits. Experiments on the Ignition of Fire-damp Mixtures and Clouds of Coal Dust by Electricity—**Indications of an Existing or Incipient Fire—Appliances for Working in Irrespirable Gases:** Respiratory Apparatus; Apparatus with Air Supply Pipes; Reservoir Apparatus; Oxygen Apparatus—**Extinguishing Pit Fires:** (a) Chemical Means; (b) Extinction with Water. Dragging down the Burning Masses and Packing with Clay; (c) Insulating the Seat of the Fire by Dams. Dam Building. Analyses of Fire Gases. Isolating the Seat of a Fire with Dams; Working in Irrespirable Gases ("Gas-diving"); Air-Lock Work. Complete Isolation of the Pit. Flooding a Burning Section isolated by means of Dams. Wooden Dams: Masonry Dams. Examples of Cylindrical and Dome-shaped Dams. Dam Doors: Flooding the Whole Pit—**Rescue Stations:** (a) Stations above Ground; (b) Underground Rescue Stations—**Spontaneous Ignition of Coal in Bulk—Index.**

VENTILATION IN MINES. By ROBERT WABNER, Mining Engineer. Translated from the German. Royal 8vo. Thirty Plates and Twenty-two Illustrations. 240 pp. 1903. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; strictly net.

Contents.

The Causes of the Contamination of Pit Air—The Means of Preventing the Dangers resulting from the Contamination of Pit Air—Calculating the Volume of Ventilating Current necessary to free Pit Air from Contamination—Determination of the Resistance Opposed to the Passage of Air through the Pit—Laws of Resistance and Formulæ therefor—Fluctuations in the Temperament or Specific Resistance of a Pit—Means for Providing a Ventilating Current in the Pit—Mechanical Ventilation—Ventilators and Fans—Determining the Theoretical, Initial, and True (Effective) Depression of the Centrifugal Fan—New Types of Centrifugal Fan of Small Diameter and High Working Speed—Utilising the Ventilating Current to the utmost Advantage and distributing the same through the Workings—Artificially retarding the Ventilating Current—Ventilating Preliminary Workings—Blind Headings—Separate Ventilation—Supervision of Ventilation—INDEX.

HAULAGE AND WINDING APPLIANCES USED IN MINING. By CARL VOLK. Translated from the German. Royal 8vo. With Six Plates and 146 Illustrations.

[IN THE PRESS.]

Contents.

Haulage Appliances—Ropes—Haulage Tubs and Tracks—Cages and Winding Appliances—Winding Engines for Vertical Shafts—Winding without Ropes—Haulage in Levels and Inclines—The Working of Underground Engines—Machinery for Downhill Haulage.

Engineering, Smoke Prevention and Metallurgy.

THE PREVENTION OF SMOKE. Combined with the Economical Combustion of Fuel. By W. C. POPPLEWELL, M.Sc., A.M.Inst., C.E., Consulting Engineer. Forty-six Illustrations. 190 pp. 1901. Demy 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Fuel and Combustion—Hand Firing in Boiler Furnaces—Stoking by Mechanical Means—Powdered Fuel—Gaseous Fuel—Efficiency and Smoke Tests of Boilers—Some Standard Smoke Trials—The Legal Aspect of the Smoke Question—The Best Means to be adopted for the Prevention of Smoke—Index.

GAS AND COAL DUST FIRING. A Critical Review of the Various Appliances Patented in Germany for this purpose since 1885. By ALBERT PÜTSCH. 130 pp. Demy 8vo. 1901. Translated from the German. With 103 Illustrations. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Generators—Generators Employing Steam—Stirring and Feed Regulating Appliances—Direct Generators—Burners—Regenerators and Recuperators—Glass Smelting Furnaces—Metallurgical Furnaces—Pottery Furnace—Coal Dust Firing—Index.

THE HARDENING AND TEMPERING OF STEEL IN THEORY AND PRACTICE. By FRIDOLIN REISER. Translated from the German of the Third Edition. Crown 8vo. 120 pp. 1903. Price 5s.; India and British Colonies, 5s. 6d.; Other Countries, 6s.; strictly net.

Contents.

Steel—Chemical and Physical Properties of Steel, and their Casual Connection—Classification of Steel according to Use—Testing the Quality of Steel—Steel-Hardening—Investigation of the Causes of Failure in Hardening—Regeneration of Steel Spoilt in the Furnace—Welding Steel—Index.

SIDEROLOGY: THE SCIENCE OF IRON (The Constitution of Iron Alloys and Slags). Translated from German of HANNS FREIHERR V. JÜPTNER. 350 pp. Demy 8vo. Eleven Plates and Ten Illustrations. 1902. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; net.

Contents.

The Theory of Solution.—Solutions—Molten Alloys—Varieties of Solutions—Osmotic Pressure—Relation between Osmotic Pressure and other Properties of Solutions—Osmotic Pressure and Molecular Weight of the Dissolved Substance—Solutions of Gases—Solid Solutions—Solubility—Diffusion—Electrical Conductivity—Constitution of Electrolytes and Metals—Thermal Expansion. **Micrography.**—Microstructure—The Micrographic Constituents of Iron—Relation between Micrographical Composition, Carbon-Content, and Thermal Treatment of Iron Alloys—The Microstructure of Slags. **Chemical Composition of the Alloys of Iron.**—Constituents of Iron Alloys—Carbon—Constituents of the Iron Alloys, Carbon—Opinions and Researches on Combined Carbon—Opinions and Researches on Combined Carbon—Applying the Curves of Solution deduced from the Curves of Recalescence to the Determination of the Chemical Composition of the Carbon present in Iron Alloys—The Constituents of Iron—Iron—The Constituents of Iron Alloys—Manganese—Remaining Constituents of Iron Alloys—A Silicon—Gases. **The Chemical Composition of Slag.**—Silicate Slags—Calculating the Composition of Silicate Slags—Phosphate Slags—Oxide Slags—Appendix—Index.

