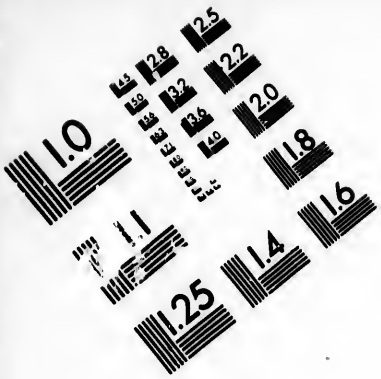

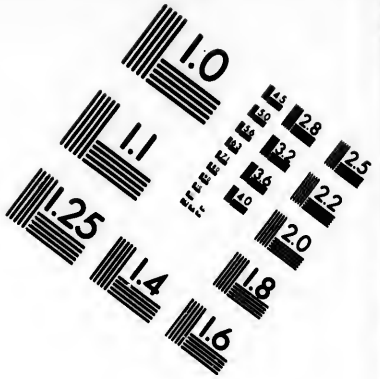

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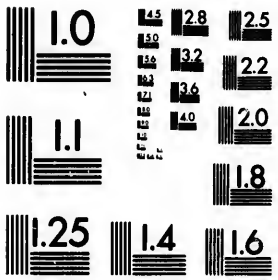

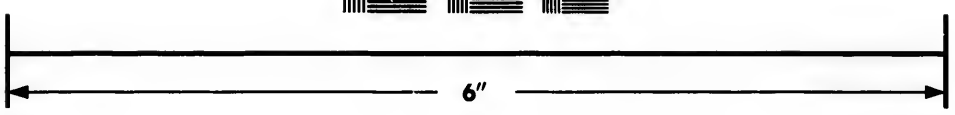

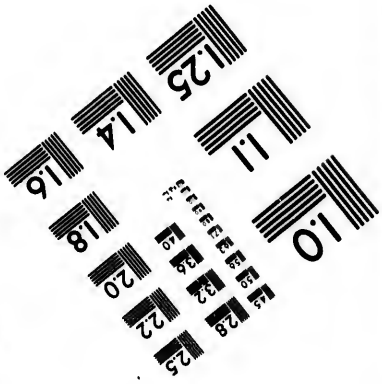

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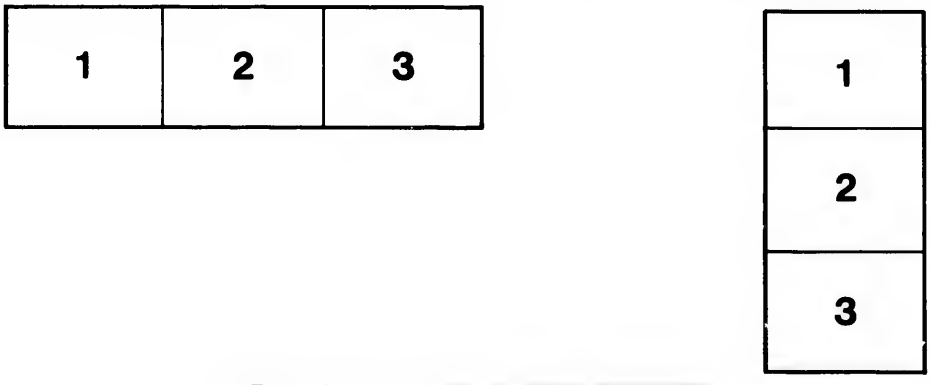

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THE ART MOVEMENT IN AMERICA

REPRINTED FROM THE CENTURY MAGAZINE.

FOR THE

VICTORIA SCHOOL OF ART AND DESIGN

OF HALIFAX, N. S.

THE ART MOVEMENT IN AMERICA.

THREE ARTICLES REPRINTED FROM THE CENTURY MAGAZINE
FOR THE BENEFIT OF

THE VICTORIA SCHOOL OF ART AND DESIGN
OF HALIFAX, N. S.

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PREFACE.

A few words may be necessary as preface to this pamphlet, which has been so kindly republished for the Victoria School of Art and Design, by THE CENTURY CO., *publishers,* 33 *East Seventeenth Street, Union Square, New-York, U. S. A.*

The object of reprinting these three articles, respectively entitled "The Western Art Movement," "Hand-craft and Rede-craft," and "Need of Trade Schools," which appeared last year in THE CENTURY MAGAZINE, *is, first, to put before the Nova Scotia public, in as small a compass as possible, what has been done and is being done in the far-off Western cities of the United States by the establishment of Schools of Art and Design, not only in encouraging the Fine Arts, such as painting, sculpture, architecture, but in giving a remarkable impetus and a higher artistic value to all the various branches of the mechanical and industrial arts. Second, with a view of enlightening the reading public, how best to promote and support such a school in Halifax; and third, to prove the immense advantage of such a school, which would afford technical education in the mechanical and industrial arts, and thus facilitate the production of articles of excellent and beautiful workmanship, and at the same time serve to give our artisans those advantages which they are now obliged to seek in foreign cities.*

A. H. LEONOWENS.

Sunnyside, Halifax, 26*th April,* 1887.

THE ART MOVEMENT IN AMERICA.

REPRINTED FROM THE CENTURY MAGAZINE.

From THE CENTURY *for August, 1886.*

THE WESTERN ART MOVEMENT.

WHERE the vineyards of Nicholas Longworth clothed the hilltops above Cincinnati within the memory of living men now stands a spacious art museum, and close beside it there will be an art-school building more generously appointed than any other in our land. In St. Louis, where French traders gathered with their furs since the opening of the century, a new art museum supplements the work of a school whose pupils profit by the latest lessons of South Kensington and German art centers, as well as by the academic teachings of Paris. Chicago, with citizens still living who watched the Indians depart, is building for her Art Institute a new museum. The money is ready for art museums in Milwaukee and Detroit. The Minneapolis Society of Fine Arts has established an art school of ambitious plans. The "first white male child born in Kansas" is trustee of a State Art Association, and men who fought for "free soil" are now collecting autotypes and casts. These plain facts have an eloquence of their own. Their story is told again in the art societies, exhibitions, and lectures of minor cities throughout the middle West and beyond. History has recorded the period of chasing or being chased by the red man, of clearing forests and breaking prairies, the marvelous growth of agriculture, commerce, and manufactures, and the resultant wealth. But of the working of that most abstract of all ideas, the art feeling, little has been told. And now it is suddenly made manifest that the most active among the current phases of that formative condition which we call American art is the movement in progress throughout our West.

If this active interest in art were shown only in the buying of costly paintings for private galleries, and the building of wonderful examples of architecture for private occupancy, it would have a very minor significance. These are the usual accompaniments of prosperity, too often the outward and visible signs of a theory of art as something concerning only a favored few, as represented only by paintings and statues in Dives's galleries. But the Western art movement with which we have to do is an expression of a broader and sounder idea. Some of our Western legislators have been sturdily defending the thirty per cent. duty upon works of art, doubtless in the firm belief that art is an extravagant luxury. But meantime the constituents of these gentlemen have proved their conviction that art not only gives pleasure to the many, but has such practical value as to be worth the investment of much money and time. The work has been done by an army of citizens without thought of private advantage. These museums and schools are of the people and for the people, at least in theory. There will be discouraging mistakes and experimental gropings, just as there have been museums which have become mere storehouses of curiosities, and schools enslaved by routine. But the West is progressive, eager to learn, and willing to profit by the lessons of past failures. Her substantial beginnings are the partial realization of ambitious plans.

I.

OVER a million dollars have been given to the art school and museum of Cincinnati within the last six years. This, like the foundation of the College of Music, is the ripened

expression of an art sentiment which has existed for over forty years. The feeling has been fostered by the large German population of the city, and strongly directed by German influence, if one may judge by the continuous devotion to the Düsseldorf cult in pictorial art. Cincinnati was the first of the Western cities to become known as a home of picture-collectors, and it holds the first place at the present time in the amount of its recent gifts to art. After a generation of desultory picture-collecting came an art school which struggled into existence seventeen years ago, with half a dozen pupils, the scant income from fees eked out by private generosity. From this beginning has grown up a school attended by over four hundred pupils, and employing a corps of ten teachers. Its independence is assured by a yearly income of fifteen thousand dollars from the Joseph Longworth endowment fund. Its new home promises to be the best American art-school building. At the National Academy in New York most of the pupils are confined to two imperfectly lighted rooms in the basement and one other. The Cincinnati art students will have the liberty of a building considerably larger than the entire Academy.

