

139 The Potter's Dictionary of Materials and Techniques

Frank Hamer

London: Pitman. New York: Watson-Guptill Publications (£9.50).

This large and expensive compilation will undoubtedly prove a useful reference work for potters and students and teachers of pottery, bringing together, as it does, much information not all elsewhere found between two covers.

The emphasis, as the title indicates, is on materials and techniques. To take materials first, there is perhaps no limit to those with which potters have experimented but Mr Hamer's coverage is comprehensive and clear. This is the book's real strength. The more important constituents of clay, slips and glazes attract substantial articles; three columns on alumina, ten on silica and twelve on iron oxide. Relevant chemical, physical and geological terminology is concisely explained and so is the potter's own earthy jargon; dunt, crawl, blunge, clobber, wedge, saggar, jolley, grog and so forth. The reader who wants to know the difference between, say, potash feldspar and soda feldspar, why some clays are more plastic than others or what happens to the metallic oxides in his glazes in a reducing kiln atmosphere will find entries which are illuminating not only in terms of chemistry but of studio practice too. It is a great advantage that the author is first and foremost a widely experienced and accomplished potter and teacher though his scientific data are accurate and reliable so far as this reviewer is competent to judge.

On techniques, it is as well to remember that this is a dictionary and not the kind of practical handbook to which beginners will need to turn for more detailed instruction on, for instance, how to centre clay on the wheel, pull a handle, dip a pot or build a sawdust kiln. In this respect, an additional

section in the bibliography would have been a good idea.

Mr Hamer goes somewhat beyond his title by including, in a highly selective way which is not clearly explained, some potters, factories, types of ware and ceramic objects. Thus we have Toft but not Simpson, Wedgwood but not Spode, the Martin Brothers but not William de Morgan, Bernard Leach but not Staite Murray, Liverpool but not Lowestoft or Leeds, Rockingham but not Doulton, Castor ware but not Samian, China and Crete but not Korea or Japan, tyg and fuddling cup but not amphora or urn. It is, perhaps, unnecessary to be told that a teapot is 'A pot for infusing and serving tea' and that 'The teapot is a symbol of friendliness'. We are told that the handled teacup is supposed to have been originated by the Marquise de Pompadour (without a date) but this scrap of information is illustrated with half a page of photographs of cups and saucers by contemporary British studio potters.

The dictionary ends with a valuable appendix of twenty pages of tables. There are nearly three hundred line drawings and diagrams which are as clear and helpful as the text generally is and entries are sensibly cross-referenced. A similar number of small black and white photographs are adequate for their purpose.

Michael Paffard

Calligraphic Lettering with Pen and Brush

Ralph Douglas

London: Pitman (£4.25)

This is a most attractive book to look at and much of this attraction derives from its simple planning and the employment of calligraphy rather than a typographical face for the body of the text. This appeals very much to the penman and possibly to the ordinary reader as well, and it certainly gives

the feeling that the author has based his page layout upon medieval manuscript proportions and design. He uses vertical columns of lettering complemented by illustrative material. Although it is nice to have a book that opens out flat the central spine tends to be coldly efficient and, for me, detracts from its overall sensity quality. It is obvious that cost limitations are probably responsible for this pragmatism in the present spiralling economic climate which is forcing the prices of publications ever upwards and so one ought not to be too critical.

Ralph Douglass is a most competent calligrapher and his writing hand echoes the beauty and openness of that of Edward Johnston the craftsman who revived this letter form and kindled so much interest in this aspect of the visual arts earlier this century. As a teacher of lettering Douglass is certainly well aware of the problems and needs of students and this is reflected in his carefully structured approach. He sees the book as a kind of teaching aid and this is to be commended. Indeed, I conduct short courses on lettering and calligraphy for Postgraduate Certificate students at the University of Bristol and shall certainly provide them with copies of it to support my own teaching.

Teachers of art and design in schools and lecturers in colleges would do well to add the book to their libraries. It deals with the basic tools and materials required in making a start with this craft and the author explains how the scribe should set up a writing position, pursue his practice strokes, and he points out how the script letter is based upon Roman forms. He then deals in a simple yet competent way with proportions, layout and spacing — all very important in the planning of well designed pages of script — and discusses the use of Italic handwriting, Gothic Lettering, brush and other letter forms, as well as making a brief reference to type faces. He provides us with a comprehensive bibliography which should be a useful source of reference for the professional

scribe, teacher and amateur.