EVAPORATING, CONDENSING AND COOLING APPARATUS. Explanations, Formulæ and Tables for Use in Practice. By E. HAUSBRAND, Engineer. Translated by A. C. WRIGHT, M.A. (Oxon.), B.Sc. (Lond.). With Twenty-one Illustrations and Seventy-six Tables. 400 pp. Demy 8vo. 1903. Price 10s. 6d.; India and Colonies, 11s.; Other Countries, 12s.; net.

Contents.

ReCoefficient of Transmission of Heat, k , and the Mean Temperature Difference, θ/m —Parallel and Opposite Currents—Apparatus for Heating with Direct Fire—The Injection of Saturated Steam—Superheated Steam—Evaporation by Means of Hot Liquids—The Transference of Heat in General, and Transference by means of Saturated Steam in Particular—The Transference of Heat from Saturated Steam in Pipes (Coils) and Double Bottoms—Evaporation in a Vacuum—The Multiple-effect Evaporator—Multiple-effect Evaporators from which Extra Steam is Taken—The Weight of Water which must be Evaporated from 100 Kilos. of Liquor in order its Original Percentage of Dry Materials from 1-25 per cent. up to 20-70 per cent.—The Relative Proportion of the Heating Surfaces in the Elements of the Multiple Evaporator and their Actual Dimensions—The Pressure Exerted by Currents of Steam and Gas upon Floating Drops of Water—The Motion of Floating Drops of Water upon which Press Currents of Steam—The Splashing of Evaporating Liquids—The Diameter of Pipes for Steam, Alcohol, Vapour and Air—The Diameter of Water Pipes—The Loss of Heat from Apparatus and Pipes to the Surrounding Air, and Means for Preventing the Loss—Condensers—Heating Liquids by Means of Steam—The Cooling of Liquids—The Volumes to be Exhausted from Condensers by the Air-pumps—A Few Remarks on Air-pumps and the Vacua they Produce—The Volumetric Efficiency of Air-pumps—The Volumes of Air which must be Exhausted from a Vessel in order to Reduce its Original Pressure to a Certain Lower Pressure—Index.

[Pg 27]

Dental Metallurgy.

DENTAL METALLURGY: MANUAL FOR STUDENTS AND DENTISTS. By A.

B. GRIFFITHS, Ph.D. Demy 8vo. Thirty-six Illustrations. 1903. 200 pp. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Introduction—Physical Properties of the Metals—Action of Certain Agents on Metals—Alloys—Action of Oral Bacteria on Alloys—Theory and Varieties of Blowpipes—Fluxes—Furnaces and Appliances—Heat and Temperature—Gold—Mercury—Silver—Iron—Copper—Zinc—Magnesium—Cadmium—Tin—Lead—Aluminium—Antimony—Bismuth—Palladium—Platinum—Iridium—Nickel—Practical Work—Weights and Measures.

Plumbing, Decorating, Metal Work, etc., etc.

EXTERNAL PLUMBING WORK. A Treatise on Lead Work for Roofs. By JOHN W. HART, R.P.C. 180 Illustrations. 272 pp. Demy 8vo. Second Edition Revised. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Cast Sheet Lead—Milled Sheet Lead—Roof Cesspools—Socket Pipes—Drips—Gutters—Gutters (continued)—Breaks—Circular Breaks—Flats—Flats (continued)—Rolls on Flats—Roll Ends—Roll Intersections—Seam Rolls—Seam Rolls (continued)—Tack Fixings—Step Flashings—Step Flashings (continued)—Secret Gutters—Soakers—Hip and Valley Soakers—Dormer Windows—Dormer Windows (continued)—Dormer Tops—Internal Dormers—Skylights—Hips and Ridging—Hips and Ridging (continued)—Fixings for Hips and Ridging—Ornamental Ridging—Ornamental Curb Rolls—Curb Rolls—Cornices—Towers and Finials—Towers and Finials (continued)—Towers and Finials (continued)—Domes—Domes (continued)—Ornamental Lead Work—Rain Water Heads—Rain Water Heads (continued)—Rain Water Heads (continued).

HINTS TO PLUMBERS ON JOINT WIPING, PIPE BENDING AND LEAD BURNING. Third Edition, Revised and Corrected. By JOHN W. HART, R.P.C. 184 Illustrations. 313 pp. Demy 8vo. 1901. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Pipe Bending—Pipe Bending (continued)—Pipe Bending (continued)—Square Pipe Bendings—Half-circular Elbows—Curved Bends on Square Pipe—Bossed Bends—Curved Plinth Bends—Rain-water Shoes on Square Pipe—Curved and Angle Bends—Square Pipe Fixings—Joint-wiping—Substitutes for Wiped Joints—Preparing Wiped Joints—Joint Fixings—Plumbing Irons—Joint Fixings—Use of "Touch" in Soldering—Underhand Joints—Blown and Copper Bit Joints—Branch Joints—Branch Joints (continued)—Block Joints—Block Joints (continued)—Block Fixings—Astragal Joints—Pipe Fixings—Large Branch Joints—Large Underhand Joints—Solders—Autogenous Soldering or Lead Burning—Index.

