THE ARTISTIC CRAFTS
IN THE PUBLIC SCHOOLS.

by

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PREFACE

(1) Sources of Information.

Practically no printed matter is available concerning the place of the artistic crafts in the public schools. Considerable work along these lines is being done in different places, but it largely optional with the special teachers of drawing and manual training and is not treated in the published courses of study. Consequently the basis for judgment in the present study is to a great extent the personal observation and experience of the writer.

The preparation that has formed a part of the basis for judgment includes study at the Eliot (Manual Training) School, Jamaica Plain, Boston, Massachusetts, for two years; two summer sessions at Middlebury College (Pottery and Metal); courses in the Manual Arts Department of the University of Missouri during two semesters and a summer session; and private study during several years with a pupil of Ross and with graduates of Teachers College, New York City, and of Pratt Institute.

Personal visits of inspection have been made to schools in California, Massachusetts, Missouri,
New Hampshire, New York, Rhode Island, and Vermont.

The teaching experience of the writer, extending over about fifteen years, includes work in the schools of four of these states. The teaching experience includes eight years of elementary and secondary work, six years of general supervision of schools, two seasons as instructor of handicrafts in a summer camp, several seasons with private pupils and craft clubs, and nearly a year as instructor of manual training in the University Schools, Columbia, Missouri. The eight years in elementary and secondary work includes two years as substitute in and near Boston, Massachusetts, in fifteen buildings where the handwork was usually done by the regular teachers under the direction of a special supervisor. This gave opportunity for close observation of the work of many specialists in Drawing and Manual Training.

As an indication that the writer possesses such skill in the crafts here discussed as would, in addition to his study and his teaching experience, enable him to form correct judgments concerning their place in the public schools, he can only mention the fact that articles he has made have been accepted for sale by public and private craft shops and have always brought higher prices than the average from people from all parts of the United States and from foreign lands.
INTRODUCTION

(1) Limiting the Subject.

The crafts that will be considered in this study are: (1) Basketry; (2) Bookbinding; (3) Clay Modelling; (4) Leather; (5) Metal Work; (6) Stencilling; (7) Weaving; (8) Woodcarving.

In considering the artistic crafts in connection with the public school curriculum it is advisable to define carefully, in the beginning, the aspect that is to be discussed. The field of handwork, especially in the grades, is so broad and is so often associated so closely with other parts of the course of study, that it seems necessary to limit the present discussion to those forms of handwork that are included in the artistic crafts more properly so called, and to neglect the other forms, without passing upon their values in comparison with the values of the crafts here treated. The matter of comparative values is worthy of a separate study in itself; furthermore any consideration of it would be entirely a matter of the expression of personal opinion until by means of scientific experiments, made under conditions where accurate records may be kept, values and efficiency may be rightly correlated. The intention here is, to deal with the subject from the standpoint of the crafts themselves, their direct and indirect functions, and the justification for their place in the course of study for elementary and secondary schools.
No handwork that is in the realm of the Fine Arts and Pure Design is included in this study. The crafts here discussed belong rather to the Applied Arts and to Applied Design. Craftsmen attach to the terms Fine Arts and Applied Arts, Pure Design and Applied Design, such definite and distinct ideas that they often take for granted a similar understanding on the part of everybody and make no attempt to formulate clearly the distinctions between the terms; and indeed the terms are often carelessly used even by craftsmen themselves. But however difficult a clear, concise definition may be, we need to keep in mind the fact that there is a distinction. In their pure forms Art and Design are ends in themselves, while in their applied forms they are means to an end. In studying the Theory of Design, one may work out problems that, although intricate, beautiful, and of absorbing interest, yet have no relation to the practical, everyday affairs of life; in Applied Design, the design itself is made to contribute to the efficiency and beauty of some article of common use. The difference is largely one of the point of view. To the artist, art exists for art's sake: to the craftsman, art should be the handmaid of human activities and the craftsman would be the last to admit that art, as such, is lowered in any degree through its application to the practical affairs of life.
in an effort to enrich them and make them more beauti-
ful. There is a sense in which an object that is
purely ornamental and an exercise in abstract design
do have a practical value through the pleasure they
bring to the observer, but that is using the word
practical in a wider sense than usual. There is no
attempt here to pass judgment upon the relative values
of Pure and Applied Art or Design, but rather to dis-
tinguish between them clearly enough to make plain the
kind of handwork with which the writer intends to deal.

One other distinction must be made, between
Artistic Crafts and "Arts and Crafts". There is as
much difference between the Artistic Crafts properly
so called, and the popular conception of the "Arts and
Crafts" as there is between Sentiment and Sentimentality.
Beauty, to the popular mind, seems to mean ornamentation
at any price. Into this false conception of beauty the
Arts and Crafts movement, lacking the technique and
skill necessary to achieve use and beauty at the same
time, has often fallen. On the contrary, the true crafts-
man resorts to ornamentation only where it will enhance
the beauty of the article, and to him it cannot do that
if it detracts in any way from the utility of the object
or if, by meretricious ornament, seeks to cover up faulty
lines and construction. The true craftsman seeks to
produce simple, dignified articles, that are primarily
designed to be of use, and the degree to which they fulfil
that function is the first measure of the success of his work. But the true craftsman realizes that an article may be very useful and still be entirely ugly, and so he bends his energies to the task of producing articles that are not only useful but also as beautiful as he can design. Design, to the craftsman, is first a matter of structure, and second a matter of ornamentation.

(II) Stating the Subject.

Although this study is made from the point of view of the craftsman, the educational implications of function, motive, adaptation to individual differences, and interest cannot be ignored. Chapter I, which deals with these educational implications, does not attempt to treat these matters exhaustively, but only to give them such consideration as tends to help place the crafts in their proper relation to other subjects of study.

The possibility of giving the crafts a relatively adequate place in the curriculum depends upon several factors: a supply of well trained teachers is necessary; suitable equipment must be provided. These matters are discussed in Chapter II of the study.

In Chapter III each of the eight crafts selected is considered in detail, with bibliographies and representative projects.

1. Miller, P. *The Training of a Craftsman*, Chapter II
CHAPTER I.

EDUCATIONAL IMPLICATIONS.