All this has come about after dreary periods of the disappointment and discouragement which are the lot of missionaries in art as in science or religion. Once the doubtful experiment was tried of placing the school under the control of the city fathers by uniting it with the University of Cincinnati. The result hardly encouraged a desire for a government paternal in its care of art. The real father of the school was the late Joseph Longworth, a name intimately associated with the growth of art in Cincinnati. From him came the first important recognition which the school obtained, probably the first large gift to art made in the city. It was his intention to endow the school more liberally on condition that its control should be transferred to the Museum Association. Within thirty days after his death his son Nicholas Longworth carried out this intention. The transfer was effected early in 1884, and the school endowed with a fund of $371,000. And finally — for the record of art in this fortunate city is a record of acts of splendid munificence — there came to the school from Mr. David Sinton a gift of $75,000 for a new building, and, added to the golden shower, a legacy of $20,000 from the late Reuben R. Springer. We speculate upon the emotions of the school's principal as he contrasts this era of great things with the days of struggle, of the half dozen pupils, of aldermanic patronage. Yet all this time the school, under the charge of Mr. Noble, has faithfully offered instruction not only to pupils from the city but to others from all the country around.

The new school building, like the art museum, stands upon the crest of Mt. Adams, three hundred and fifty feet above the Ohio, a site given by the city in a park which probably is better entitled to the name of Eden in June than when I saw it under a leaden February sky. Below in the south-west lay an "impression" of Cincinnati. Spires and gables with vague outlines underneath peered through sad-colored clouds of soft-coal smoke, nothing defined except the massive shoulders of outlying hills. Perhaps this "impressionistic" view from the windows of the art school may offset too great emphasis upon definition in the class-room. The building will combine Romanesque arches with gables and dormers in lighter vein, but in general it will harmonize with the more consistently Romanesque museum near by. The walls of both are of blue limestone, the roofs of red Akron tiles. Of light and air and floor-space the art school should have an abundance. The ground plan is 82 feet by 106, or 141 including the lecture-room, and there will be three floors, the first two containing generous rooms for primary, modeling, and wood-carving classes, the uppermost affording a noble hall a hundred feet in length for classes in drawing from casts and from the costumed model. On the same floor will be ten studios, an excellent feature, which should encourage teachers and advance students to independent work. With all these opportunities, and with tuition fees a matter of the least consequence, the responsibility of him to whom much was given is certainly heavy upon this school.

At present, in addition to the usual academic curriculum, there are departments of wood-carving, decorative designing, and metal-work, and in the modeling department some attention is given to industrial work. With a school increasing and prospering as this has done in a city of comparatively small size, there is a natural tendency toward self-glorification, and it may not be easy for a stranger to measure justly the amount of its productiveness. The principal of the school would probably lay the greatest stress upon the results accomplished by the academic classes, the fidelity of drawings from the antique, and the accuracy of life-studies, which certainly attest the earnestness of the pupils. Those who take up the study of art as an amusement are probably in the majority here as elsewhere. Some become teachers of drawing, and a few professional artists are numbered among the graduates, one of whom, Mr. Charles H. Niehaus, the sculptor of a statue of Garfield, has

recently received a commission for an equestrian statue of Robert E. Lee. A score or more of artists have gone out from Cincinnati to win no inconsiderable degree of public recognition; many of them have never been connected with the school as pupils, and unfortunately none of the younger men who are known in our exhibitions and in the work of other schools have been retained as teachers.

But some of the graduates have applied their training to various forms of industrial work. The designers and decorators in the Rookwood Potteries have been drawn from the art school; its pupils helped to do the wood-carving upon the great organ in the Music Hall; in the adjoining Odeon the ceiling and proscenium arch were decorated by their hands; and some of them have been engaged in frescoing and mural painting within the new museum. There is nothing of all this beneath the dignity of an artist, nothing to prevent the worker from painting ideal pictures or modeling statues if he will. Yet few art schools emphasize the truth that the principles of pure and applied art are the same, and that the training is the same up to a certain point. It is our pitiful fashion to rank as artist only the painter of pictures or sculptor of statues. Perhaps it is through impatience at such narrowness that the vulgar have so misused the word.

No application of art can be more appropriate than wood-carving and the modeling and decorating of pottery in a city where the manufacture of furniture is a large industry, and where beds of native clay are within easy reach. The father of Cincinnati wood-carving, Mr. Henry Fry, has for years trained pupils in the old apprentice fashion, hardly dignifying with the name of school the workshop where he and his son, Mr. William Fry, have wrought in the spirit of true artist artisans. Instruction in wood-carving by Mr. Benn Pitman has for some years formed a department of the School of Design. "When it became publicly known that there was to be a grand organ placed in the new Music Hall, and that the screen was to be built at home, all these people — men and women, boys and girls — with whom life had become so much more beautiful and attractive by reason of their art-studies, came quickly forward and said: 'Let us make the designs; let us carve the panels, frames, friezes, capitals, and finials of the organ screen. We will work with hands and brains and heart, and offer the results of our labor as our contribution toward the people's organ.'" So designs for Morning, Evening, and Noon, with trumpet and passion flowers, hawthorn, oak-leaves, wistaria, and lilies, and a multitude of other graceful shapes, were wrought out for the decoration of "the people's organ." Mr. William Fry led the work, aided by his daughter and father; and under Mr. Pitman's care, "more than a hundred ladies who were or had been students of the carving classes" of the School of Design began work upon carvings for the organ screen. Mr. Springer's generosity was shown again in an offer of prizes for the best carvings; but the offer was hardly needed, I fancy, to quicken the zeal of the workers. There is something very pleasant in this picture, something which brings back to us a little of the spirit of the cathedral-building age. What worthier ambition could they have than the development of a Cincinnati school of wood-carvers, to be known like the schools of the middle ages? Whatever may be said of our changed conditions and the spirit of the modern time, if there is to be any abiding vitality in our art it must come partly from the encouragement of efforts like these.

It is only a few years since the manufacture of pottery on a scale of any importance was begun in Cincinnati, but Cincinnati pottery has already more than a local reputation. Here, as in every phase of the city's growth in art, the influence of woman should be recognized. The Woman's Pottery Club, organized many years since, has proved to be something more than "amusement for the idle rich." Modeling in clay and china-painting were introduced into the School of Design in its early days. To a member of the club, Miss Louise McLaughlin, is assigned the credit of rediscovering the Haviland process of decoration under the glaze. Another member, Mrs. Maria Longworth Nichols, who for some time supported a pottery school, founded the Rookwood Potteries — an example of the influence of international expositions. The Japanese collections at our Centennial Exhibition suggested to Mrs. Nichols the idea of developing possibilities latent in the clays of the Ohio Valley. At first the work of these potteries was imitative, naturally enough. After a period of Haviland work with Japanese modifications, came an attempt at a distinctive style, but more or less assimilation has been unavoidable. At present one characteristic of these potteries is the unusual variety of clay bodies and glazes. Another is the absence of restrictions upon the artists. They are not bound, as in purely commercial enterprises, to the production of a given amount of work, but are left free and encouraged in every way to produce individual work. There must be something more than the copying of Royal Worcester or Barbetine, and there must be less deference to taste for showy decoration, if we are to have American pottery which

shall be valued for its art. A vase perfect in the quality and color of its ground is of a very different rank from the imperfect piece which challenges the eye by a mass of gaudy floral ornamentation. The perfection and strengthening of the ground and simplicity of decoration, where decoration is called for, are the expressed aims of these potteries. There have been some essays in solid colors, with glazes of considerable beauty, after the standards set by the greatest ceramists of the world, the Oriental artists. Examples of this work are kept before the designers, as M. Haviland keeps them in his private collection, representing standards which have not yet been reached. The graduates of the art school in these potteries may or may not be called artists; but there are plenty of painters of pictures who are doing far less to spread a love of art.