THE PRINCIPLES AND PRACTICE OF DIPPING, BURNISHING, LACQUERING AND BRONZING BRASS WARE. By W. NORMAN BROWN. 35 pp. Crown 8vo. 1900. Price 2s.; Abroad, 2s. 6d.; strictly net.

[Pg 28]

WORKSHOP WRINKLES for Decorators, Painters, Paper-hangers and Others. By W. N. BROWN. Crown 8vo. 128 pp. 1901. Price 2s. 6d.; Abroad, 3s.; strictly net.

HOUSE DECORATING AND PAINTING. By W. NORMAN BROWN. Eighty-eight Illustrations. 150 pp. Crown 8vo. 1900. Price 3s. 6d.; India and Colonies, 4s.; Other Countries, 4s. 6d.; strictly net.

A HISTORY OF DECORATIVE ART. By W. NORMAN BROWN. Thirty-nine Illustrations. 96 pp. Crown 8vo. 1900. Price 2s. 6d.; Abroad, 3s.; strictly net.

A HANDBOOK ON JAPANING AND ENAMELLING FOR CYCLES, BEDSTEADS, TINWARE, ETC. By WILLIAM NORMAN BROWN. 52 pp. and Illustrations. Crown 8vo. 1901. Price 2s.; Abroad, 2s. 6d.; net.

THE PRINCIPLES OF HOT WATER SUPPLY. By JOHN W. HART, R.P.C. With 129 Illustrations. 1900. 177 pp., demy 8vo. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; strictly net.

Contents.

Water Circulation—The Tank System—Pipes and Joints—The Cylinder System—Boilers for the Cylinder System—The Cylinder System—The Combined Tank and Cylinder System—Combined Independent and Kitchen Boiler—Combined Cylinder and Tank System with Duplicate Boilers—Indirect Heating and Boiler Explosions—Pipe Boilers—Safety Valves—Safety Valves—The American System—Heating Water by Steam—Steam Kettles and Jets—Heating Power of Steam—Covering for Hot Water Pipes—Index.

Brewing and Botanical.

HOPS IN THEIR BOTANICAL, AGRICULTURAL AND TECHNICAL ASPECT, AND AS AN ARTICLE OF COMMERCE. By EMMANUEL GROSS, Professor at the Higher Agricultural College, Tetschen-Liebwerd. Translated from the German. Seventy-eight Illustrations. 1900. 340 pp. Demy 8vo. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; strictly net.

Contents.

HISTORY OF THE HOP—THE HOP PLANT—Introductory—The Roots—The Stem—and Leaves—Inflorescence and Flower: Inflorescence and Flower of the Male Hop; Inflorescence and Flower of the Female Hop—The Fruit and its Glandular Structure: The Fruit and Seed—Propagation and Selection of the Hop—Varieties of the Hop: (a) Red Hops; (b) Green Hops; (c) Pale Green Hops—Classification according to the Period of Ripening: Early August Hops; Medium Early Hops; Late Hops—Injuries to Growth—Leaves Turning Yellow, Summer or Sunbrand, Cones Dropping Off, Honey Dew, Damage from Wind, Hail and Rain; Vegetable Enemies of the Hop: Animal Enemies of the Hop—Beneficial Insects on Hops—CULTIVATION—The Requirements of the Hop in Respect of Climate, Soil and Situation: Climate; Soil; Situation—Selection of Variety and Cuttings—Planting a Hop Garden: Drainage; Preparing the Ground; Marking-out for Planting; Planting; Cultivation and Cropping of the Hop Garden in the First Year—Work to be Performed Annually in the Hop Garden: Working the Ground; Cutting; The Non-cutting System; The Proper Performance of the Operation of Cutting: Method of Cutting: Close Cutting, Ordinary Cutting, The Long Cut, The Topping Cut; Proper Season for Cutting: Autumn Cutting, Spring Cutting; Manuring; Training the Hop Plant: Poled Gardens, Frame Training; Principal Types of Frames; Pruning, Cropping, Topping, and Leaf Stripping the Hop Plant; Picking, Drying and Bagging—Principal and Subsidiary Utilisation of Hops and Hop Gardens—Life of a Hop Garden; Subsequent Cropping—Cost of Production, Yield and Selling Prices.

Preservation and Storage—Physical and Chemical Structure of the Hop Cone—Judging the Value of Hops.

Statistics of Production—The Hop Trade—Index.

Timber and Wood Waste.

[Pg 29]

TIMBER: A Comprehensive Study of Wood in all its Aspects (Commercial and Botanical), showing the Different Applications and Uses of Timber in Various Trades, etc. Translated from the French of PAUL CHARPENTIER. Royal 8vo. 437 pp. 178 Illustrations. 1902. Price 12s. 6d.; India and Colonies, 13s. 6d.; Other Countries, 15s.; net.

Contents.