The text is supported by a number of historical examples but I found this area disappointing because of its brevity. I felt it could have been more extensive in its coverage. A nice touch provided towards the end of the book is the provision of a number of master sheets which can be removed without damaging the volume. These have been considered as practice pages and as the quality of the paper is good they should be of great value to the reader who intends to experiment further with pen and brush forms.

John Lancaster

Using Letters in Art and Craft

Carol Walklin

London: Batsford Ltd. (£2.75)

Long gone are the days of making letters with a round nib and those crucifying efforts to recreate the Trajan Column on a large sheet of sugar paper — and Carol Walklin's book exorcizes every last vestige out of the classroom with her enjoyable approach to stimulating an interest in letter forms. She has used a wide range of historical and contemporary examples of lettering as models to develop in creative ways through any media available to a school — cut paper, collage, paint, silk screen, lino etc. The results are equally wide ranging in their charm, imagination and obvious enjoyment which the pupils have had in interpreting the letters as basic patterns for cushions, mugs, monograms, symbols, concrete poetry, ideograms and so on.

Mrs. Walklin is clearly a very able and experienced teacher and virtually every page contains a suggestion for a project which has been tried and tested in the classroom situation, covering all ages from primary to secondary level. In this respect alone it is a very practical ideas book for teachers. More important, however, is the authors point that words are elements that children will have to use every day of their lives and that

it is through an inventive interpretation of letters that many children develop an interest in all the visual media.

Cal Swann

Photography – Simple and Creative

Jane Elam

London: The Herbert Press

Jane Elam is the Head of the Art Department at Walworth Comprehensive School, London, and this book has obviously been written by a practising teacher who is fully aware of the potential of photography as a stimulating and creative medium.

The author rightly underplays the technical skills that are needed in order to introduce photography as a school subject, noting that technical instruction can be found in many books and that results can be achieved with little knowledge or experience. In the four main sections of the book there are exciting illustrations of work which show well what secondary children can produce with the minimum of equipment and some guidance. The section on photograms, rather too long in comparison with other sections in the book, has good illustrations and some novel ideas, although it owes a lot to Virna Haffer's book 'Making Photograms'. In the other three sections – experimenting with a camera, experimenting with negatives and printing and other ways of experimenting with creative photography, there are, again, some striking images and good suggestions for starting points for work in school.

The main deficiency that I find in the book is that while it emphasises the experimental nature of the work and the end-product, it neglects the important explicit or implicit understanding of aims that should always be present in work of this nature. The photogram is not just an experimental method of producing images but is also concerned with the fundamental under-

standing of the response of the light-sensitive surface to light, the acquiring of elementary darkroom techniques, and the developing understanding of the concept of tone. The use of so many pages on the photogram has almost exhausted the classroom possibilities in the thirty pages that have been used, yet the use of the hand-made negative, much more useful in the introduction of darkroom ideas such as reverse printing, over-printing, serialisation, 'dodging' and 'burning-in' has been almost totally ignored, apart from one page on 'negatives without a camera'.

There are some statements in the book, particularly in the technical information, which are misleading or obscure. When describing the printing from Lith or Ortho negatives, the author seems to suggest that the film should be contact printed from a red light, and it would also assist clarity in this section if the second film from the original negative were referred to as a 'film positive'. The medium speed film Kodak Verichrome Pan is only available as a roll film, the equivalent 35 mm film being Kodak Plus-X Pan.

Although I have some reservations about the book, it can be recommended to teachers who are interested in introducing photography as part of the school art syllabus, and there are plenty of interesting illustrations of work produced by children to maintain the enthusiasm of the teacher during the day-to-day teaching of the subject.

Alan Kay

Visual Awareness

Frederick Palmer

London: Batsford (£1.90)

Too many educational books have a vocabulary and a narrative that is far beyond the comprehension of students in general. Frederick Palmer's *Visual Awareness* is quite the reverse; his approach makes for tedious

Chinese Stoneware Glazes

Joseph Grebanier

London: Pitman. New York: Watson-Guption Publications (£6.50)

reading. This is also aggravated by two factors. First, the format used is one of numerous, short and fragmented subsections which effectively disturb any flow in the narrative; and second, his style of writing is a rather monotonous succession of facts, some of dubious accuracy. For example, his gross generalisation, "Blues give a sense of distance", or his statement that a successful poster "must be simple enough for us to understand quickly".