The Cincinnati Museum has its record yet to make. The new building in Eden Park is the result of recent efforts, although a fruitless attempt to raise funds for a museum was made ten years ago, and the Woman's Art Museum Association existed long before plans were considered for the present building. But it was left for a man who knew little of art, who "simply acted upon what he heard talked of about him," to make the first decisive move. It was in September, 1880, that the "talk" was crystallized into shape by an offer from the late Charles W. West of $150,000 for a museum building, conditional upon the raising of a like sum by subscriptions. There was a prompt response. The first report of the Museum Association, for 1882, contains a list of four hundred and fifty-five subscribers, who gave from $5 to $10,000 each, the total, including the gift of Mr. West, amounting to $316,000. The city gave a building site, and the next question was answered by Mr. West. "We have money enough to build our museum," he said, "but how shall we support it?" The answer was an endowment of $150,000, a gift made known at the opening of temporary exhibition rooms in 1882. Like the memory of Peter Cooper in New York, the memories of Longworth, West, and Springer will be kept alive by their benefactions to their city.

The new museum building has a substantial, simple character, and the rounded bluffs of the vicinity are surroundings not ill adapted to the Romanesque. The present building represents only the central pavilion and west wing of the future museum as pictured in the dreams of its friends. But the present dimensions, 214 feet in length by 107 in width, furnish enough floor-space for immediate needs. A touch of impressive effect is given by a spacious arched entrance, opening into a lofty hall with a double stairway, buttressed with blocks of Missouri granite. For the rest there are the usual work-shops and rooms for casts in the basement, a sculpture gallery, rooms for textile fabrics and four for Elkington reproductions on the first floor, and black-and-white and oil galleries on the second. The black-and-white room contains a collection of nine hundred drawings by C. F. Lessing — one of the distinctive features of the museum collections. There is said to be no such collection of black-and-white work by the prolific Berlin academist in any other museum, and the contemplation of his careful drawing and sturdy realism is expected to prove invaluable to art students. Couture, beloved of Boston art students, would be a heretic here.

The paintings represent German art, with the exception of some copies of "old masters," a few American pictures, and three or four French works of the academic order. Here are the Achenbachs, Hubner, Lessing, Humbert, Robbe, and Verboeckhoven, but one looks vainly for examples of the progressive French painters from Delacroix down. Was it a Cincinnati collector who declared that he had never seen a French picture to which he would give house-room? And was it one of his fellow-citizens who solemnly led a wondering visitor to a painting by Verboeckhoven, saying with impressive gesture, "That, sir, that is not a sheep. It is a Madonna!" Like the Pennsylvania Academy of Fine Arts, the museum has an example of the uproarious heroics in which our grandfathers delighted, an "important" painting by Benjamin West, "Ophelia before the King." At present there is in the museum another example of the English historico-heroic school by Benjamin Robert Haydon, "Christ's Entry into Jerusalem," the only one of his pictures probably in this country. More cheerful than West's disheveled Ophelia is the aspect of a sunny corner room devoted to the "Hillingford collection of armor," comprising half a dozen suits and eighty or ninety arms. A collection of two hundred pieces of pottery, increasing from year to year, illustrates the progress of work at the Rookwood Potteries. These examples have been given by the Woman's Art Association, and there are a few pieces from the Kezonta Potteries. A somewhat scanty supply of casts includes a few from groups modeled by pupils of the art school, who are also represented by a few paintings in the galleries. Some sculptures, tapestries, and coins attest the generosity of the museum's friends.

Nearly four-fifths of the museum collections, now valued at one hundred and fifty thou-

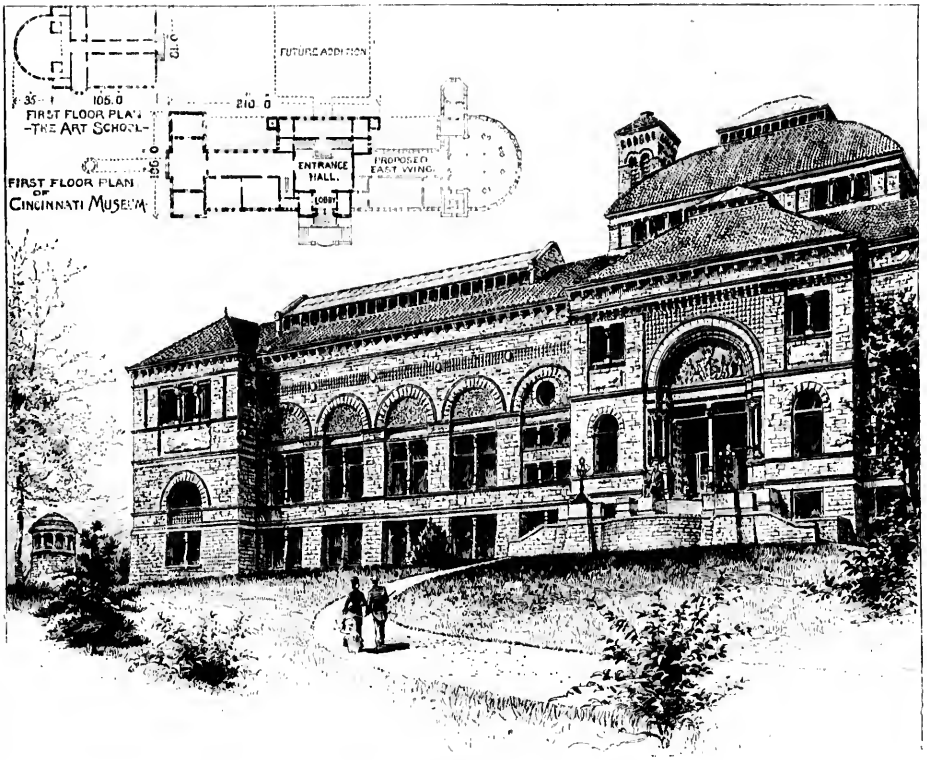
sand dollars, have come as gifts, the most considerable being the Longworth and Springer collections of paintings and drawings. With the exception of the Elkington reproductions of metal-work and Hellingford collection of arms and armor, there have been no purchases of consequence for a reason common to nearly all our museums with the exception of the Corcoran gallery. The income of this museum, derived from the West and Springer endowment funds, amounts to only about thirteen thousand dollars, less than that of the art school, a sum sufficient for its maintenance, but permitting little in the way of outside expenditures. But the noble spirit which the citizens of Cincinnati have shown promises to rescue this museum from the dependent condition of similar institutions. The museum which is powerless to exercise a right of selection may well fear "those bearing gifts." It is compelled to become a receptacle for all manner of odds and ends, prized, no doubt, by the donors, but in reality curiosities without educational value. Meantime the director may be fully aware of the suggestions supplied by such museums as those of South Kensington and Brussels. He may understand the value of such influences as are exerted by the collections in the Berlin and Munich industrial art museums, by the Museum of the Decorative Arts in Paris, by the recently established Museum of Comparative Sculpture at the Trocadéro Palace, and the gallery of photographs at the Louvre. Yet without an endowment fund providing for purchases his hands are tied.

The director of our Centennial Exhibition, General A. T. Goshorn, is the director of the Cincinnati museum and school, an assurance of their competent and harmonious administration. The lessons of the industrial art movement will not be lost upon Cincinnati if the director is sustained in the execution of his plans for the art school. These, as summarized in his last report, are "to secure instruction and training that will fit students for occupations requiring artistic skill, and to make practical applications of art to the ordinary uses of life. . . . The school must become an important factor in this region in the dissemination of art and in inducing its proper application to the industries." At the time when this report was in preparation, the editor of the "Courrier de l'Art" in Paris was commenting upon Cincinnati's new museum and school with the almost despairing exclamation, "Blind those who do not wish to comprehend that on all sides, in the entire universe, they wage obstinate war against the industrial art supremacy of France."

II.