Physical and Chemical Properties of Timber—Composition of the Vegetable Bodies—Chief Elements—M. Fremy's Researches—Elementary Organs of Plants and especially of Forests—Different Parts of Wood Anatomically and Chemically Considered—General Properties of Wood—**Description of the Different Kinds of Wood**—Principal Essences with Caducous Leaves—Coniferous Resinous Trees—**Division of the Useful Varieties of Timber in the Different Countries of the Globe**—European Timber—African Timber—Asiatic Timber—American Timber—Timber of Oceania—**Forests**—General Notes as to Forests; their Influence—Opinions as to Sylviculture—Improvement of Forests—Unwooding and Rewooding—Preservation of Forests—Exploitation of Forests—Damage caused to Forests—Different Alterations—**The Preservation of Timber**—Generalities—Causes and Progress of Deterioration—History of Different Proposed Processes—Dessication—Superficial Carbonisation of Timber—Processes by Immersion—Generalities as to Antiseptics Employed—Injection Processes in Closed Vessels—The Boucherie System, Based upon the Displacement of the Sap—Processes for Making Timber Uninflammable—**Applications of Timber**—Generalities—Working Timber—Paving—Timber for Mines—Railway Traverses—Accessory Products—Gums—Works of M. Fremy—Resins—Barks—Tan—Application of Cork—The Application of Wood to Art and Dyeing—Different Applications of Wood—Hard Wood—Distillation of Wood—Pyroligneous Acid—Oil of Wood—Distillation of Resins—Index.

THE UTILISATION OF WOOD WASTE. Translated from the German of ERNST HUBBARD. Crown 8vo. 192 pp. 1902. Fifty Illustrations. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; net.

Contents.

General Remarks on the Utilisation of Sawdust—Employment of Sawdust as Fuel, with and without Simultaneous Recovery of Charcoal and the Products of Distillation—Manufacture of Oxalic Acid from Sawdust—Process with Soda Lye; Thorn's Process; Bohlig's Process—Manufacture of Spirit (Ethyl Alcohol) from Wood Waste—Patent Dyes (Organic Sulphides, Sulphur Dyes, or Mercapto Dyes)—Artificial Wood and Plastic Compositions from Sawdust—Production of Artificial Wood Compositions for Moulded Decorations—Employment of Sawdust for Blasting Powders and Gunpowders—Employment of Sawdust for Briquettes—Employment of Sawdust in the Ceramic Industry and as an Addition to Mortar—Manufacture of Paper Pulp from Wood—Casks—Various Applications of Sawdust and Wood Refuse—Calcium Carbide—Manure—Wood Mosaic Plaques—Bottle Stoppers—Parquetry—Fire-lighters—Carborundum—The Production of Wood Wool—Bark—Index.

Building and Architecture.

THE PREVENTION OF DAMPNESS IN BUILDINGS; with Remarks on the Causes, Nature and Effects of Saline, Efflorescences and Dry-rot, for Architects, Builders, Overseers, Plasterers, Painters and House Owners. By ADOLF WILHELM KEIM. Translated from the German of the second revised Edition by M. J. SALTER, F.I.C., F.C.S. Eight Coloured Plates and Thirteen Illustrations. Crown 8vo. 115 pp. 1902. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; net.

Contents.

The Various Causes of Dampness and Decay of the Masonry of Buildings, and the Structural and Hygienic Evils of the Same—Precautionary Measures during Building against Dampness and Efflorescence—Methods of Remedying Dampness and Efflorescences in the Walls of Old Buildings—The Artificial Drying of New Houses, as well as Old Damp Dwellings, and the Theory of the Hardening of Mortar—New, Certain and Permanently Efficient Methods for Drying Old Damp Walls and Dwellings—The Cause and Origin of Dry-rot: its Injurious Effect on Health, its Destructive Action on Buildings, and its Successful Repression—Methods of Preventing Dry-rot to be Adopted During Construction—Old Methods of Preventing Dry-rot—Recent and More Efficient Remedies for Dry-rot—Index.

GLOSSARY OF TECHNICAL TERMS USED IN ARCHITECTURE, BUILDING, PLUMBING, AND THE ALLIED TRADES AND SUBJECTS. By AUGUSTINE C. PASSMORE. Demy 8vo. About 400 pp.

[Pg 30]

[*IN THE PRESS.*]

Foods and Sweetmeats.

THE MANUFACTURE OF PRESERVED FOODS AND SWEETMEATS. By A. HAUSNER. With Twenty-eight Illustrations. Translated from the German of the third enlarged Edition. Crown 8vo. 225 pp. 1902. Price 7s. 6d.; India and Colonies, 8s.; Other Countries, 8s. 6d.; net.

Contents.