Function. The intrinsic function of the teaching of the crafts in the schools must be that of giving the pupil the ability to make certain articles that appeal to him as worth while in themselves, and this standard of judgment must determine what crafts shall be taught and in which of the school years they shall be offered. Incidentally, the craft may provide for that co-ordination of mind and muscle which is so great an advantage to the individual and for which the complexities of our modern social organization make so little provision. Then, to those people who are so situated that they see the worse than aimless way in which the majority of the general public employs its leisure time, the opportunity which these crafts offer to give the individual a satisfactory and often profitable method of occupying such leisure cannot but appeal with great force. Indeed, if the crafts can be so presented that they furnish a means for the expression of the aesthetic and constructive instincts and prevent them from becoming atrophied early in life, this function might be considered nearly as fundamental as the intrinsic function, insofar as the schools are concerned.

The relation of the crafts to vocational and industrial education is a matter quite apart from this
discussion, although the crafts might figure to a considerable extent in pre-vocational courses. The claim of the crafts to a place in the school course does not imply that they can take the place of vocational and industrial training, but that they have a function of their own of enough importance to warrant a separate consideration.

Motive. When the crafts are looked at from the standpoint of motive, the value of any craft as affording in adult life a pleasant employment of leisure time must be ignored. There is nothing to warrant the assumption that pupils will be interested now in learning something that may be of value to them later in life. A mediate interest might be secured by urging upon the pupil this potential future value, but that value alone could not justify the admission of subject-matter to the curriculum. The primary reason for the introduction or continuance of any subject in our schools is the value it has for the pupils in and of itself. If, however, a subject has this immediate interest for the pupil and at the same time has so great an indirect value as has been suggested is the case with the various artistic crafts, it should not only be given a place on the school program, but should also be adequately supported.

Adaptation to Individual Differences. The crafts suitable for teaching in our schools are so

1(Suggested by Professor Ira S. Griffith)This does not imply that out of the wide range of interests of children, adult experience should not select that subject matter which is valuable as well as interesting.
numerous, and the materials used so diverse in nature, that it is possible to fit the varied interests and abilities of practically all pupils. Then there is such a wide range of difficulty in the problems in any one craft, that something suitable to all degrees of skill can easily be found. It is difficult to understand why, with the wealth of material at hand, the work in the schools should have been so largely confined to wood, unless it be that it is easier to follow along paths already formed than to branch out and establish new ways. The cost of equipping a wood shop would provide for the necessary outfit for several crafts, and they would offer an infinitely wider range for self-expression on the part of many more pupils.

Interest. All writers on education name the constructive instinct as one of the strongest and most persistent with which we are endowed. No extensive evidence need be supplied to establish the fact that children are naturally interested in all forms of activities that involve doing things with the hands. Daily observation of even the most casual sort establishes this as one of the plain facts of life. Children take the same interest in all forms of handwork in school that they show in handwork outside the school, except when it is so entirely formal in character as to lose all connection with their real everyday life.

CHAPTER II.
THE CRAFTS AND THE CURRICULUM.

When the crafts are discussed in relation to the curriculum of the public schools, there are several important factors to be considered, such as the difficulty of obtaining adequately trained teachers, and the cost of suitable equipment. Of these the most important is the supply of well trained teachers, and the greater part of this chapter is devoted to a consideration of that factor. The chapter will discuss the training available and the training desirable, and will give some suggestions as to possible methods of correcting the conditions that now militate against the prospective teacher's getting this training.

Very few schools are so organized that a teacher can be employed for each craft, and when one person attempts to teach several of them many dangers are often encountered. The person with practical experience usually knows only one craft or two closely related crafts, while the person who has had some training in the teaching of the crafts and in design has lacked either the time or the inclination to get enough practice in the execution of any of them to develop adequate skill and technique.

Available Training. Our universities that train teachers, and only too often our normal schools, offer to those who are preparing to teach little oppor-
tunity and practically no encouragement to perfect
themselves in the technical matters that can be so
easily acquired under proper instruction, but are
difficult to learn without the direction of a master
craftsman. At present, the only opportunity a student
has to get any knowledge of the processes involved in
the practise of the crafts is in connection with such
courses as Primary and Intermediate Handwork and Ap­
plied Design. From the nature of these courses the
opportunity in most cases must be limited both in time
and extent to the very simplest forms of the crafts,
and of course no adequate mastery of the processes can
be acquired. This means that even in the simple forms
of handwork the teachers are going to be restricted
and crippled because of lack of knowledge and skill.
If their work is in the upper grammar grades or the
high school, the matter is even more serious. It is
just as absurd for a person to attempt to teach a craft
without proper preparation as it would be for him to
try to teach arithmetic without having studied the sub­
ject; yet unprepared teachers are teaching the artistic
crafts in many of our schools today.

Private institutions that train special
teachers of manual arts usually offer adequate courses
in several of the crafts, but those schools that are a
part of our great public system including some state
universities, and that provide the only opportunity for
the person wishing to teach to secure general training, offer courses very limited in number and scope.

Desirable Training. The person who is to teach the crafts should have the skill of the designer and craftsman and the teaching ability of the trained teacher. Courses in Theory of Design and in Applied Design should follow or parallel the courses in the crafts themselves, and enough time should be spent upon each craft so that some degree of skill in handling the materials and in working out suitable designs can be developed. This skill cannot be obtained in courses in Applied Design, because that is not the aim of such courses, and because in a course in general Applied Design, enough time cannot be spent upon any one craft to ensure that result. Definite courses in the various crafts should be offered in schools that aim to train teachers for the elementary and secondary schools, where a knowledge of these things is of so great advantage to the teacher.

Suggestions. Semester courses in as many of the Artistic Crafts as possible should be offered in all schools that aim at the training of teachers, with the amount of credit in proportion to the amount of time required in the workrooms. Practically no student in the universities averages two hours of preparation for

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each credit hour of recitation; yet all manual arts
students must spend that amount of time in the shops
and often must do outside reading in addition to the
shop work. Not less time should be spent on these
subjects, but more credit should be allowed for them.
Moreover, the prospective teacher should begin work
along these lines earlier than the junior year; but
under the present organization of the Schools of Edu-
cation throughout the country this is not possible.
The matter of shop and laboratory fees might well be
revised. It probably would not be possible nor advisable
to omit them entirely, but a revision along more liberal
lines might well be considered. The reason often
given for the lack of attention to the crafts is that
there is very little demand for courses in them; but,
according to the commonly expressed opinion of students,
if the indicated modifications in our present system were
effected there would be a constantly increasing demand
for this work.

Equipment. From the administrative standpoint
the factor of importance next to that of well trained
teachers is the necessary equipment. The equipment re-
quired for the various crafts is so varied that it is
taken up in the consideration of the specific crafts, but
in general it may be said that for many of them the cost
of equipment is very slight and in no case is it as great
as for the traditional courses in woodwork. As a matter
of fact, the cost of equipping a wood-shop would equal the total cost of the necessary appliances for from three to six of the artistic crafts, and many of them may be practised in any ordinary schoolroom and do not require a special room, as does the woodwork.
CHAPTER III.