With the exception of the museum presented to the School of Fine Arts by Wayman and Isabella Crowe there has been no large gift to art in St. Louis. The school, which for seven years has been a formally recognized department of the Washington University, is without endowment. And yet a school which might easily have sunk into an inconsequential routine department, and a museum which might have become a storehouse for curiosities with ample precedent, have been made one harmonious instrument for the execution of a purpose as broad as that represented by South Kensington. It is here that the element of personality comes in. This must be emphasized in noting methods and results in St. Louis. In twelve years the director has built up a school whose aim is the widest development of individual abilities, and whose advantages leave nothing more to be obtained in this country; a school not merely academic, but constantly teaching the dignity and value of the application of art education to industry. This personal influence is felt in the corps of teachers, enthusiastic artists trained in the studios of Dupré, Gérôme, Boulanger, Yvon, Cabanel, Lefebvre, and Barth. It is to be recognized in the selections for the museum collections, the judiciously chosen casts, the autotypes and carbon prints, the examples of metal-work, potteries and wood-carving, all selected with a view to their educational value. It is not strange that this active personality has enlisted the practical sympathy of one citizen after another, and that outside aid has again and again been forthcoming, to supply this or that deficiency. The story of the St. Louis school shows that earnest and practical art-work is appreciated by those whom dilettanti rank as Philistines.

The class-work of the school is constantly supplemented by references to standards fixed by the great artists of the past. The museum collections are in actual use, not mere objects of wonder for the idle and curious. In the regular classes the first aim is to develop a truthful apprehension of construction, and then of values and relations. High finish is disregarded. In the elementary class the pupil first works outline and shaded drawings from objects whose contours are straight lines. He advances, after mastering difficulties due to the position of these objects, to simpler geometrical forms, the curves of Greek vases and models patterned after the antique. Then comes drawing from models of portions of the human figure, and models of natural objects like fruit and foliage and of architectural forms. In the antique class, a comprehensive



ART SCHOOL AND MUSEUM, CINCINNATI, OHIO.

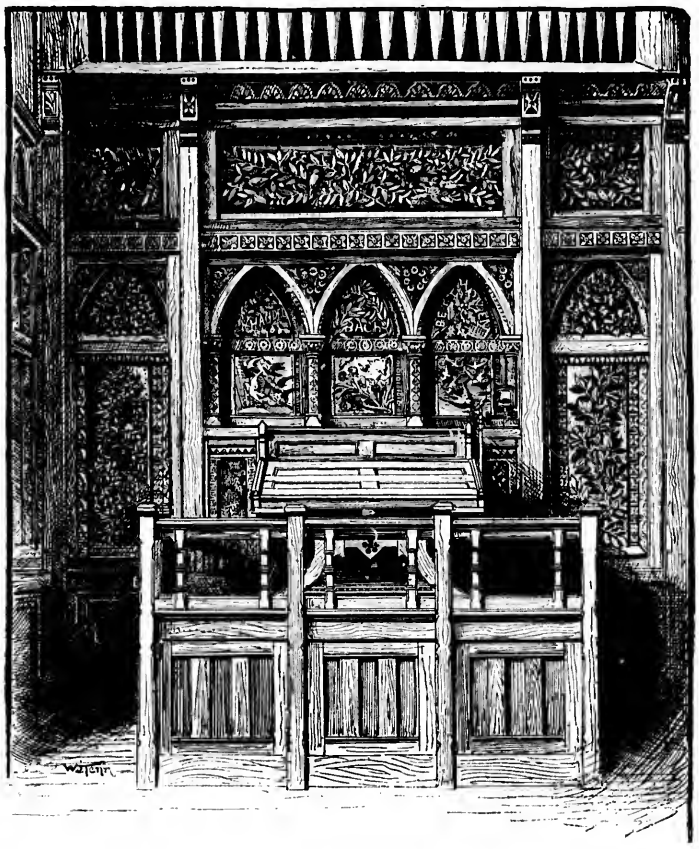
method of drawing and the education of the eye are the desired ends, rather than pictorial finish and the mere training of the hand. At the same time no chance is allowed for "accidental effects," and all stump processes are discarded. Close observation, patience, and perseverance are necessary here, and the eye is taught comprehension of general laws of construction as well as of lines and superficial forms. Gérôme's plates are constantly referred

CARVED PANEL — HAWTHORN.

DESIGN FOR AN ETCHED SALVER.

BY STUDENTS OF THE CINCINNATI ART SCHOOL.

CARVED PANEL — SWAMP ROSE.



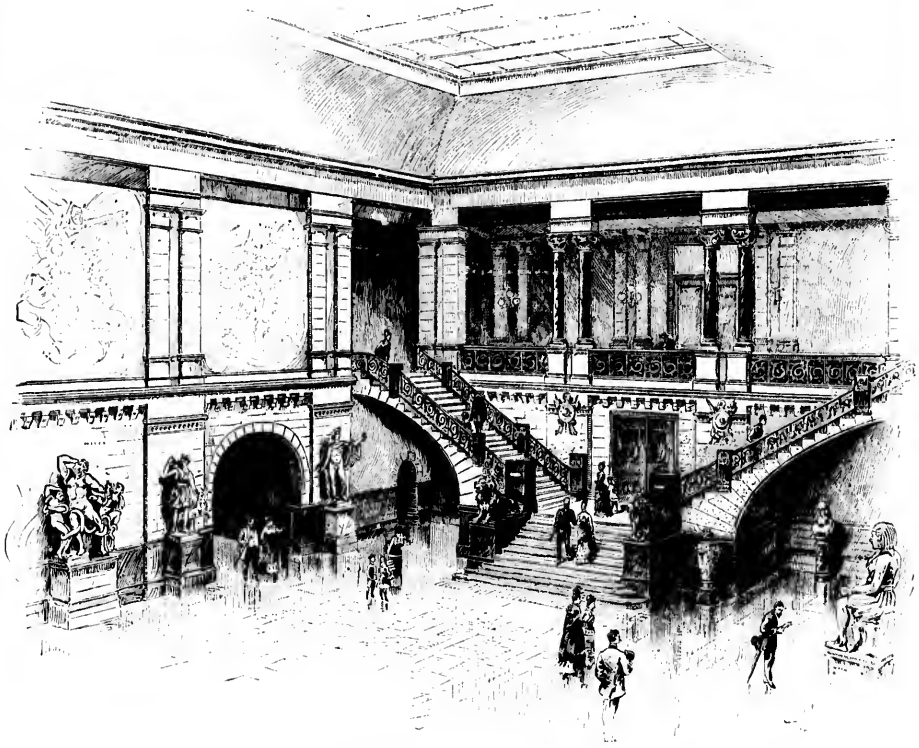
WOOD-CARVING ON ORGAN IN MUSIC HALL, CINCINNATI, BY PUPILS OF THE ART SCHOOL.

to in the work, and in the life class more attention is given to drawing than to painting. "In all cases the careful study of the model and a conscientious search for contours and construction requiring continual use of the mind are insisted upon. No effort is made to bring the students to a uniformity of method, except to the extent of instructing them to see forms as they really exist." Pupils are taught to view their subjects as a whole, thus properly subordinating parts and details. At the same time there is urged upon them self-reliant and conscientious care in determining and working out each part, that the eye may grasp and the hand reproduce exactly what is seen in the natural form. Modeling in the day classes is intended to supplement work in drawing and painting, but for the night pupils, most of whom are artisans, the work is more specific, consisting largely of forms used in exterior decoration and in architecture. In mechanical drawing more or less outside theoretical instruction is necessitated by the fact that many pupils come directly from their work-shops entirely uneducated.

That there may be no danger of routine instruction, each teacher spends every second or third year abroad, returning refreshed and invigorated to the work of the school. The old tendency of the college was to make of the teacher a mere class-room figure, a setter of tasks and hearer of lessons. The broader idea is to allow that teacher opportunities for original research, for a development of himself and an addition to the world's lore, which will react favorably upon his pupils. This principle is applied at the St. Louis School of Fine Arts. The teachers are allowed to develop themselves abroad. At home they are encouraged to "bring out the best that is in them"; and to secure favorable conditions for their creative work, they are to be provided with private studios. There is like encouragement for the pupils. No promises are made, no scholarships offered, but the pupil who shows himself extraordinarily deserving is very apt to find the way clear for a continuance of his studies abroad. These are but a few illustrations of the director's influence within the school, and outside upon men willing to help on a good cause presented in concrete form. By and by larger gifts will open a wider field of usefulness.