The Manufacture of Conserves—Introduction—The Causes of the Putrefaction of Food—The Chemical Composition of Foods—The Products of Decomposition—The Causes of Fermentation and Putrefaction—Preservative Bodies—The Various Methods of Preserving Food—The Preservation of Animal Food—Preserving Meat by Means of Ice—The Preservation of Meat by Charcoal—Preservation of Meat by Drying—The Preservation of Meat by the Exclusion of Air—The Appert Method—Preserving Flesh by Smoking—Quick Smoking—Preserving Meat with Salt—Quick Salting by Air Pressure—Quick Salting by Liquid Pressure—Gamgee's Method of Preserving Meat—The Preservation of Eggs—Preservation of White and Yolk of Egg—Milk Preservation—Condensed Milk—The Preservation of Fat—Manufacture of Soup Tablets—Meat Biscuits—Extract of Beef—The Preservation of Vegetable Foods in General—Compressing Vegetables—Preservation of Vegetables by Appert's Method—The Preservation of Fruit—Preservation of Fruit by Storage—The Preservation of Fruit by Drying—Drying Fruit by Artificial Heat—Roasting Fruit—The Preservation of Fruit with Sugar—Boiled Preserved Fruit—The

Preservation of Fruit in Spirit, Acetic Acid or Glycerine—Preservation of Fruit without Boiling—Jam Manufacture—The Manufacture of Fruit Jellies—The Making of Gelatine Jellies—The Manufacture of "Sulzen"—The Preservation of Fermented Beverages—**The Manufacture of Candies**—Introduction—The Manufacture of Candied Fruit—The Manufacture of Boiled Sugar and Caramel—The Candying of Fruit—Caramelised Fruit—The Manufacture of Sugar Sticks, or Barley Sugar—Bonbon Making—Fruit Drops—The Manufacture of Dragées—The Machinery and Appliances used in Candy Manufacture—Dyeing Candies and Bonbons—Essential Oils used in Candy Making—Fruit Essences—The Manufacture of Filled Bonbons, Liqueur Bonbons and Stamped Lozenges—Recipes for Jams and Jellies—Recipes for Bonbon Making—Dragées—Appendix—Index.

Dyeing Fancy Goods.

THE ART OF DYEING AND STAINING MARBLE, ARTIFICIAL STONE, BONE, HORN, IVORY AND WOOD, AND OF IMITATING ALL SORTS OF WOOD. A Practical Handbook for the Use of Joiners, Turners, Manufacturers of Fancy Goods, Stick and Umbrella Makers, Comb Makers, etc. Translated from the German of D. H. SOXHLET, Technical Chemist. Crown 8vo. 168 pp. 1902. Price 5s.; India and Colonies, 5s. 6d.; Other Countries, 6s.; net.

Contents.

Mordants and Stains—Natural Dyes—Artificial Pigments—Coal Tar Dyes—Staining Marble and Artificial Stone—Dyeing, Bleaching and Imitation of Bone, Horn and Ivory—Imitation of Tortoiseshell for Combs: Yellows, Dyeing Nuts—Ivory—Wood Dyeing—Imitation of Mahogany: Dark Walnut, Oak, Birch-Bark, Elder-Marquetry, Walnut, Walnut-Marquetry, Mahogany, Spanish Mahogany, Palisander and Rose Wood, Tortoiseshell, Oak, Ebony, Pear Tree—Black Dyeing Processes with Penetrating Colours—Varnishes and Polishes: English Furniture Polish, Vienna Furniture Polish, Amber Varnish, Copal Varnish, Composition for Preserving Furniture—Index.

Lithography and Engraving.

[Pg 31]

PRACTICAL LITHOGRAPHY. By JOSEPH KIRKBRIDE. Demy 8vo. With Plates and Illustrations.

[IN THE PRESS.]

Contents.

Stones—Transfer Inks—Transfer Papers—Transfer Printing—Litho Press—Press Work—Machine Printing—Colour Printing—Substitutes for Lithographic Stones—Tin Plate Printing and Decoration—Photo-Lithography.

ENGRAVING FOR ILLUSTRATION. HISTORICAL AND PRACTICAL NOTES.
By J. KIRKBRIDE. 72 pp. Two Plates and Illustrations. Crown 8vo. Price 2s. 6d.;
Abroad, 3s.; strictly net.

Contents.

Its Inception—Wood Engraving—Metal Engraving—Engraving in England—Etching—Mezzotint—Photo-Process Engraving—The Engraver's Task—Appreciative Criticism—Index.

Bookbinding.

PRACTICAL BOOKBINDING. By PAUL ADAM. Translated from the German. Demy 8vo. With 129 Illustrations.

[IN THE PRESS.]

Contents.

Materials for Sewing and Pasting—Materials for Covering the Book—Materials for Decorating and Finishing—Tools—General Preparatory Work—Sewing—Forwarding, Cutting, Rounding and Backing—Forwarding, Decoration of Edges and Headbanding—Boarding—Preparing the Cover—Work with the Blocking Press—Treatment of Sewn Books, Fastening in Covers, and Finishing Off—Handtooling and Other Decoration—Account Books—School Books, Mounting Maps, Drawings,

Sugar Refining.

THE TECHNOLOGY OF SUGAR: Practical Treatise on the Modern Methods of Manufacture of Sugar from the Sugar Cane and Sugar Beet. By JOHN GEDDES McINTOSH. Demy 8vo. 83 Illustrations.

[IN THE PRESS.]

Contents.

Chemistry of Sucrose, Lactose, Maltose, Glucose, Invert Sugar, etc.—Purchase and Analysis of Beets—Treatment of Beets—Diffusion—Filtration—Concentration—Evaporation—**Sugar Cane:** Cultivation—Milling—Diffusion—Sugar Refining—Analysis of Raw Sugars—Chemistry of Molasses, etc.

New Textile Books.

[Pg 32]

(See also pp. [19-24](#).)

TEXTILE CALCULATIONS, especially relating to Woollens. From the German of N. REISER. Thirty-four Illustrations. Tables.