PRESENTATION OF EACH CRAFT.

(1) Plan of Presentation of the Crafts.

In the treatment of the different crafts the following topics will be considered: (1) Nature and Description of the Craft; (2) Interest for Pupil; (3) Employment for Leisure Time; (4) Common Practice in Schools; (5) Suggested Plan with Reasons; (6) Bibliography; (7) Projects.

Nature and Description. This will include some consideration of the materials used, cost of equipment, limitations of the craft, etc. The crafts are arranged in alphabetical order, with no attempt to list them in the order of their educational, practical, or artistic value.

Interest for Pupil. The immediate interest that boys and girls will take in the various articles and the processes involved in their construction will be taken as one of the fundamental tests of the fitness of a craft for use in schools.

Employment for Leisure Time. As a secondary basis for judgment, the value of a craft as furnishing an opportunity to employ pleasurably the time not spent in earning a livelihood, will be discussed. Mention will be made of cost of equipment, space requirements, etc. as determining factors.
Common Practise in Schools. This comprises a brief statement of the place each craft has in the curriculum of the traditional public schools.

Suggested Plan with Reasons. An attempt to justify the opinion of the writer will be made when his recommended plan differs from the common practise. The materials involved in each case will be taken as determining the period in which the craft may properly be taught.

Bibliography. As instruction in the technique of the crafts would be out of place in a discussion of this sort, a bibliography of the books treating that phase of the subject has been compiled and is appended. Not all such treatises are listed, but only those that seem the most useful. Valuable articles are also to be found in periodicals like the Industrial Arts Magazine, Manual Training and Vocational Education, School Arts, Elementary School Journal, The Craftsman, etc.

Projects. To the discussion of each craft are appended pictures of models, or designs either worked out by pupils or suitable as suggestions to them. The basis for the selection of the particular designs shown is the interest the pupils who worked them out showed in the work or the popularity of standard designs with different groups of pupils. No exhaustive list of projects is attempted. A few typical ones have been selected. Others may be found in reference material listed in the bibliography.
Section 1. Basketry.

Nature and Description. Unlike many of the other crafts, basketry requires little or nothing in the way of tools and equipment. A package of tapestry needles and a pair of scissors are all that is necessary, although an awl and a pair of cutting pliers, a pair with half-round jaws, are a help in some kinds of work. The only drawback to a general enjoyment of this craft is that the more ambitious projects require a degree of strength in the fingers and fore-arms that is not as common as might be imagined, although it can usually be developed.

To the craftsman only those baskets are considered worth while that are made of durable material and are fully adequate to the service that may be reasonably expected of them. This excludes from our consideration all those forms of baskets made from paper, cardboard, etc., which, although they may have a real educational value in the grades where they are made, yet do not belong to the craft, as such. The materials that, either singly or in combination, form the basis of the craft are reed, raffia, pine needles, corn husks, rope, plant and root fibres, willow, sweet-grass, splints, braided grass or straw, and a few other similar materials.

Design in basketry is largely a matter of form and proportion. The decorative motifs that are suitable are limited in number by the nature of the materials and by the demands of harmony.
Interest for Pupils. The desire to make baskets seems to be instinctive at all stages of development up to, and sometimes through the period of maturity. It expresses itself in the baskets which the little child makes, for his own peculiar purposes of the burs of the burdock; then by the baskets of paper, tissue paper rope and cardboard; then by the use of bark, reed, raffia, pine needles, corn husks, rope, plant and root fibres, willow, sweet-grass, splints, and many other materials which lend themselves less readily and directly to this use, and which are inferior because they lack durability or some other desirable quality.

Employment for Leisure Time. The materials for basketry are so varied and so cheap that they can be procured by everyone. There are few parts of our country so poor in natural resources that they do not furnish some kind of material suitable for this purpose. If one does not care to go to the trouble of gathering and selecting his own material and then dyeing and preparing it in other ways, there is always the possibility of getting materials from supply houses. The necessary equipment for the work is so small and so inexpensive that it is within the reach of all, and the nature of the work makes it possible to leave it at any time and then return to it at one's convenience without any bad effect on the article being made. For these reasons basketry offers one of the most easily available occupations for leisure time in the home.
Common Practise in Schools. Aside from the baskets of paper, tissue paper rope, and cardboard made in the first four grades, the only form of basketry taught in our public schools is that calling for the use of reed, either alone or in combination with raffia. Occasionally a teacher will use corn husks or sweetgrass, but that is uncommon. Basket-making is usually done in the fourth, fifth, and sixth grades.

Suggested Plan. Very few children of the age normally found in the fourth, fifth, and sixth grades have either the necessary strength or patience to make basketry advisable in those grades. The finished baskets do not meet the requirements of good workmanship, or symmetrical appearance. It is the exception rather than the rule when a basket made in these grades is satisfactory in either of these two points; and in too great a number of cases when the basket is satisfactory, the teacher has done an undue amount of the work for the pupil. The time involved and the difficulty of handling the material make this result inevitable, and show clearly that this type of basket should be taught later on in the course, when the pupils have more strength and are willing to spend enough time on one project to enable them to do the work well and to make a basket that will be worth while. The reed and raffia type of basketry should be given either in the last year of the elementary school or in the high school, and it should be elective.
in all cases.

The all-reed baskets probably have a greater educative value in the grades than the reed and raffia baskets and they can be made by boys and girls in the upper grades without too much difficulty if they have help in starting them. Very few pupils below high school age are able to start reed baskets successfully, and many of high school age find it difficult. The best type of these baskets can be made only by a fairly mature person; yet there are reasons enough for their being made in the grades so that it seems well to offer this work from the sixth grade on.

Corn husks, sweet-grass, and splints offer too many difficulties of various sorts to make their use in the grades advisable, but they might well be used in an advanced course in the high school.

Common judgment admits that in those schools where really good work in basketry is done lower down in the grades than is suggested here, the parts of the work requiring any degree of skill are done for the pupils by the teachers. This may be warranted from the standpoint of the teacher, but it cannot be from that of the craftsman, and it can never give the pupil that command of the craft that must precede the pleasure of creative work. In order to make the practise of this or any other occupation pleasurable and in order to make it possible that the individual will turn to it eagerly during his leisure time, it must be presented at a time when his strength
is equal to it, and in a form that he can master sufficiently to make the work enjoyable. There are points in the making of a basket that call for finer coordinations than have been established in pre-adolescence or even in early adolescence. The starting of any kind of basket is one of these points, and the shaping of a basket is another.