In the museum the pupils find models by which to correct their faults. Suppose a pupil shows a tendency to mere drawing for effect: the director or teacher presently places beside the drawing an autotype or carbon print which points a moral; and so with drawings overwrought in details. There are several hundred autotype reproductions of sketches,

studies, and paintings by masters from the fifteenth century to the present time. There are over a thousand carbon prints made from collections in the British Museum. They illustrate the historical development of art, like the collection of casts, which number over five hundred. In both collections waste has been avoided. Each cast is typical, representative of a time, and its relations are illustrated. to be reached by casts, autotypes, and oil-paintings. The paintings belonging to the museum are very few in number. There is no chamber of horrors yclept "old masters," no dreary collection left by the misdirected munificence of well-meaning but uninstructed citizens. The truly American idea of an art museum—a costly building filled with paintings usually dear at any price—is not realized



ENTRANCE HALL, CINCINNATI MUSEUM.

Here are object lessons for the youthful student, ranging from Egyptian and Assyrian reliefs to the sculptures of Michel Angelo. One of several architectural casts is without a duplicate in this country. This is a cast of the shrine of St. Sebald, in the church of that name at Nuremberg, which was wrought in the early sixteenth century by Peter Vischer and his five sons. The original is of metal-work, a branch of art which is fully recognized in the museum collections. The value of casts and autotypes is acknowledged in our museums, although it may be difficult to recall such complete collections as these in any city except Boston. But the plan of selection followed here has included other ends than those in St. Louis. The paintings selected for the museum are not to tell a story or tickle an idle fancy, but to teach one really interested in art something of values and relations, or a hint in composition, or something of breadth and freedom.

Pelouse, Harry Thompson, and Louis Loir are among the painters, but their work is subordinate to the collections of metal and potteries. There are several cases of cast-iron reproductions, of armor of the German and Italian renaissance, of Roman, Oriental, Gothic, and French forms, selected for the fineness of the designs, and to show iron-molders and foundrymen what has been done with common iron, of poorer quality than that used in

ROOKWOOD POTTERY — EARLY WORK.

LATE WORK.

St. Louis. In line with this purpose is the selection of several cases of electrotype reproductions, presented by a most judicious friend of the museum. Examples of Nuremberg and Ilsenberg iron-work enforce this appeal to the interest of men engaged in the manufacture of iron, St. Louis's greatest industry. The collection of pottery includes salt-glazed stoneware from the village of Hoehr, near Coblenz, a headquarters for pottery since 1400, with a representative group of Doulton ware chronologically arranged, examples of other English wares, and of Chinese porcelains.

Cases of fictile ivories reproduced, and a room with a Henri IV. mantel, to be devoted to old carved furniture, teach lessons in design to carvers of wood or metal-workers. Everything is significant; everything expresses a welcome to artist or art student, to designer, draughtsman, or practical worker. The spectacle of blacksmiths intently studying Nuremberg iron-work, and the knowledge that these men are embodying hints received at the museum in their work, are ample compensation for the absence of "old masters" of the American variety.

Out of Massachusetts comes the cry that her industrial supremacy is in danger, that her coarser industries are going to the South and West, that only by the development of the finer industries can New England hold her own. Yet the St. Louis School of Fine Arts is as near to Europe as the Boston schools. Yearly the director, after visiting the schools and museums of this country, goes to study the latest results of the South Kensington system, visits English potteries, the Continental schools and museums, notes the work of artist artisans at Bruges, Nuremberg, Ilsenberg; and after

this glimpse of art industry as well as art abroad, he returns to apply these first lessons at St. Louis, and to teach them in lectures delivered throughout the West. "As Cardinal Wiseman expressed it, 'Thus we find art and industry hand in hand, stimulating and supporting each other.' To bring about this relation between art and industry through the medium of our schools and museums of art is the work to which we in the West should give our energies." With such doctrines preached and practiced up and down the West, the East can hope for no monopoly of the finer industries. "The work to be done in the West," to quote Professor Ives again, "is not to bring French or other paintings before the public, but to do something with raw material. Nearly all the useful ores, with iron at the head, are found in Missouri. What the school and museum must help in doing is the working up of these ores with brains, so that the work shall be recognized, and a school founded, like those of the Nuremberg and Belgian iron-workers."

PROPOSED EAST WING OF CINCINNATI MUSEUM.

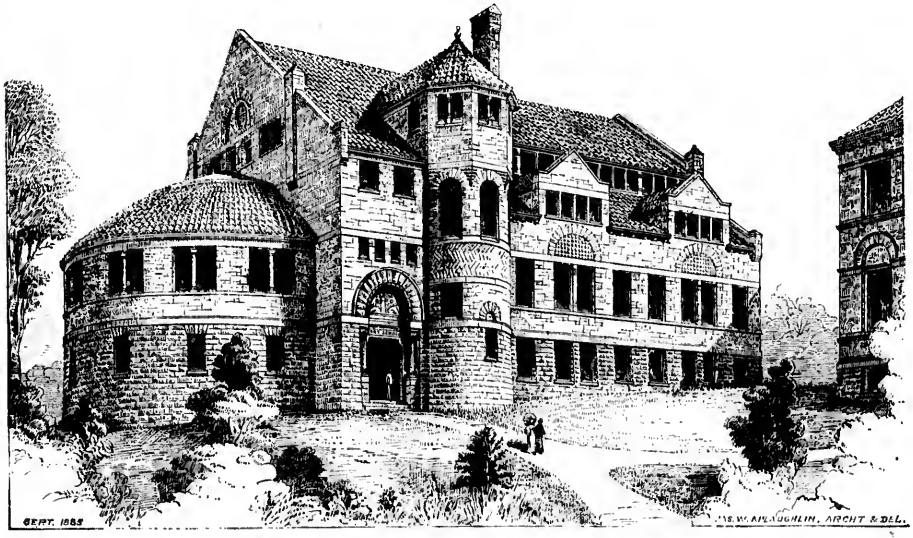
The force of this is being grasped by more

STATUE OF GARFIELD, CINCINNATI.
DESIGNED BY CHARLES H. NIEHAUS.

and more people through the West. Some of the examples of art in the museum were given by a man who had refused to do anything of the kind for a time, supposing that the museum was only for pictures. But when he learned the director's ideas his gifts came at once. Yet in the museum there are always good pictures, few though they be, with loan exhibitions from time to time. In the way of academic education the school aims to do all that any school can do in this country. But these distinctions in terms are confusing. What the St. Louis school aims to do is to give the best possible training in art which within certain limits is equally of use in painting pictures or decorative designing, in modeling statues, or in the designing-rooms of a stove-foundry. The collections in the museum and the pecuniary resources of the school are not large, but the work already done shows how much can be accomplished despite limited opportunities, with a catholic and wisely ordered purpose.

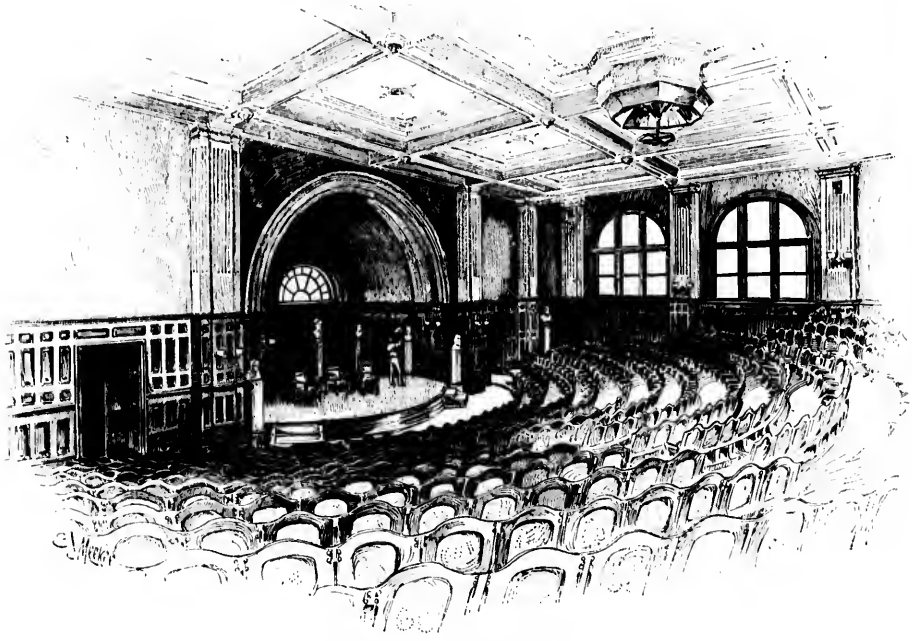
III.