[IN THE PRESS.]

Contents.

Calculating the Raw Material—Proportion of Different Grades of Wool to Furnish Mixture at a Given Price—Quantity to Produce a Given Length—Yarn Calculations—Yarn Number—Working Calculations—Calculating the Reed Count—Cost of Weaving, etc.

WATERPROOFING FABRICS AND MATERIALS. By Dr. S. MICRZINSKI. Twenty-nine Illustrations.

[IN THE PRESS.]

Contents.

Preparing the Fabrics—Impregnating the Fabrics—Drying—Paraffin—Cupric Oxide Ammonia—Size—Tannin—Metallic Oxides, etc.

SCOTT, GREENWOOD & Co. will forward any of the above Books, *post free*, upon receipt of remittance at the published price, or they can be obtained through all Booksellers.

Full List of Contents of any of the books will be sent on application, and particulars of books in the press will be sent when ready to persons sending name and address.

SCOTT, GREENWOOD & CO.,
Technical Book Publishers,
19 LUDGATE HILL, LONDON, E.C.

*** END OF THE PROJECT GUTENBERG EBOOK SCOTT GREENWOOD AND CO. CATALOGUE OF SPECIAL TECHNICAL WORKS, 1903 ***

Updated editions will replace the previous one—the old editions will be renamed.

Creating the works from print editions not protected by U.S. copyright law means that no one owns a United States copyright in these works, so the Foundation (and you!) can copy and distribute it in the United States without permission and without paying copyright royalties. Special rules, set forth in the General Terms of Use part of this license, apply to copying and distributing Project Gutenberg™ electronic works to protect the PROJECT GUTENBERG™ concept and trademark. Project Gutenberg is a registered trademark, and may not be used if you charge for an eBook, except by following the terms of the trademark license, including paying royalties for use of the Project Gutenberg trademark. If you do not charge anything for copies of this eBook, complying with the trademark license is very easy. You may use this

eBook for nearly any purpose such as creation of derivative works, reports, performances and research. Project Gutenberg eBooks may be modified and printed and given away—you may do practically ANYTHING in the United States with eBooks not protected by U.S. copyright law. Redistribution is subject to the trademark license, especially commercial redistribution.

START: FULL LICENSE
THE FULL PROJECT GUTENBERG LICENSE
PLEASE READ THIS BEFORE YOU DISTRIBUTE OR USE THIS WORK

To protect the Project Gutenberg™ mission of promoting the free distribution of electronic works, by using or distributing this work (or any other work associated in any way with the phrase “Project Gutenberg”), you agree to comply with all the terms of the Full Project Gutenberg™ License available with this file or online at www.gutenberg.org/license.

Section 1. General Terms of Use and Redistributing Project Gutenberg™ electronic works

1.A. By reading or using any part of this Project Gutenberg™ electronic work, you indicate that you have read, understand, agree to and accept all the terms of this license and intellectual property (trademark/copyright) agreement. If you do not agree to abide by all the terms of this agreement, you must cease using and return or destroy all copies of Project Gutenberg™ electronic works in your possession. If you paid a fee for obtaining a copy of or access to a Project Gutenberg™ electronic work and you do not agree to be bound by the terms of this agreement, you may obtain a refund from the person or entity to whom you paid the fee as set forth in paragraph 1.E.8.

1.B. “Project Gutenberg” is a registered trademark. It may only be used on or associated in any way with an electronic work by people who agree to be bound by the terms of this agreement. There are a few things that you can do with most Project Gutenberg™ electronic works even without complying with the full terms of this agreement. See paragraph 1.C below. There are a lot of things you can do with Project Gutenberg™ electronic works if you follow the terms of this agreement and help preserve free future access to Project Gutenberg™ electronic works. See paragraph 1.E below.

1.C. The Project Gutenberg Literary Archive Foundation (“the Foundation” or PGLAF), owns a compilation copyright in the collection of Project Gutenberg™ electronic works. Nearly all the individual works in the collection are in the public domain in the United States. If an individual work is unprotected by copyright law in the United States and you are located in the United States, we do not claim a right to prevent you from copying, distributing, performing, displaying or creating derivative works based on the work as long as all references to Project Gutenberg are removed. Of course, we hope that you will support the Project Gutenberg™ mission of promoting free access to electronic works by freely sharing Project Gutenberg™ works in compliance with the terms of this agreement for keeping the Project Gutenberg™ name associated with the work. You can easily comply with the terms of this agreement by keeping this work in the same format with its attached full Project Gutenberg™ License when you share it without charge with others.

1.D. The copyright laws of the place where you are located also govern what you can do with this work. Copyright laws in most countries are in a constant state of change. If you are outside the United States, check the laws of your country in addition to the terms of this agreement before downloading, copying, displaying, performing, distributing or creating derivative works based on this work or any other Project Gutenberg™ work. The Foundation makes no representations concerning the copyright status of any work in any country other than the United States.

1.E. Unless you have removed all references to Project Gutenberg:

1.E.1. The following sentence, with active links to, or other immediate access to, the full Project Gutenberg™ License must appear prominently whenever any copy of a Project Gutenberg™ work (any work on which the phrase “Project Gutenberg” appears, or with which the phrase “Project Gutenberg” is associated) is accessed, displayed, performed, viewed, copied or distributed:

This eBook is for the use of anyone anywhere in the United States and most other parts of the world at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at www.gutenberg.org. If you are not located in the United States, you will have to check the laws of the country where you are located before using this eBook.