Basketry, then, should be placed in the high school or evening continuation school courses, and might well be offered in our higher institutions of learning, especially where teachers are trained.
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White, Mary How to Make Baskets.
Baskets Made by High School and College Girls.
Original Baskets by Writer
forms of bookbinding are equally necessary for the simple text book as they are for the standard or advanced grade, and the Japanese binding, and the book by itself, lead to the fine book, there are types suitable for all these grades and for the finer work of the craftsman. Bookbinding must be unusually adapted to close correlation with other school work, as it provides a permanent method for preserving and insuring the originality and worth of any work which the pupil may wish to save.

Original Baskets by Writer.
Section 2. Bookbinding.

Nature and Description. There are so many forms of bookbinding, and the different forms vary so in degree of difficulty, that this craft seems particularly desirable in the public schools. From the simple two-page folder that may be made in the first grade, up through the four page booklet, the portfolios, the Japanese binding, and the half or full leather bound book, there are types suitable for all the grades and for the finer work of the craftsman. Bookbinding seems unusually adapted to close correlation with other school work, as it provides a permanent method for preserving the work done in the other subjects. The tools and materials for the simpler forms are so few and inexpensive that there can be no objection on the ground of expense. The time element offers no serious obstacle, although there are points in the binding of a book that require continuous work if the finished project is to be a success.

Interest for Pupils. The immediate use to which the projects may be put ensures on the part of the pupils an equally immediate interest in bookbinding, whether it is the first grade that is making a folder for their reading lessons, the second or third grade that is making a Christmas booklet or holiday cards, the fourth or fifth grade that is making a cover for their scratch pads, or
the higher grades that are making portfolios for their drawings, maps, or nature-study papers. The more advanced forms that are suitable for high schools and colleges appeal to the students both on account of their utility and also on account of the interesting nature of the processes.

Employment for Leisure Time. Bookbinding, because of its nature and scope, will probably serve only a limited number of people as an avocation. The more advanced forms are too exacting to be used to fill up the odd minutes that are all the ordinary person has to devote to such a purpose. The simpler forms are quite suitable, however, on this point. These simpler forms include all the forms of holiday cards and booklets that are so popular today as remembrances. Lettering and illuminating are involved in these forms, but they are matters that may be easily learned by anyone who is interested, and once acquired they offer the worker a means of producing articles with the universally valued distinctive touch.

Common Practise in Schools. The simpler forms of this craft are rather generally taught in connection with the regular work in drawing, since they furnish a very good opportunity for the application of principles that are to be taught. For the more difficult forms, however, there is very little place in a course in drawing, and consequently they are not often found in the public schools.
Suggested Plan. In the lower grades, in the time set apart for handwork, there is usually some time that can be devoted to bookbinding; but in the upper grades, where there are well organized courses in manual training, it would be well worth while to take time from these stereotyped courses and teach the suitable forms of this craft. In the first and second grades the pupils are well able to make books consisting of separate leaves, punched and bound together with fasteners, or better yet from the artistic standpoint, tied with cord. In the third and fourth grades, small books in pamphlet form, with folded leaves, are quite suitable. The Japanese method of binding is not too difficult for these grades, and can be used for either single or folded leaves. Portfolios with board covers and cloth backs, and books bound in cloth and bound in the Japanese style, are easily within the posers of fifth grade pupils. In the sixth grade, more elaborate portfolios, post-card albums, covers for pads, etc., may be made. In the seventh and eighth grades, book-binding proper, with separate sections sewed to tapes, and bound in boards with cloth or paper; may be undertaken with satisfactory results. This leaves for the high school the binding with leather, and the more difficult details which have been omitted in the grades.
These advanced forms require a suitable equipment that is rather expensive but not unduly so when compared with the cost of equipment for woodwork. In fact the cost is considerably less for bookbinding, for the individual equipment is much smaller than that needed for wood, the general machines and tools are less expensive than wood machines, and no power is needed.
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Bean, Florence  *Bookbinding for Beginners*.
Brown, M.W.  *Mending and Repair of Books*.
Cockerell, Douglas  *Bookbinding and the Care of Books*.
Crane, W.J.E.  *Bookbinding for Amateurs*.
Curran and Buxton  *Paper and Cardboard Construction*.
Dana, J.C.  *Bookbinding for Libraries*.
Hasluck, P.N.  *Bookbinding*.
Holme, Charles  *The Art of the Book*.
Pearce, W.B.  *Practical Bookbinding*.
Sanford, F.G.  *Art Crafts for Beginners*.
Simple Bookbinding. Direction of E.V. Dobbs.

Bookbinding for Grades. Direction of E. V. Dobbs.
Book Binding. "Direction of E. V. Dobbs."
Section 3. Clay Modelling, Pottery, Concrete.

Nature and Description. Clay, and its modern substitutes such as "Plasticene", provides a medium for the expression of that universal instinct to play in the mud, dig in the good brown earth, or whatever other phrase we may use to express that universal human desire which everybody of intelligence now accepts as an established fact. Closely related to clay modelling and growing out of it is pottery, and recently we have added work in concrete, either in a strictly practical manner or as a medium for the making of decorative articles like garden furniture.

The fingers make the best tools for clay modelling in its simpler forms, but for serious study of pottery, very few simple and inexpensive wooden or steel tools are advisable. A potter's wheel adds much to the interest of the work and is only moderately expensive. Another method of making pottery is that by molding and casting. This work requires a fine grade of plaster for the molds. The molds, if properly made, may be used many times, and this method insures uniformity in the product. If variation is desired, it may be easily secured by incision or modelling while the articles are still moist. Much of the commercial pottery is either turned on a wheel or molded, and then the design is applied by hand.
Interest for Pupils. Anything as fundamentally instinctive as working with clay must from the nature of things be interesting, and since there is added to the interest in handling the medium the desirable nature of the finished articles, there is a double appeal that very few persons can withstand if they are brought into contact with this craft. Children and adults are nearly all interested in some phase or other of this work, some from one motive and others from another, but there is always a spontaneous response to the appeal of the craft. With children it may be only the instinctive desire to handle plastic material, while with adults it may be either a desire for the finished article or a desire for a means of expressing an artistic impulse. In many cases it is doubtless a combination of the two.