He aims to impart a little knowledge about an impossibly large variety of visual experience and as often happens with such an approach the observations and facts fade into an unmemorable tedium. Indeed, the only notable passage is a delightful quote from the letters of D.H. Lawrence.

The illustrations, which are by no means outstanding, are too often unsympathetically used. They punctuate the writing seemingly as a matter of course rather than as the needs dictate. Again, this reflects and heightens the slow method of the writing. The use of colour would have helped to alleviate this, but economics possibly have prohibited this: there are only four colour plates. Even sections such as 'Surfaces' and 'Viewpoints' which do rescue the text a little have not been sufficiently exploited, in terms of depth of inquiry and adequate illustration.

The book's overriding weakness lies in its attempt to do too much in too small a space. This field of study is vast; one volume is hardly enough to explore it all. The jacket boasts,

"To see the world without preconception is a worthwhile aim. This book shows how it can be realised".

I am not at all sure it is advisable or even possible to view the world in such a way, but in any case the book does not fulfil its promise.

Ben Hinks-Edwards

Potters have been by long tradition, a secretive lot, particularly about their glaze formulae and modern studio potters are, in general, no exception. It is hardly surprising since many of their most prized efforts have been arrived at after years of painstaking experiment and observation occasionally helped along by happy accidents which they have had the wit to exploit. Glazing pots under studio conditions for high temperatures is still happily as much a chancy art as a precise science and so it is hardly surprising, either, that many fine potters rely exclusively on a small number of well tried and reliable glazes which they have developed. Mr Grebanier is an exception to both these rules: he continues to be a tireless experimenter with glazes and he shares with the reader the fullest technical details of his experiments with their attendant triumphs and equally instructive disasters.

The most intriguing problems for the connoisseur and historian as well as for the potter are the techniques by which the Far Eastern potters produced the ceramic masterpieces of which the Chun Blues, Celadons, Tenmokus, Copper Reds, Peach Blooms, Turquoises and Tz'u-chou wares of the Sung Dynasty are, by common consent, the pinnacle of achievement. Mr Grebanier is something of a connoisseur and historian as well as a potter, though he probably would not claim as much. Although his book is primarily for fellow potters it is also, incidentally, an excellent guide to such problems as the confusing terminology of the great family of Celadon glazes, the glaze composition of the legendary Ju ware and the 'yao pieu' phenomenon in some of the rarest and most beautiful Chien wares.

Mr Grebanier's central concern, however, is to emulate in modern kilns and with over-refined modern materials the effects of the Sung potters and he devotes a major chapter to each of the glazes mentioned above. One of the most intractable mysteries is the precise composition of the wood ashes which were a natural by-product of wood-burning kilns and which he convincingly shows must have been a significant ingredient in many Sung glazes. Anyone who has been fascinated by these problems of ceramic chemistry will read this book with eagerness and constantly refer back to it. It is the first book-length assault on them since the second edition of Arthur Hetherington's *Chinese Ceramic Glazes* of 1948 and that seminal treatise contained no glaze formulae at all. By contrast, Mr Grebanier gives not only precise formulae but also details of his clay bodies, slips and stains, on glaze calculation, decoration (if any) and firing. There are useful supplementary chapters on stoneware bodies, slips and strains, on glaze calculation, on synthetic wood-ash, on ball mill construction as well as a glossary and bibliography. The sixteen fine colour plates eloquently illustrate his success at reproducing Sung glazes even if one sometimes feels his results could be even more impressive if he used a spray gun less frequently. The British reader should note, of course, that his cone numbers refer to Orton rather than Seger cones and will inevitably have difficulty in obtaining precise equivalents of Buckingham and Maine feldspars, Georgia kaolin, Jordan clay and granite and red slate powder.

Mr Grebanier writes with clarity, enthusiasm and agreeable modesty about his own work and he neither over- nor under-estimates the importance of a glaze in the total integrity of a fine pot. He has produced an exciting book and a scholarly one in the best sense of the word: he deserves our gratitude for so generously sharing his hard-won knowledge and hoping we can profit from it as undoubtedly many potters will.