In its relations to art the Western metropolis resembles to an extent the metropolis of the East. Chicago contains more professional artists than any other Western city, and this implies a picture market of some consequence. Various art associations center in the city, and there are frequent exhibitions of considerable importance. Of imposing business blocks and costly residences there is no lack, but—and here again the resemblance to New York comes in—there is a curious apathy regarding the advancement of the cause of art education. The unselfish public spirit which, as in Cincinnati, manifests itself in the building of art museums and the generous endowment of art schools, is not yet awakened in Chicago, although all this may be close at hand. The youth of the city, its



DESIGN FOR SINTON BUILDING FOR THE CINCINNATI ART SCHOOL.

marvelous development, its still more marvelous uprising since its destruction fifteen years ago, are explanation enough, perhaps, for the preoccupation of its citizens with individual material interests. "What has been done for art?" one asks. "What gifts have you made? What facilities for education in art have you placed within the reach of your people?" And the answer is, "Wait. We are young.



LECTURE ROOM, ST. LOUIS MUSEUM.

This ground was cleared of Indians hardly fifty years ago. Look at our business streets and avenues of private residences. Remember our population of three-quarters of a million and our vast business interests. Remember that the men whom you meet have been working night and day for fifteen years to build this great city up from ashes. Their energies have been absorbed in material things. The next generation will have money and time for something else. The change is coming; indeed, it is already felt. In Chicago we act quickly. The art in the air will materialize into gifts and endowments, and all at once Chicago will be the art center, as she is now the business center, of the West."

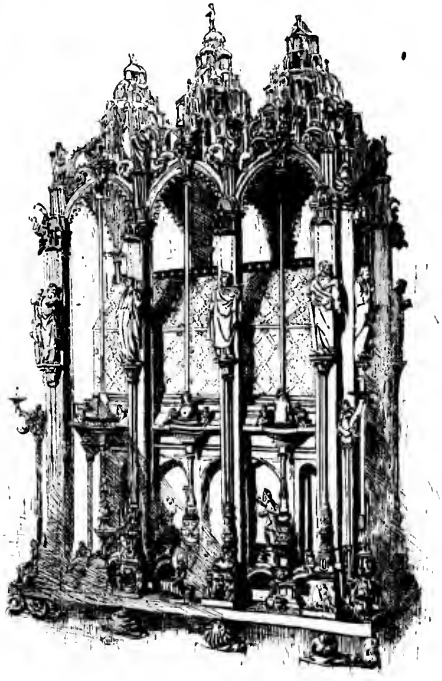
All this is characteristic. The influence of local pride will count for something. Chicago will not long allow herself to lag behind St. Louis and Cincinnati. At present the representative art institution of the city is without any endowment, and its usefulness is limited by the want of funds. It has received no large gifts either of money or collections. Yet the Art Institute of Chicago is attended in the course of the year by some four hundred pupils, and is soon to take possession of a new building, which with the land represents a value of two hundred and fifty thousand dollars. This is the result of a "business management." The money has been obtained from gifts, chiefly of a thousand dollars each, from membership fees, and from loans upon bonds secured by mortgages on the property. Interest upon these bonds and the running expenses are to be met for a time by renting parts of the building to various societies. Membership fees and dues are to cover the expenses of exhibitions. The school is dependent upon its tuition fees. In short, both museum and school are independent and self-supporting. Thanks to the prudence of business men, the Art Institute has maintained itself successfully during the seven years since its incorporation. Through the energetic efforts of the president, Mr. Charles L. Hutchinson, the credit of the Institute is firmly established, and its future seems certain even without the outside help which is needed to increase its usefulness.

PRODIGAL SON, ST. LOUIS. DESIGNED BY R. P. BRINGHURST.

At least the new building is an important step forward. The Chicago Academy of Design, founded nearly twenty years ago, once controlled a building nominally its own, but this was destroyed in the great fire. The Academy, in which Mr. Leonard W. Volk was a leader, was primarily an association of artists. It maintained a school, and owned some small collections. But when the business men who were members left the organization in 1879 to found the Academy of Fine Arts, now called the Art Institute, the life of the old Academy seems to have departed, although it is still a chartered and officered association. It was in 1882 that the Institute was established on its present site, where the museum occupied an old building, and one was afterward erected for the school. The latter remains. The substantial brown-stone building now going up stands on the corner of Michigan Avenue and Van Buren street, fronting a narrow park along the lake front.

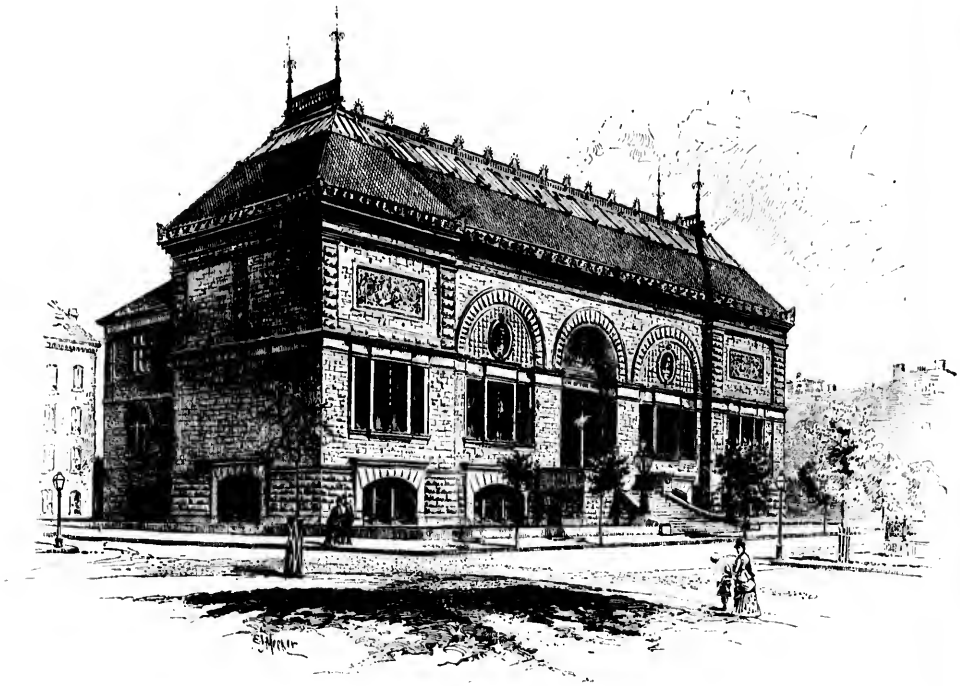
The plans for the interior include a lecture-room, several galleries, and other exhibition rooms, with studios and rooms for modeling and carving, and others to be temporarily occupied by the Decorative Art Society and various clubs. The entire building is designed for the use of the Art Institute. Only a part of the exhibition space will be occupied by the hundred or so casts, and the few oil-paintings and autotypes belonging to the Institute, the nucleus of a collection. American art has found early representation in "Les Amateurs," by Mr. Alexander Harrison, and "The Beheading of John the Baptist," by Mr. Charles Sprague Pearce. But the galleries will be filled for the most part by loan exhibitions. Last year the Institute held fourteen, including paintings, sculpture, engravings, autotypes, pottery, illustrative designs, etchings, and black-and-white drawings. Both the Western Art Association and the Bohemian Art Club of Chicago held exhibitions in the galleries of the Institute. All this is helpful to the pupils of the school, as well as interesting to the public. For further stimulus the pupils have lectures by the director of the Institute, Mr. W. M. R. French, and others, and two or three times the pupils have made sketching expeditions of some duration—one to the Natural Bridge in Virginia.