Employment for Leisure Time. When we come to consider clay modelling as a pastime, there are so many limitations to its use that an unqualified approval must be materially modified before many will agree. In the first place it is decidedly "messy", and is objectionable on that score not only in a house but in a schoolroom as well. Then it requires slight but constant care to keep it in workable condition; and while this care is not difficult, yet it must be given every day if the clay is to be always ready for use, and it takes several days to
prepare the clay adequately in the first place. Third, articles modelled from clay are extremely perishable unless fired and that is an expensive matter if done at a commercial pottery, and almost equally expensive if done in a small kiln in the home or the school. Furthermore, the firing is an exacting process and very uncertain in results.

There will always be people to whom the modelling will be worth while in itself without regard to the permanency of the results, and others to whom the element of chance as well as the really interesting nature of the work will appeal; but for the majority of people it will probably prove to be a disappointing and unsatisfactory craft, and an attempt to follow it will not be worth the time and trouble involved. To a chosen few it will remain the one craft desirable above all others, but they will be a very small minority of those to whom some craft will make a strong appeal.

Common Practise in Schools. A little clay modelling is sometimes given in the lower grades of schools in the better sections of our cities, but nothing like a general practise exists. In some cities, Boston for example, this work was tried for several years and then given up as unsatisfactory.

In a few public secondary schools and a fairly large number of private schools of that grade, pottery is given some attention.
Suggested Plan. No other medium lends itself so readily as clay or its substitutes to the requirements of illustrative handwork. In this work, where permanency is not necessary or desirable, clay is invaluable to the teacher and also to the pupils, since it gives them an excellent opportunity to exercise their sense of form and proportion. At the same time this use of the material does not affect adversely the craft as such, when it is taken up later on in the course.

Where modelling is done for the sake of its value in developing the sense of form and proportion, many of the objectionable features do not appear, since the substitutes for clay, though expensive in the first place, are really preferable to clay, insomuch as they can be used over and over again and are much less untidy than the clay.

The higher forms of modelling are suitable for the upper grammar and high school courses since they lead directly to sculpture and other forms of plastic art, but even here clay work will probably attract only a few.

Pottery is suitable for seventh and eighth grades and in high schools where there is plenty of money available for the firing, for supervision, and for care of materials, but usually it has been found unsatisfactory.

Experiments are now being tried in various parts of the country to see if work in concrete will not give
the good results of clay without its disadvantages. Of course it cannot take the place of clay modelling and pottery entirely, but it has many of the advantages claimed for them and it does not require the expensive and exacting firing process to ensure permanence. Then, too, concreet work is so directly useful and practical, especially for those who live in the country, that it makes a much stronger appeal than many of the more ornamental crafts. Yet there is nothing in the nature of the materials or the method of procedure that prevents concrete work from being as truly artistic as any other kind of handwork. It can be modelled, colored, and its surface treated in a large number of ways in order to get desired effects; and the very fact of its usefulness is an opportunity for the real artist and craftsman to emphasize his slogan of "Beauty in Common Things".

A significant fact in connection with concrete work in the schools is that the suggested courses of study, with blue prints of models, have been worked out, not by school men, but by those whose business is the production and sale of the foundation materials. The courses they suggest are pedagogically sound, the progression is rational, and where their plans have been tried the work has been eminently successful.
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Pieces at Extreme Left and Right, and in Center Molded.
Piece at Right Front, Turned on Wheel.
Other Pieces Built Up in Indian Style.
THE ELEMENTARY SCHOOL TEACHER, VIII

Plate 1

Pottery Done in Matt and Transparent Glazes

By Members of a College Class
Concrete Urns.

Information Bureau, Universal Portland Cement Co., Chicago.
Concrete Pedestals

Concrete Flower Box.

Concrete Pedestal

Concrete Garden Bench

Information Bureau, Universal Portland Cement Co. Chicago.
Section 4. Leather.

Nature and Description. From the artistic point of view leather work offers almost unlimited possibilities. It does not limit the designer so closely as do many of the other crafts, for lines as well as masses may be used, and nearly all motifs are suitable. By a combination of tooling, coloring, modelling, and cutting, effects can be secured that rival the Spanish leather of the Middle Ages. From this very elaborate work down to that suitable for the grades, are all degrees of difficulties that correspond to the varying degrees of skill to be found in the different workers, and the simpler articles are entirely satisfactory when carefully made and decorated with appropriate designs.

There are many tools and appliances that are of value occasionally, yet the essential equipment for leather work of various kinds is so very limited and so much of it can be made by the worker that it is within the means of all. The leather itself is quite expensive, but if one buys prudently and is careful in cutting, this cost is low when compared with the value of the articles made.

Interest for Pupils. So many of the articles of ordinary everyday use, as well as those suitable for less common occasions, are made of leather that the majority of children bring to this craft an almost
instinctive interest in the making of articles from leather, and their interest in the various processes of applying ornamental designs to the material is only a little less immediate.

Leather responds so readily to treatment that after the design is ready only a comparatively short time is needed to do the actual work. This has an important meaning for the educator. During the early adolescent period the interest of the child is often spontaneous but rather transitory, and, in order to get the best results from the standpoint of both the educator and the craftsman, the work given should be of such a nature that the article may be finished before the interest of the child has shifted to something else. The habit of finishing whatever is started is a very desirable one to establish early in life, but if this completion puts too great a strain on the voluntary attention of the child, it often defeats its own purpose and brings a distaste for the work that is never lost.

Employment for Leisure Time. This craft is particularly suitable for short spaces of leisure time at the disposal of many people, as the time required for completing an article is shorter and the processes may be interrupted with very little loss of effect in the finished article. The limited nature and small cost of equipment are other points in favor of this craft, as
is also the fact that so many desirable articles may be made of leather and that no especially prepared place is required for the work. It may be done at any ordinary table as well as at a special bench, and the whole outfit, including a fair stock of leather, may be put away in an ordinary drawer.

Common Practice in Schools. There are several reasons why so little attention has been given to leather work in the public schools. One is the cost of the leather, another is that very few manual training teachers have learned this craft, and another is that the regular drawing teacher, even if a craftsman, has not the time to teach it and also do the required work in drawing. Where it has been offered it has usually been in connection with the drawing, and it has not, therefore, been treated very extensively. The few experiments have usually been with the seventh and eighth grades, and the results have been satisfactory evidence that this work is entirely suitable for elementary pupils.