Michael Paffard

Control Technology

London: English Universities Press, Pupils' Assessments £1.80, Pupils' Follow-Up Sheets (£1.95), Teacher's Guide £3.50

Something like ten years of development, including five years of trials in schools, have passed since this three-year C.S.E. course was first conceived in Danum Comprehensive School, Doncaster. "Official" trials were closely watched by professional evaluation teams in about twenty schools, and unofficial teaching of the course from pirated copies of the trial worksheets has gone on in many more — such was the interest stimulated by Project Technology (now The National Centre for School Technology at Trent Polytechnic, Nottingham). Now, at long last, the whole teaching scheme is published.

Good Technology is the discipline of designing things for the benefit of people — things not beneficial are bad Technology or, at worst, misapplied science. Since society as we have come to know it is dominated by Technology good and bad, it has become urgent for young adults to understand the processes of Technology — the disciplines of design and optimization — and how better than through planned experiences of designing and constructing models and mechanisms are likely to work? There are, of course, other approaches to Technology Appreciation, but this one has been shown to have a wide appeal to boys and girls equally, since no craft skills are assumed and few, beyond putting a nut on a screw or a plug in a socket, need be learned. The Control Technology course is good educational Technology too, in its true sense of designing efficient learning situations: the whole course is planned for pupils to learn directly from practical experience (at a rate controlled by the teacher) with background information and theory supplied by the teacher as required.

The Teacher's Guide is essential since, in a course planned with minimum factual content but maximum opportunity for

pupil experience of analysis, synthesis, and evaluation, it is vital for the teacher to understand thoroughly the purpose of it all. The pupil texts are also indispensable since these are the worksheets. The Assignments book is the pupils' basic programme of practical experiences, beginning with simple frame structures in Meccano (where the pupil is immediately introduced to one of the fundamental characteristics of Technology — that for any one problem, there is no single right answer), through handling motors, gears, and pulley-drives, switching and relays, pneumatic cylinders and air-fluidics, transformers and rectifiers, up to transistors and simple logic circuits. A fair amount of hardware is therefore needed and this can be purchased by instalments in kit form from the suppliers.

The Follow-Up Sheets are produced in the form of a tear-off pad, so that the teacher can hand out these items of extending or consolidating experience to pupils on completion of an Assignment, and thus control the rate and depth of learning for each pupil.

These books are worth getting if only as a model of syllabus planning and design of learning situations: they are more worth getting for any school that takes Technology Appreciation seriously enough to want to do something practical towards enhancing its pupils' experience of Technology before their attitude hardens into opposition through incomprehension.

Michael Sayer

Raku Techniques for Contemporary Potters

Christopher Tyler and Richard Hirsch

London: Pitman. New York: Watson-Guptill Publications (£7.50)

'Raku' means 'pleasure', 'enjoyment', 'ease' and *raku* pots have their origin in the tea-

ceremony of 16th Century Japan. Although Bernard Leach introduced the technique of raku firing to England in the early 1920s and Warren Gilbertson to America during the Second World War, it has only become something of a vogue with potters on both sides of the Atlantic in the past ten years. When the cultural history of the period comes to be written this movement will be seen as connected with the revival of interest in oriental religions generally and in Zen Buddhism in particular. To the Westerner the Zen Buddhist's love of asymmetry and roughness and 'wabi' or austerity as an acquired taste but a refreshing one for its sharp contrast to the lifeless perfection of so much factory-produced ware. In many ways the raku revival has been very fruitful: for one thing, it has reminded western potters of the expressive possibilities of low-fired earthenware which they have tended to regard as a medium for beginners. More importantly, however, the technique has not been used merely immitatively but much essentially new work has been produced. It is often sculptural rather than functional, shows affinities to abstract expressionism and is often far removed in feeling from the classic tea-bowls of Kenzan and Koetsu.

The authors of this glossy and expensive book are two young teachers of ceramics, one an American and the other a Canadian who emigrated from Britain. Neither has visited or worked in Japan. They have endeavoured to write a book aimed simultaneously at the novice and the teacher of graduate students. This inevitably leads to much statement of the obvious for one group of readers and inappropriate technicalities for the other. The writing is very uneven in style too. Some chapters like the first on the history of raku, the fourth on clay and glazes and the fifth on kilns are straightforwardly informative. The second called *Pottery and Perception* tends to become lyrical/mystical in uttering banal truths about honesty to the nature of materials, etc. which are not specific to raku or even to

pottery but have their place, if anywhere, in Foundation Course lectures. In the last two chapters on *Firing and Post-Firing* and on *The Nature of Raku*, the prose becomes even more hectic, exclamatory and dithyrambic in attempting to define that combination of serendipity; experience and artistic judgement exercised in the heat of the moment that goes to make raku at its best. There is already a pyromaniac streak in most potters and to one reader, at least, a more sober description of the facts of this exciting process would be more eloquent.