These are aids outside of the regular curriculum of the school, which is mainly academic like the leading art schools of the East, with which it claims equality. There are the usual



CAST SHRINE FROM NUREMBERG, IN ST. LOUIS.

grades and classes, with a somewhat unusual range of mediums, which includes pastel drawing, monotypes, and etching. Nothing seems to be omitted which pertains to academic art education, and there is also a class in decorative designing. The teachers for the most part have been trained at Munich, but practices which originated in French ateliers, like the use of Julian's flats, and drawing from blocks to get ideas of construction, are common here as in most modern schools. As to the pupils, it would be unfair to judge so young a school by the achievements of its graduates. Their history is like that of the graduates of other American schools. Most of them study art for amusement, or as an accomplishment. Some become teachers. Not more than one or two per cent., I am told, become professional artists. As to results obtained in the application of art to industry, there is still less to be said. The night classes, as in Cincinnati and St. Louis, are attended by many lithographers, draughtsmen, and engravers, and the influence counts for something. The head of a large firm of designers and decorators is teacher of a night class. His testimony is that pupils of the school as yet have taken little part in the decorative art work of the city. He had been able to find but one competent American designer, and that one, significantly enough, was a graduate of the St. Louis school. The Chicago Pottery Club, which includes several graduates of the school among its members, has held several exhibitions of merit. But there has been no application of art to pottery or metal-work on a larg scale.



ST. LOUIS MUSEUM OF ART.

All that is claimed for the Art Institute, even with its costly new building, is that it represents a beginning. The management of the Art Institute is vested in some of the active business men who have won for their city its great material prosperity. This is surely a fortunate omen. Moreover, whatever facilities these men may procure will be discreetly utilized. The director of the school wisely recognizes the value of individuality, and this he aims to encourage while maintaining regularity and discipline. He looks forward to keeping his pupils for four years, teaching them to use their hands and eyes, and at the same time equipping them with a truly liberal education obtained through artistic channels. More

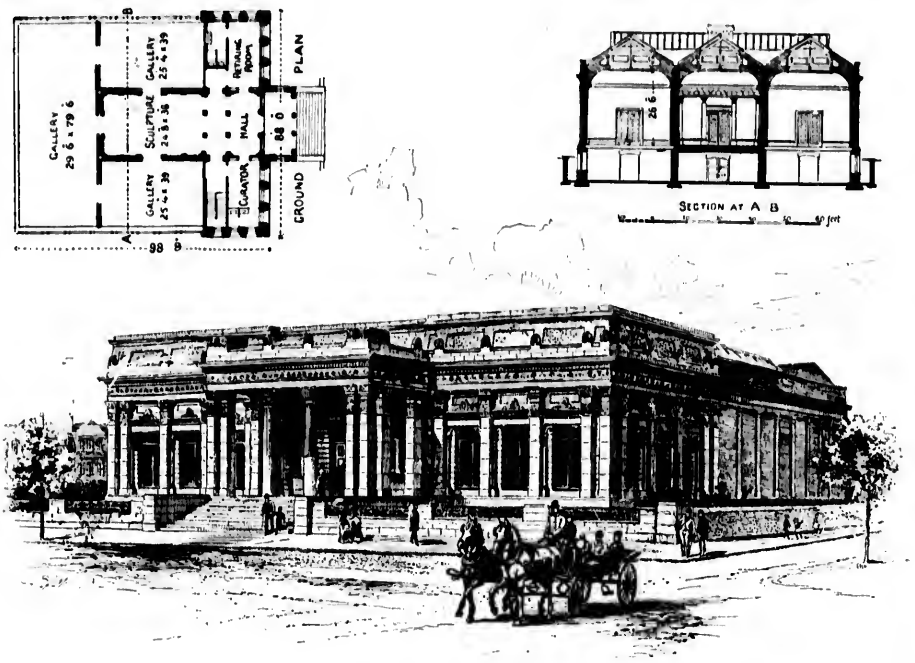
than this, he intends to make the study of applied art a department coördinate with the academic.

Such are the present conditions of art in Chicago, but these conditions will soon change. The founding of the Manual Training School, the great bequest for the Newberry Library, and the establishment of the Armour Memorial are signs of the direction in which men's minds are turning, and these examples are sure to inspire others.

CHICAGO ART INSTITUTE.

IV.

THESE are not sporadic instances of practical interest in art. The same thing is going on in other cities and in towns throughout our West. In Milwaukee Mr. Frederick Layton is building a public art gallery, where paintings already collected will be housed, and where loan exhibitions from time to time will tell of current movements in the world of art. Milwaukee's private galleries contain some paintings which Eastern collectors unwillingly relinquished, and this store of pictorial art should profit the students of the Milwaukee Art School. In Minneapolis a strong movement for advanced art education, headed by a local Society of Fine Arts, has resulted in the establishment of an academic school under a member of the Society of American Artists. Detroit, if Detroit may be included in the West, stands ready to build an art museum,—success reached at last after three years of persistent, energetic efforts. The idea was suggested by the interest



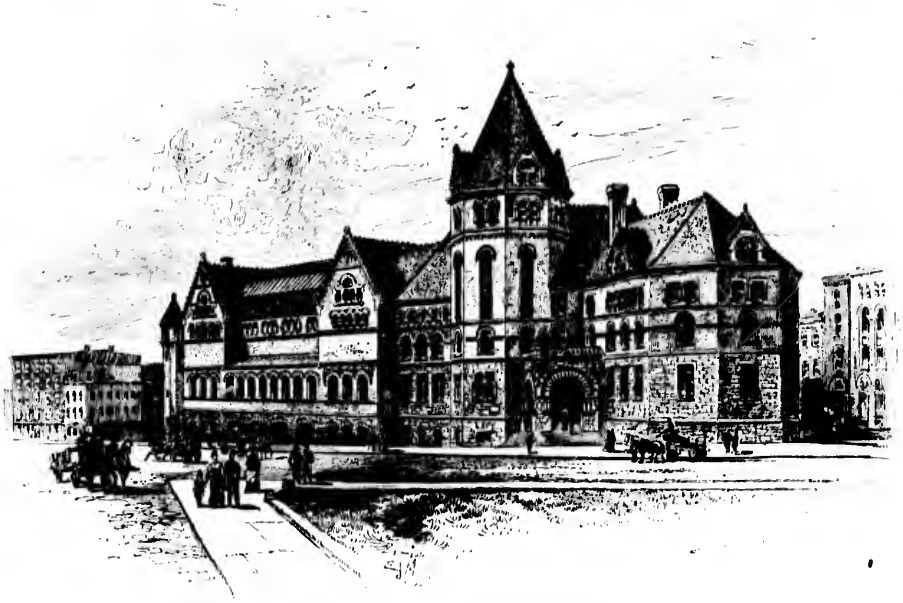
LAYTON ART GALLERY, MILWAUKEE.

shown in the Detroit Art Loan Exhibition of 1883.

"If people are so hungry for art as to travel hundreds of miles and pay fifty thousand dollars to see this exhibition, let us bring art within their reach." Such was the thought of those who watched the throng of visitors from distant country towns, some of whom probably then saw their first oil-painting. Yet it was said that there were more inquiries for THE CENTURY collection of drawings than for the paintings, a significant hint as to the influence of what may be termed applied art, a hint which would admit of amplification, were it permitted here. All sorts of visitors there were, from the artist to that venerable woman who eyed THE CENTURY drawings suspiciously through her glasses, and asked, "Are all them pictures a hundred years old?" But there was clearly something done in the way of education as well as in satisfying curiosity. Then came the Museum of Art Association incorporated in February, 1884. For a building site $40,000 was raised in cash, and after many delays and discouragements the sum of $100,000 for a building was completed at midnight of March 20, 1886. This, too, in a city which beside New York, the home of the languishing Grant Monument Fund, is only a village. But such perseverance as that of Mr. W. H. Brearley, to whom the credit of this result largely belongs, is rare even in the metropolis. Building and site are thus provided for, and Mr. James E. Scripps has pledged $50,000 for the purchase of works of art. A beginning has already been made with "old masters," which appear to be favored by Mr. Scripps, and with a few other paintings, among them Rembrandt Peale's "Court of Death" and Mr. F. D. Millet's "Œnone." A friend of the museum has pledged $10,000 for a collection of casts, and if the maintenance of the museum is assured by endowments, its future is certainly full of promise. Already the eyes of the faithful see in the building only a wing of a museum of vast extent. Let us hope that the building, whatever it may be, will not be given over entirely to "old masters," but will contain collections from which Detroit's stove-molders, lithographers, and other artisans may gain ideas which will tell in the quality of their work. All this can be done at small expense, without neglect of "high art," and with evident profit both to handicraftsmen and to the pupils of the future art school whose training may be utilized in these crafts.