Suggested Plan. While some forms of leather work are difficult enough to make it advisable to leave them for the high school courses, yet the tooled and stencilled leather are suitable in all points for work in the grades, even as low as the fourth or fifth when there is competent supervision. The articles made in
these grades must be of a simple nature that will not require stitching or skiving, but of these simpler articles there are so many that are exceedingly useful, and that may be made attractive as well, that there is no difficulty on that point.

In the high school, there may be added to these courses the more difficult forms of tooling, modelling, and cut leather. Carved leather, properly so called, is a matter for the master craftsman. The articles made in the high school may call for stitching, either by hand or machine, and the designs may be more elaborate than in the grades; yet here, as in most matters of design, the simpler forms usually prove the more satisfactory.
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Tooled Leather Coin Purse.
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Design for Collar Bag. Tooled Leather.
Tooled Leather Coin Purse.
Gard Case of Tooled Leather
Card Case or Purse of Tooled Leather
Section 5. Art Metal Work.

Nature and Description. The terms "Metal Work" and "Art Metal" are so comprehensive when properly used, that they include many different forms of handwork in different metals, with heat as well as without it. They are often used in a much more limited sense, which is very often misleading. For example, in many catalogs and courses of study a course is listed as "Art Metal" when it is really a course in only one phase of that craft. It is unfortunate that a term should be so loosely used since it must lead to confusion on the part of all concerned. Any one phase of the work is worthy of a definite course of instruction by itself and our catalogs should distinguish clearly between them. The important phases of "Art Metal" are: punched brass, copper, or German silver; hammered metals; forged iron or steel; molding and casting; etching; repousse; spinning; jewelry, including the setting of stones; and engraving. These forms often appear in combination, but they are distinct types rather than mere processes.

Interest for Pupils. The spontaneous interest in metal work which nearly all children and many adults take is shown in the proverbial children who, going home from school, stop in to watch the smith at work at his forge, and by the ever changing group of people who stop
to watch the silversmith or goldsmith whenever one happens to be working near a window that gives a view of his bench from the sidewalk. Great machine shops and foundries always have a strong appeal to the interest of people not familiar with them; it is true the processes found in such plants belong rather to the trades than to the crafts, but the processes involved in these trades enter into many of the crafts on a small scale and often in a comparatively primitive way.

Employment for Leisure Time. The various forms of metal work can never furnish the easy and ready means for the employment of leisure time that some of the other crafts can offer, since the expense of the equipment is greater, and since, furthermore, there must be a special place to work if satisfactory results are to be obtained. These limitations, however, are not prohibitive to the great middle class of our population, using the word "class" in an economic sense.

The simplest form of metal work, punched copper, brass, or German silver, requires for equipment only an awl and mallet and a piece of board, and from this thin material can be made many articles that are both useful and ornamental.

Because of the obvious inconvenience involved, some kinds of metal work are not suitable for the majority of people as an avocation. Foundry and forge work are out of the question except for those few who live in
the country, with plenty of space and some means at their disposal. Bench work in metal is subject to many of the same restrictions, since it is very noisy and requires a very substantial bench with vise, and an intense heat for annealing. This leaves jewelry, with etching, engraving, and the setting of stones, as the form offering the greatest opportunities for the home worker. The necessary minimum cost for equipment for this would not exceed five dollars unless one intended to go into it professionally, and an ordinary table is a satisfactory place at which to work, although a fixed bench is better. With these possibilities in mind it would seem that a special course in jewelry might well be offered in high schools in addition to the general appreciation course. This double course would allow time enough so that those who were interested could develop sufficient skill to really enjoy working in silver and gold, and would give them some incentive to acquire an outfit of their own and continue the work in their homes as an avocation.

Common Practise in Schools. In the public schools of elementary grade, practically no work in metals has been offered except where, as with the leather, a drawing teacher has introduced some little punched metal to illustrate the work in design. In the high schools of large cities, there is usually a
course in machine shop practise, with some forging. Courses in art metal are sometimes given in the better secondary schools of the country.

Suggested Plan. The work in thin metals has been carried on successfully with boys and girls from the fourth grade up through the elementary course in the University Elementary School, and not by one teacher but by several. This experience seems to show conclusively that this phase of the work is adapted for use in the middle grades as well as the higher. The possibilities of design in this branch of metal work are only a little more restricted than in leather work. There are fewer suitable motives, and the handling of them is more restricted, since masses alone can be used successfully.

Simple bench work in metals is quite suitable for those grades in which woodwork alone is usually offered. There is nothing in the nature of the material or the cost of the equipment that gives wood any advantages over metal as a suitable subject in these upper grammar grades, and tradition, that ogre of all school subjects, seems to be entirely responsible for the selection of wood to the exclusion of metal in so many of our schools. Certainly when we come to courses

suitable for high school students, manual arts teachers are agreed that various forms of metal work are to be recommended. In this connection attention might well be called to a high school course in metal work arranged under the direction of Associate Professor I.S. Griffith at the University of Missouri. That course includes chipping and filing, forging, foundry, hammered copper and brass, etching, repousse', hard and soft soldering, work in silver with the setting of semi-precious stones, and a little engraving. A course similar to this model course was given to students of the University High School during the first semester of the year 1914-1915 with marked success. The instructor in charge was M.H. Brigham. The writer has seen work done in the schools in New England by pupils in the upper grammar and high school years that rivaled in appropriateness of design and skill in execution some of the work offered for sale in the various craft shops of the country.

Girls seem to have a more direct interest in the making of jewelry and setting of precious and semi-precious stones than boys have; such, of course, is not always the case, but in general, since custom allows to girls greater latitude in the matter of personal adornment than it allows to boys, the finished articles may appeal more strongly to girls than to boys.

Design plays a very important part in the success of this kind of work, since much valuable material may be used without satisfactory results unless the design is appropriate and carefully worked out. The only way to acquire this skill in design is to parallel the work in the actual material with work in applied design, making careful drawings and then trying them out in the proper metal. Some experience with the actual materials is almost necessary for an intelligent understanding of the way the principles of design may be applied to this kind of material.
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Original Design for Copper Plate
Background Etched.
Lip of Plate Raised One-Half Inch.
1. Original Design for Copper Watch Fob. Green Set.
2. + 3. Original Design for Fob Varied to Suit Shape of Stone
8. Silver Ring Set With Abalone Blister.
11. Silver Ring Set With Rose Quartz.
University High School Art Metal. Hammered, Etched, etc.

Direction of M. H. Brigham
University High School Forging and Bench Metal

Direction of M. H. Brigham.
Section 6. Stencilling.

Nature and Description. Those people who are not familiar with the making of stencils will find it interesting to note how it has been so simply accomplished.