The illustrations provide better value than the text despite the fact that tactile appreciation is perhaps more important with raku than any other type of ceramic art. There are two hundred in black and white which show much interesting work as well as elementary picture sequences illustrating pinching, coiling, slab-work and throwing. The sixteen colour plates show many gorgeous objects, which cry out to be handled and cherished, by Paul Soldner, Ken Ferguson, Joan Campbell, Richard Hirsch (one of the authors) and others.

Michael Paffard

Drawing for Design and Technology

J.E. Mattick

Slough: Foulsham & Co. (£3.10)

The material in Unit 1 covers C. & G. 500-series courses, 'O' level, C.S.E. and C.E.E. — the latter by way of extra material intended to introduce the student to techniques of communication between drawing office and workshop.

The book begins with fundamental isometric drawing: first the right-angle solids, then circles and sections, with examples of template use and practical drawing problems. Perspective, oblique, and exploded views are similarly introduced; also intersections and surface developments with many imaginative

examples from sources model-making, cardboard packaging, and tailoring. Conic sections are also treated quite thoroughly from a practical standpoint, as are important topics like architectural drawing and modelling; practical problems and exercises abound.

Two important features of this production are the beautiful clarity and simplicity of the drawings and diagrams (a simple communication, like a simple mechanism, is good technology because its unlikely to go wrong), and the slightly larger quantity of verbal explanation than we have seen in some other recent technical drawing texts.

Quite possibly some authors have erred in trying to over-simplify by eliminating words, but the process of technical drawing must be clearly explained if clear drawings are to result; and the competent draughtsman or technician must be competently literate if his contribution to industry is to be more than simply illustrative. The 142 pages of well-presented text demonstrate these points most clearly.

Electrical Circuit Drawing opens with fundamental facts of electrical units and measuring instruments, types of conductor, joints, cables, switches and the common mechanisms likely to be encountered by an apprentice technician. This text is much shorter than Unit 1 and its 25 pages are not numbered, hence there is no Index. Wiring diagrams are restricted to the very simplest and there is nothing about electronic circuitry — perhaps just as well, since current direction is stated as being that of positive particle flow, conventionally acceptable for heavy-current work but the cause of serious problems in teaching thermionic devices.

Technical drawing teachers should consult with colleagues in Physics and Electronic Engineering to agree on the conventions to be used with their students.

Michael Sayer

Woodwork for Young Children

Christopher Jarman

London: Batsford.

This book by Mr Jarman is aimed at helping those non-specialist teachers who wish to put to good use the creative urge that most children naturally have. The photographs used are of a good overall quality, especially those of work carried out by Mr Jarman's pupils, and will provide inspiration for work projects. Those given of tools which are of use are of particular value to the non-specialist teacher. There are, of course, other books available which cover similar types of work and I wonder whether this one contains enough new ideas to warrant adding it to one's book shelf.

In comparison with the equipment readily available in the majority of secondary schools, that recommended by Mr Jarman seems crude. However, as the book is not aimed at this market, perhaps such a comparison is unfair. My main criticism of the book, and one which I feel to be of great importance, is that some of the advice given would seem to be a source of danger to small, inexperienced fingers. Those photographs showing a young pupil sharpening gouges and removing the resultant burr by holding both the gouge and the oil-stone in the hands I personally would not recommend. The result of a slip by the pupil could be serious. For the chisel to cut efficiently, and therefore safely, the cutting edge must be kept at the correct angle. Whether a young pupil is capable of such accurate sharpening is doubtful.

Mr Jarman has made a genuine and sincere effort to convey his obvious enthusiasm to other non-specialist teachers. I feel it is a pity that some of the advice given does not fit within the safety framework so generally accepted by specialist handicraft teachers. However, it is refreshing to come across someone who is achieving such successful

results with such a modest selection of tools and equipment. For those who can obtain off-cuts of timber as readily as Mr Jarman, the book should be a valuable and useful one.