1.E.2. If an individual Project Gutenberg™ electronic work is derived from texts not protected by U.S. copyright law (does not contain a notice indicating that it is posted with permission of the copyright holder), the work can be copied and distributed to anyone in the United States without paying any fees or charges. If you are redistributing or providing access to a work with the phrase “Project Gutenberg” associated with or appearing on the work, you must comply either with the requirements of paragraphs 1.E.1 through 1.E.7 or obtain permission

for the use of the work and the Project Gutenberg™ trademark as set forth in paragraphs 1.E.8 or 1.E.9.

1.E.3. If an individual Project Gutenberg™ electronic work is posted with the permission of the copyright holder, your use and distribution must comply with both paragraphs 1.E.1 through 1.E.7 and any additional terms imposed by the copyright holder. Additional terms will be linked to the Project Gutenberg™ License for all works posted with the permission of the copyright holder found at the beginning of this work.

1.E.4. Do not unlink or detach or remove the full Project Gutenberg™ License terms from this work, or any files containing a part of this work or any other work associated with Project Gutenberg™.

1.E.5. Do not copy, display, perform, distribute or redistribute this electronic work, or any part of this electronic work, without prominently displaying the sentence set forth in paragraph 1.E.1 with active links or immediate access to the full terms of the Project Gutenberg™ License.

1.E.6. You may convert to and distribute this work in any binary, compressed, marked up, nonproprietary or proprietary form, including any word processing or hypertext form. However, if you provide access to or distribute copies of a Project Gutenberg™ work in a format other than “Plain Vanilla ASCII” or other format used in the official version posted on the official Project Gutenberg™ website (www.gutenberg.org), you must, at no additional cost, fee or expense to the user, provide a copy, a means of exporting a copy, or a means of obtaining a copy upon request, of the work in its original “Plain Vanilla ASCII” or other form. Any alternate format must include the full Project Gutenberg™ License as specified in paragraph 1.E.1.

1.E.7. Do not charge a fee for access to, viewing, displaying, performing, copying or distributing any Project Gutenberg™ works unless you comply with paragraph 1.E.8 or 1.E.9.

1.E.8. You may charge a reasonable fee for copies of or providing access to or distributing Project Gutenberg™ electronic works provided that:

- You pay a royalty fee of 20% of the gross profits you derive from the use of Project Gutenberg™ works calculated using the method you already use to calculate your applicable taxes. The fee is owed to the owner of the Project Gutenberg™ trademark, but he has agreed to donate royalties under this paragraph to the Project Gutenberg Literary Archive Foundation. Royalty payments must be paid within 60 days following each date on which you prepare (or are legally required to prepare) your periodic tax returns. Royalty payments should be clearly marked as such and sent to the Project Gutenberg Literary Archive Foundation at the address specified in Section 4, “Information about donations to the Project Gutenberg Literary Archive Foundation.”
- You provide a full refund of any money paid by a user who notifies you in writing (or by e-mail) within 30 days of receipt that s/he does not agree to the terms of the full Project Gutenberg™ License. You must require such a user to return or destroy all copies of the works possessed in a physical medium and discontinue all use of and all access to other copies of Project Gutenberg™ works.
- You provide, in accordance with paragraph 1.F.3, a full refund of any money paid for a work or a replacement copy, if a defect in the electronic work is discovered and reported to you within 90 days of receipt of the work.
- You comply with all other terms of this agreement for free distribution of Project Gutenberg™ works.

1.E.9. If you wish to charge a fee or distribute a Project Gutenberg™ electronic work or group of works on different terms than are set forth in this agreement, you must obtain permission in writing from the Project Gutenberg Literary Archive Foundation, the manager of the Project Gutenberg™ trademark. Contact the Foundation as set forth in Section 3 below.

1.F.

1.F.1. Project Gutenberg volunteers and employees expend considerable effort to identify, do copyright research on, transcribe and proofread works not protected by U.S. copyright law in creating the Project Gutenberg™ collection. Despite these efforts, Project Gutenberg™ electronic works, and the medium on which they may be stored, may contain “Defects,” such as, but not limited to, incomplete, inaccurate or corrupt data, transcription errors, a copyright or other intellectual property infringement, a defective or damaged disk or other medium, a computer virus, or computer codes that damage or cannot be read by your equipment.

1.F.2. LIMITED WARRANTY, DISCLAIMER OF DAMAGES - Except for the “Right of Replacement or Refund” described in paragraph 1.F.3, the Project Gutenberg Literary Archive Foundation, the owner of the Project Gutenberg™ trademark, and any other party

distributing a Project Gutenberg™ electronic work under this agreement, disclaim all liability to you for damages, costs and expenses, including legal fees. YOU AGREE THAT YOU HAVE NO REMEDIES FOR NEGLIGENCE, STRICT LIABILITY, BREACH OF WARRANTY OR BREACH OF CONTRACT EXCEPT THOSE PROVIDED IN PARAGRAPH 1.F.3. YOU AGREE THAT THE FOUNDATION, THE TRADEMARK OWNER, AND ANY DISTRIBUTOR UNDER THIS AGREEMENT WILL NOT BE LIABLE TO YOU FOR ACTUAL, DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE OR INCIDENTAL DAMAGES EVEN IF YOU GIVE NOTICE OF THE POSSIBILITY OF SUCH DAMAGE.