There is a great deal of little people working behind the scenes to say nothing of those in the background who make it possible for you to be in the light of the limelight. It's all in the background.

University High School Foundry Work

Direction of M. H. Brigham.
Section 6. Stencilling.

Nature and Description. Those people who are interested in household decoration cannot help but be interested in stencilling, since it has so many possibilities of effective use at very little cost. The custom of living in apartments and changing often from one to another has discouraged what little interest in such matters might be natural to people, but an increasing amount of attention is being paid to the places where we live, and there is an increasing disposition on the part of many people to acquire permanent homes for themselves. This means an increased amount of interest in the matter of home decoration, which, as stated before, must imply an interest in this important method of decoration.

Stencilling includes the application of units of design to all sorts of fabrics and surfaces with all sorts of mediums, and in these days of emphasis upon prevocational education, a craft that is so closely related to many forms of skilled labor should certainly be given a place in the public schools.

Interest for Pupils. We are apt to think of stencilling as the applying of more or less pretty designs to cloth to be used for cushion covers and curtains, and therefore as being of interest only to a limited number of girls; but when we stop to consider
its higher, or at least more difficult, forms, such
are in constant use by our professional mural
decorators, we realize that it should have an interest
for a large number of people, and that it will have
an interest for them when they are shown its possibilities.

The mere using of the colors will be enough
to interest the pupils, and therein lies one of the
dangers that should be avoided. Too great an interest
in the colors may lead to a neglect of the design side.
Not enough time will be spent in working up the designs,
and unsatisfactory ones will be used. Or else the
inferior commercial designs that can be so readily pur-
chased will be used; and this usually results in an
inharmonious product that will be a reproach to the
maker.

This does not imply that many of the designs
for sale are not superior, because they are; but neither
does it mean that they are suitable for all purposes
and places. Only by careful study of the surroundings
and then by such a modification of the selected design
as will make it suit those surroundings can the most
satisfactory results be expected. This is as true of
original designs as of commercial ones.

Employment for Leisure Time. The all-important
parts of stencilling are the making of the design and
the cutting of the stencil. Care may be necessary in
other parts of the work, but the real skill is shown here, and we have here a simple but absorbing means of occupying leisure time. All that is required is pencil, rule, paper and knife, although other drawing instruments may be helpful. The wide range of materials and colors and the variety of articles that can be appropriately decorated with stencilling provide the greatest possible liberty to the individual worker, whether his problem be a border for milady's scarf or a frieze for a public building.

Common Practise in Schools. A little work in the simpler forms of stencilling is being done in connection with the courses in drawing in many of the school systems where a special teacher of drawing is employed, but not to the extent to which it might be done. One of the criticisms of much of the art work in our schools has been that it was too abstract and too little related to the practical everyday life of the pupils. Here is a point of contact that needs to be considered seriously by teachers of drawing as well as teachers of the manual arts.

Suggested Plan. While care must be exercised if neat results are to be achieved by stencilling, yet here is no reason why simple forms should not be
taught as early as paper cutting (in the first or second grade) whenever there is any call for the repetition of one motive in design. This matter of the repetition of motive occurs in all the grades, and while materials more difficult to handle will be used in the higher grades and more elaborate designs needed, yet the principle is the same in all cases, and the pupil may develop a high degree of skill in the course of his experience with all sorts of materials and color mediums. If time is lacking for so much of this work, it might be substituted for some of the more formal work in drawing. In the high school a definite course in the more advanced forms of stencilling would probably be the best way of handling this craft.
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Border Design by Graduate of Pratt Institute, N.Y. City

Border Design by Graduate of Pratt Institute
Tulip Design 5 3/4" X 5 3/4"
Japanese Design 5 1/2" X 5 1/2"

Japanese Rose 3 3/4" X 6 1/2"

Fleur-de-lis 3 3/8" X 5"
Pine Trees 8" X 12 1/2"

Commercial Designs for Stencils.
From 'The Modern Priscilla for November 1908.'
Section 7. Weaving.

Nature and Description. Much of the beauty of the old hand-woven linens and woolens is dependant upon the unevenness of texture, and this is due not so much to the fact that the material was woven by hand as that the wool or flax was carded and spun by hand. In our hand-weaving of today we must use yarn and thread that have been prepared by machines and that lack that charming inequality of texture that makes the hand carded and spun products so attractive and so different from those turned out by machines. Carding and spinning as cottage industries are almost lost arts today, and probably their revival would be neither expedient nor possible, but the charm they added to textiles will be appreciated by all who have the opportunity to see side by side a piece of linen prepared entirely by hand and another that is the product of machines.

Interest for Pupils. It is hard for us, today, to say whether the interest in weaving which without doubt does exist at present is a fundamental affair that will be permanent, or whether it is a by-product of the popular wave of interest in all forms of handwork. At all events, the simpler forms of weaving are interesting to the smaller children, if the eagerness with which they take up the work is any proof; and whenever the larger hand looms are
provided, the older pupils show an equal interest in weaving cloth of various kinds as well as rugs. They often spend their recesses and other play periods in this work if not prevented.

Employment for Leisure Time. Weaving is not a suitable avocation for the majority of city and town people, because they usually live in flats and apartments, and any weaving worthy of the name requires considerable room, and a rather expensive outfit. There are a very few of the old looms that have been preserved and handed down as heirlooms, but they are large, clumsy machines when compared with the new ones. There are several makes of hand looms on the market, but one that is capable of turning out good work will cost thirty dollars or more. Pillow covers and even small rugs can be woven on frames similar to those used in the grades but larger, but these frames cannot be used with any degree of success except in teaching the structure of textiles; they cannot be used for weaving, as such, where the emphasis is on the finished product.

It is true that the Indians and other primitive peoples have done exquisite work on the very crudest of looms and frames, but they have all placed a much lower valuation on human time and labor than is possible today even in the matter of an avocation. We may be fairly
safe in assuming that handwork with such primitive implements cannot be pleasurable in a high degree, because of the amount of drudgery involved.

Common Practise in Schools. Nearly all city school systems provide materials for the weaving of holders and other small articles in connection with the drawing, but anything beyond that is very unusual, as far as the public schools are concerned.

Suggested Plan. The weaving of holders and other small articles may well be done in the first grades, and all that is needed is the cardboard weaving frames that can be made by the pupils themselves. They may need some help in threading them, but usually they only need to be shown how it should be done. The carpet thread and roving required for this work is coarse enough and the processes require a degree of coordination low enough so that there can be no objection to the weaving on those points. Even in the first grade weaving with strips of paper or splints is a pleasant and profitable occupation, since it calls into play judgment and discrimination in the selection and use of colors and in rudimentary problems in design.