G. Grimshaw

A Basic Course in Practical Metalwork (new metric edition)

J.R. Bedord

London: John Murray £1.15

On glancing through *A Basic Course of Practical Metalwork* one's first impression is that one is looking at a book that seems very familiar. And indeed it is! The metric edition has made no concessions to changing ideas other than to acknowledge that dimensions are now in millimetres.

The book sets out to offer ideas for a basic course and anyone who follows it will undoubtedly have an understanding of elementary techniques. However, one must question whether some of the models enhance the point of view put forward in the preface "the value of his learning will become more apparent to him if it results in a pleasing model which he can take home or otherwise display for approval". Like a straight repair plate or an angle repair plate, for instance?

Like all books by experienced craftsmen there are ideas in it which any teacher can use to advantage, but if one were to draw up a list of essential books for the workshop library I doubt whether *A Basic Course* would be included.

N. Glover

Plastics — An Integrated Science Approach

A.J. Yate

London: Edward Arnold £1.10

Plastics is an intriguing little book, but it has

one or two irritating quirks.

The layout of this book is clear, simple and likely to appeal to the age group for which it is intended — children at the upper end of the Middle School or older non-examination pupils. The diagrams, however, are sometimes rather crowded and a little confusing, like the full page one on the identification of common plastics on page 15. To have to follow it through would deter all but the brightest or keenest child.

The idea of finding out about plastics and identifying them with other areas of knowledge is good, e.g. "Where do plastics come from?", linked with the distribution of oil and coal, two traditional science areas.

Many of the suggested experiments given are interesting and suitably set out in simple sections, each dealing with different aspects of plastic technology. A child could delve into these at random and find something of value at an appropriate level.

This book is not a re-hash of an earlier edition and it is gratifying to see suitable treatment of modern subjects like encapsulating and moulding. The whole subject of plastics is put into historical perspective by a resume covering their uses from the Ancient Egyptians to the present day.

Basically the book provides source material for project type work, although many teachers would undoubtedly prefer to adopt a different approach to some subjects. On a purely personal note, I found it rather irritating to have questions immediately followed by answers — printed upside down!

N. Glover

Technology Around Us

Ed. G. Terry Page

St. Albans: Hart-Davis Educational Ltd.

Technology Around Us is billed as a new Series of short books on topics of importance in everyday life; the books are intended to

consider their subject from the standpoint of science, history and social implications. Other topics promised in the Series are electric power, food science, and printing processes. In each book the approach is through the History of Technology medium and the text is liberally punctuated with practicable suggestions for investigation or experimental projects.

Aircraft Flight opens with objective but non-technical accounts of kite and balloon aerodynamics, it takes the airship seriously (in contrast to the embarrassed silence of many texts in the last 40 years) and reviews aircraft development up to the present. Half the book then concentrates on fundamental aerodynamics, with plenty of leading questions and suggestions for experimental investigation.

Traffic and Roads follows a similar pattern but includes much quantitative data on traffic growth, vehicle movement, and road deaths and injuries. There is practical information on traffic survey techniques and some valuable material on road design for optimum flow.

The World of Detergents again begins with a brief history of soap technology and a non-technical account of the manufacturing process; the action of detergents is simply explained (and the social need for biodegradability), and some pages are given to the strength-testing of packaging materials.

In conclusion, this appears to be a most promising series of booklets for investigation projects in History of Technology or in non-technical applied science.

Michael Sayer

Leatherwork

Kenneth Lyon and Ron Hill

London: Kaye and Ward (£2.50)

These two books represent the first of the Kaye & Ward Creative Craft and Design

series.

In *Leatherwork* the authors recommend the craft, which needs few tools and improvised working space, as ideal for home enjoyment. However, their hope that the various chapters on aspects of history, materials, tools, craft methods, pattern making, design, fashion potential and related materials will stimulate original designs, must be regarded at best as extremely optimistic in a book of less than 80 pages. The brief chapters on material, surfaces, tools and methods are clearly written with a good balance between text and photographs, although here, and throughout the book, many of the black and white photographs are of poor quality and fail to do justice to leather as a material. The trinket box on page 33 is a notable example of this, especially when compared with some of the objects portrayed in the last few pages. The coloured photographs on the other hand are clear and of good standard.