1.F.3. LIMITED RIGHT OF REPLACEMENT OR REFUND - If you discover a defect in this electronic work within 90 days of receiving it, you can receive a refund of the money (if any) you paid for it by sending a written explanation to the person you received the work from. If you received the work on a physical medium, you must return the medium with your written explanation. The person or entity that provided you with the defective work may elect to provide a replacement copy in lieu of a refund. If you received the work electronically, the person or entity providing it to you may choose to give you a second opportunity to receive the work electronically in lieu of a refund. If the second copy is also defective, you may demand a refund in writing without further opportunities to fix the problem.

1.F.4. Except for the limited right of replacement or refund set forth in paragraph 1.F.3, this work is provided to you 'AS-IS', WITH NO OTHER WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR ANY PURPOSE.

1.F.5. Some states do not allow disclaimers of certain implied warranties or the exclusion or limitation of certain types of damages. If any disclaimer or limitation set forth in this agreement violates the law of the state applicable to this agreement, the agreement shall be interpreted to make the maximum disclaimer or limitation permitted by the applicable state law. The invalidity or unenforceability of any provision of this agreement shall not void the remaining provisions.

1.F.6. INDEMNITY - You agree to indemnify and hold the Foundation, the trademark owner, any agent or employee of the Foundation, anyone providing copies of Project Gutenberg™ electronic works in accordance with this agreement, and any volunteers associated with the production, promotion and distribution of Project Gutenberg™ electronic works, harmless from all liability, costs and expenses, including legal fees, that arise directly or indirectly from any of the following which you do or cause to occur: (a) distribution of this or any Project Gutenberg™ work, (b) alteration, modification, or additions or deletions to any Project Gutenberg™ work, and (c) any Defect you cause.

Section 2. Information about the Mission of Project Gutenberg™

Project Gutenberg™ is synonymous with the free distribution of electronic works in formats readable by the widest variety of computers including obsolete, old, middle-aged and new computers. It exists because of the efforts of hundreds of volunteers and donations from people in all walks of life.

Volunteers and financial support to provide volunteers with the assistance they need are critical to reaching Project Gutenberg™'s goals and ensuring that the Project Gutenberg™ collection will remain freely available for generations to come. In 2001, the Project Gutenberg Literary Archive Foundation was created to provide a secure and permanent future for Project Gutenberg™ and future generations. To learn more about the Project Gutenberg Literary Archive Foundation and how your efforts and donations can help, see Sections 3 and 4 and the Foundation information page at www.gutenberg.org.

Section 3. Information about the Project Gutenberg Literary Archive Foundation

The Project Gutenberg Literary Archive Foundation is a non-profit 501(c)(3) educational corporation organized under the laws of the state of Mississippi and granted tax exempt status by the Internal Revenue Service. The Foundation's EIN or federal tax identification number is 64-6221541. Contributions to the Project Gutenberg Literary Archive Foundation are tax deductible to the full extent permitted by U.S. federal laws and your state's laws.

The Foundation's business office is located at 809 North 1500 West, Salt Lake City, UT 84116, (801) 596-1887. Email contact links and up to date contact information can be found at the Foundation's website and official page at www.gutenberg.org/contact

Section 4. Information about Donations to the Project Gutenberg Literary Archive Foundation

Project Gutenberg™ depends upon and cannot survive without widespread public support and donations to carry out its mission of increasing the number of public domain and licensed works that can be freely distributed in machine-readable form accessible by the widest array of equipment including outdated equipment. Many small donations (\$1 to \$5,000) are

particularly important to maintaining tax exempt status with the IRS.

The Foundation is committed to complying with the laws regulating charities and charitable donations in all 50 states of the United States. Compliance requirements are not uniform and it takes a considerable effort, much paperwork and many fees to meet and keep up with these requirements. We do not solicit donations in locations where we have not received written confirmation of compliance. To SEND DONATIONS or determine the status of compliance for any particular state visit www.gutenberg.org/donate.

While we cannot and do not solicit contributions from states where we have not met the solicitation requirements, we know of no prohibition against accepting unsolicited donations from donors in such states who approach us with offers to donate.

International donations are gratefully accepted, but we cannot make any statements concerning tax treatment of donations received from outside the United States. U.S. laws alone swamp our small staff.

Please check the Project Gutenberg web pages for current donation methods and addresses. Donations are accepted in a number of other ways including checks, online payments and credit card donations. To donate, please visit: www.gutenberg.org/donate

Section 5. General Information About Project Gutenberg™ electronic works

Professor Michael S. Hart was the originator of the Project Gutenberg™ concept of a library of electronic works that could be freely shared with anyone. For forty years, he produced and distributed Project Gutenberg™ eBooks with only a loose network of volunteer support.

Project Gutenberg™ eBooks are often created from several printed editions, all of which are confirmed as not protected by copyright in the U.S. unless a copyright notice is included. Thus, we do not necessarily keep eBooks in compliance with any particular paper edition.

Most people start at our website which has the main PG search facility: www.gutenberg.org.

This website includes information about Project Gutenberg™, including how to make donations to the Project Gutenberg Literary Archive Foundation, how to help produce our new eBooks, and how to subscribe to our email newsletter to hear about new eBooks.