In the fourth, fifth and sixth grades weaving with finer materials and on a larger scale may be attempted. Wooden weaving frames may be bought or made in the seventh grade woodworking classes, and small rugs, doll hammocks,
and other small articles may be made. There is a wide field here for the application of the principles of design, and the most satisfactory work will be secured where much attention is paid to the designing before any work is done on the articles themselves.

In the eighth grade and in the high school, real hand looms can be used to advantage, and rugs, carpets, curtains, and many other articles or use in the school and home can be produced.

The equipment for weaving in the high school would cost no more than the fitting up of a woodshop and could be used to good advantage by both boys and girls.

The difficulty here as with the other crafts is a supply of properly trained teachers. Because of our traditions we have been training our manual arts teachers to work in nothing but wood, with perhaps some little work with metals; but there seems no good reason for ignoring so entirely the other crafts in making out courses of study. If there were a demand for teachers trained to work with materials other than wood, there would soon be a supply of such teachers available.

While weaving is suitable as an avocation for only a limited number of people, yet from its bearing on our industrial life and from the standpoint of the interest of the pupils it should be offered as an elective subject in the high schools if not in the grades.
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Small Rugs Woven on Wooden Frames.
Different Weaves and Designs.

Handloom Weaving with Border Design.
Woven by R. M. Dewey.
Section 8. Woodcarving.

Nature and Description. Woodcarving, one of the oldest and most dignified of the crafts, and one which has reached a very high degree of development in Europe, seems to have been largely neglected in this country by the schools, and in fact by the general public. There is a comparatively small body of woodcarvers, mostly foreigners, who work in our piano factories and cabinet shops who put on the higher grade pianos and furniture the few touches of carving, and who do the exquisite carving that we see in the chancels of our larger city churches, and, to a certain extent, in the interior finish of our expensive private residences.

This seems unusual when we remember that woodcarving was one of the forms of woodwork first introduced into the schools of this country and that Swedish Sloyd in the form in which it was first introduced into this country would normally lead directly to carving rather than to the more general forms of woodwork.

Although to the people of Europe woodcarving is a serious trade, a means of earning a living, yet the fact that the master craftsman and his apprentice are so often seen working together there would indicate that there must be in the work itself something of fundamental interest that will appeal to young as well as old.
Carving may well furnish the distinctive touch in our housefurnishings that is so eagerly sought in these days, and it will furnish this touch very completely when the individual home-maker sees its possibilities and makes use of so simple a way of gaining his desires. A room furnished with well carved articles gives an impression of richness and dignity that it is hard to equal through the mere expenditure of money. To be sure, the carved chairs and chests of the Middle Ages are now practically without money value and are to be found only in the museums of the larger cities; but anyone with an appreciation of design who is willing to do the work can duplicate almost any of these ancient pieces of furniture. It requires time and patience, but so do all things that are really worth while, and if one of our aims is to provide employment for leisure time, we must look upon this aspect of the matter as an asset rather than a liability.

To many people the modern carvings are vastly superior to the old ones as far as design goes. We cannot hope to surpass the skill of the workers of long ago when human life and labor were held so lightly, but we can equal it; and we can go beyond them in design, since we have had the advantage of these added centuries of study and application of its principles.

One can hardly do justice to the subject of woodcarving without paying tribute to the marvelous
skill of the Japanese in this craft. While all must regret the flood of cheap carving that they have put on the market to meet the popular demand for Japanese articles, yet one can only marvel at the panels from their temples and at many of the articles for household use that they have produced in the past. They are doubtless still producing these to a certain extent but we seldom see them in the shops. These panels, screens, and trays show the highest possible degree of skill both in design and execution.

Interest for Pupils. The free use of the tools and the play of the imagination involved in carving must appeal to the interest of many people. The eager interest with which pupils turn to even the simplest forms of carving whenever it is offered is proof that it is of real interest to them and so on that point it must be considered a suitable subject for instruction in our schools. When given as a complement to the courses in woodworking it increases the pupils interest in both.

Employment for Leisure Time. Considered as a means of pleasurable employment of leisure time, there is practically nothing to be said against carving, and much for it. Five dollars will provide an ample assortment of tools, and all but the very softest of our woods are suitable material. The pieces of wood with twisted grain and knots, that the cabinet maker
usually reject, give the carver his best opportunity to show his skill in bringing out the rarest beauties of the wood.

Common Practise in Schools. Among the first courses in the manual arts offered in this country was an evening course in woodcarving offered in Boston to boys and young men; and today, in the school founded by John Eliot, the Apostle to the Indians, courses in woodcarving are still offered at practically no cost except a registration fee, to residents of the city. In other private schools in Boston, in the Throop Polytechnic Institute in Pasadena, California, and in other private schools throughout the country, this craft is taught to a limited number of men and women, but it is a matter for regret that so little has been done in the public schools.

In Boston, and probably in other cities as well, the teaching of carving is optional with the individual manual training teachers. Chip carving is sometimes given in the seventh grade in connection with the woodwork, and other forms are taught later as the students are ready for them. In Throop Polytechnic Institute, considerable work has been done with the boys in the grades of the practice school in carving, and the results have been most satisfactory.
Suggested Plan. Since seventh and eighth grade pupils have done very satisfactory work in carving and have acquired the foundation for considerable skill later on, and since boys are apprenticed to this craft at an early age in Europe, the logical thing to do would be to make provision for the teaching of the craft in the public schools, beginning in the elementary division. In the high schools special courses should be offered. The ideal way to teach carving in the grades and high schools would be in connection with the regular courses in woodwork and furniture construction; but where this does not seem possible, then the special courses would be the next best thing. The best way to learn woodcarving would be to use it as a method of enrichment in the construction of useful objects that have immediate value to young men and women. There is no adequate reason why it should not be made a part of the regular manual training work. This plan would probably result in a benefit to both forms of woodwork as the lack of restrictions in carving would be checked by the necessity of working to the construction measurements, and the effect of absolute accuracy required in the cabinet making would be balanced by the less restricted possibilities of the carving. The two forms are almost never separated in real life; why should they be kept distinct in our schools?
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Walnut Tray. 12" X 5" X 3/4"

Walnut Tray. 12" X 5" X 3/4"

End of Mahogany Tray for Tea Service
Leaf Tray 5½" X 5½"

Leaf Tray 5" X 10"

End for Walnut Bookrack