Much of the book is concerned with the step by step making of such articles as a draw-string bag, trinket box, card case, executive case, waistcoats and toys. Visually the waistcoats and toys are particularly attractive, the boxes and executive cases much less so. Design is treated as a separate and later chapter in which an understanding of colour, shape and texture is advocated and where sketching is recommended as the way of encouraging the flow of ideas. The sheets of design sketches in the book certainly make a strong inspirational contribution. The book ends with a brief glossary of terms and a useful list of suppliers of materials and fittings. It is a pity that only imperial measurements are used throughout the book.

In summary, a book which will appeal to the adult who is interested in starting leatherwork and who is content to be guided step by step in making a range of given designs. Its place on the reference shelves of a school design and craft area is only warranted if it is used with care by the teacher.

Geoff Dalton

Woodwork

Edward Storey

London: Kaye and Ward (£2.50)

In *Woodwork* the author expresses the hope that the reader will be encouraged to produce "work that is completely personal". Within a similar limited number of pages as in the first book there are chapters on the history of furniture, timber and its conversion, jointing techniques, finishing processes and design considerations. For the reader enquiring merely about traditional jointing methods the author wisely advises him to refer to other books, and concentrates on the lesser known quick-assembly or knock-down techniques. There is a useful section providing the amateur craftsman with additional information. A good variety of quick-assembly fittings is described, together with the operations needed for their incorporation. The text in this section is admirably supported by thirty clear black and white photographs. The chapter on finishing processes contains a useful up to date section on the uses of the many paints now available.

The chapter on design considerations is limited to the basic problems involved in designing small tables and a support for books. In view of the early hopes of the author it is worrying to see further limitations imposed by the actual design briefs. The first table "is to be 400 mm high" and the two later tables are to be realised "as far as possible" in a single section of timber (65 mm x 22 mm). The sketched ideas and drawings are of good quality and are useful aids. The coloured photographs add much to the appeal of the book and show examples of furniture generally well chosen. The exception unfortunately is one of the actual tables (plate 1) detailed in the design developments, whose appearance suffers from the flat-frame construction of single section material as discussed above. A useful appendix is included listing details of materials and a

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number of tools. Here, and throughout the book, sizes are given in metric with imperial equivalents where applicable. Only one used area in this respect stands out as redundant, in which details of timber are additionally discussed in foot run and foot super sizes.

Although the design considerations in this book are extremely brief and over-simplified, and although other recent books on wood-work design have gone further and deeper in this respect, it is a book which contains sufficient new information to justify its addition to the school design and craft area library.

Geoff Dalton

Art: Search and Self-Discovery

James Schinneller

London: Ward Lock Ltd. (£6.75)

This excellent book provides a stimulating and perceptive survey of art and design in its broadest context. The author has undoubtedly achieved a formidable task since the book succeeds admirably in seeking to explore the widest possible ramifications of art and design; town planning and the environment are all viewed in a total context, in which the familiar boundaries of individual disciplines and their traditionally implied hierarchies have been intentionally blurred. This approach has allowed inter-relationships and comparisons to be explored in a most refreshing way, where art and technology represent different (but not inevitably conflicting) emphases within the continuum of civilization. Architecture is one manifestation of man's creation where the unity between functionalism and aesthetics is explicit and the harmony between art and technology obvious, but Schinneller proceeds further to scrutinise the relationship between architecture and society; morality; culture; history; the natural environment and pollution. In fact by the end of the book he has explored

a maze of inter-relationships which blend to create a picture uncannily like reality.

The material used in the book does not follow any historical development or fall into any chronological order, instead references are drawn from the past, present or future as appropriate — the majority, however, are of the twentieth century. By way of criticism it is perhaps unfortunate that such a high proportion of the photographs are of American origin since this implies a parochialism which tends to mar its otherwise universal import.

Despite the book's ambitious range of content, spanning the megastructures of architectural visionaries; the ethnic craft skills of ancient dynasties; the pop images of a pop culture; and the violations currently being wrought upon the earth by a polluting society, the author has managed to avoid superficiality, presenting instead a commentary of significant value. This book unfortunately does not attempt to be a 'potted history of art' but rather attempts to provide a sound and self-contained personal analysis of art and design, as seen in relation to society. As such Schinneller's book will serve ideally, and would be well suited as background reading for sixth form and college/university students of all disciplines.

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