In Buffalo, which can hardly be classed as a

Western city, the Fine Arts Academy, now twenty-four years old, is about to transfer its collections to spacious galleries in the new building of the Buffalo Library. The Cleveland Academy of Fine Arts, which was brought to the notice of many by a little publication filled with sprightly sketches by metal-work by the Navajos for hundreds of years, there is a school with some art-training included in its curriculum. And as for the Pacific slope, its metropolis at least boasts of societies of artists, exhibitions, schools, and collections, although San Francisco is without an art museum. Perhaps the new Stanford



BUFFALO LIBRARY AND ART BUILDING.

its students, is among many other promising beginnings. From those who are directing education in art in the larger Western cities, one hears of active art societies up and down the middle West, in Indianapolis, Springfield, Jacksonville, and Omaha. In Cairo, Dickens's "Eden," a society holds forth upon art and the architecture which Martin Chuzzlewit may have seen in his fevered dreams. In a town three years old, beyond the Missouri, the director of a Western museum gave a lecture which he had delivered in that home of sages, Concord, Massachusetts. "I could see no difference in the way my lecture was received," he said afterward. "My audience appeared to be as intelligently interested and appreciative as my audience in Concord." In villages of Dakota and western Nebraska this missionary of art found not only eager but discriminating hearers. And so this undercurrent might be traced across the continent by its occasional manifestations. In the far South-west, where a rude art has been applied to pottery by the Pueblos and to University may prove to be the center of art education upon the Pacific coast.

V.

EASTERN advantages are obvious enough, and yet if one cares to follow out comparisons it will be found that the activity represented in the building up of Western art museums and schools during the last six years has had no counterpart in the East.* Whatever groupings in the dark there may be for a time, this

* There have been no such gifts to the cause of art education in the East as in the West during this time. There has been no such building up of art museums and art schools. Even the museums in existence in Boston and New York are suffering severely for lack of support, and not an art school in New York is equipped to the satisfaction of its friends. On the other hand, the largest private and public collections are in the East, and the most important exhibitions and sales are held here, or, to localize the term further, in New York, which is the center for artists and art societies, and offers the best picture market. Any detailed exposition of the East's advantages seems to me as unnecessary as general eulogy of the arts of

Western art movement has gone far enough to insure certain definite results. The importance of art, however the word may be defined, has been publicly recognized. Art collections of various kinds are placed within the reach of the people at large. Facilities for education in art have become accessible. If there were nothing more than this, the results would represent at least an elevating influence.

But this movement comes at a time when we are rapidly accepting the ideas that training of the hand should accompany training of the brain, and that educated application of art to industry is a valuable economical end. England, Belgium, Germany, and France later, have learned the lesson, and the agents of even Russia are studying the museums and schools of applied art which are in every German city. In the fifteen years since Massachusetts took the hint from South Kensington and made drawing a part of her common-school curriculum, these ideas have taken shape in one way or another, West as well as East. All this has met with opposition, of course, as the Boston artists ridiculed the adoption of South Kensington theories and practices. Yet Massachusetts is now building an ampler home for her State Normal Art School, and her publicists in speeches and reports are demanding more popular education in art that the State may not lose her supremacy in the finer industries. The same demand is felt and has been answered in a greater or less degree in many of our cities. It is this demand based upon the practical value of art-training in industrial work which will broaden the usefulness of the Western art museums and schools.

But there is something more than the familiar argument of money value, the dwelling upon the differences in the compensation of clay-shoveler, brick-maker, tile-maker, potter, and sculptor. It is not merely on account of higher wages that this training is so necessary, but to awaken in our people a love of art if only in its simplest forms, an appreciation of beauty of line or color though it may exist in the humblest article in daily use. With this love of beauty aroused by familiarity with the work of our artist artisans, we may hope for the growth of that National Art which, as William Morris rightly said, must, if it deserves its name, take its roots among the people. The collecting of paintings and the making of Artists (with a capital A) have been our first consideration. Now we are beginning at the beginning, and something is being done to make art tell in the daily lives of the people about us. The task of the West is to help in substituting a vital principle for the idea of art as something "appealing only to the connoisseur, unintelligible to the masses, who pass before it as though it were some splendid idol weird and dumb."

Ripley Hitchcock.

painting and sculpture. But the expenditure of fortunes for paintings which go to private galleries is not so healthful a sign of interest in art as the unselfish activity in behalf of art education which is now to be noted in the West, but not in the East. At present the East seems content with its earlier achievements, but this apathy can hardly be expected to last.

From THE CENTURY *for November, 1886.*

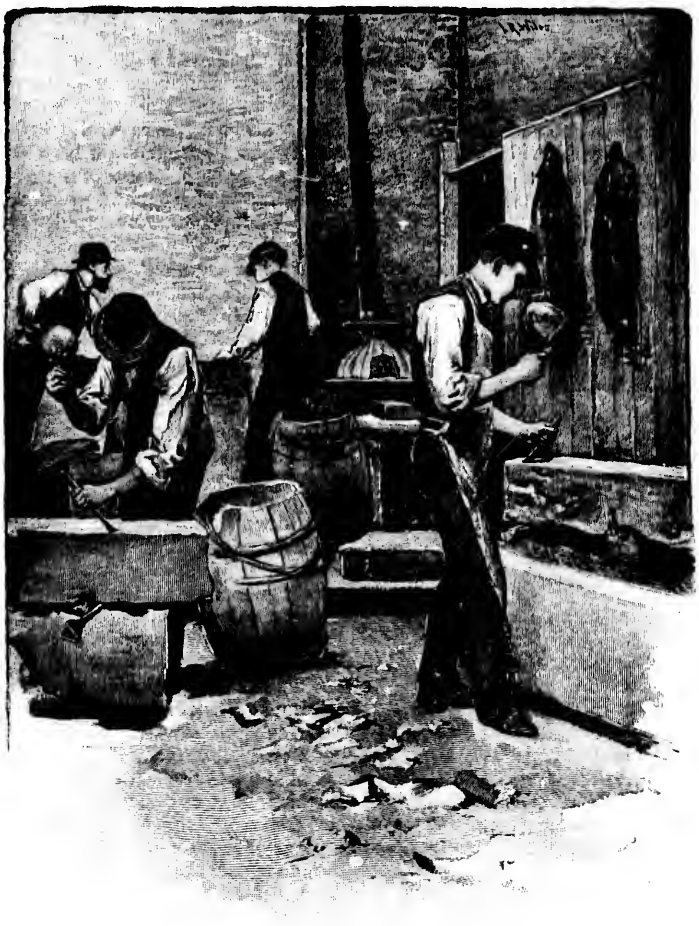
THE NEED OF TRADE SCHOOLS.

EDUCATION is in a transition state. Systems that have come down to us from past ages are found incapable of meeting the wants of the latter part of the nineteenth century. Especially is this the case in the way in which the young are taught how to work. Silently the old plan has passed away, and as yet no definite scheme has taken its place. Neither in this country nor in Europe can the apprenticeship system be said to exist. It became the custom in the middle ages to bind a lad who wished to learn a trade by a written agreement to some master mechanic, for a specified number of years. In consideration of the lad's labor, the master was to care for him and teach him a handicraft. This custom continued until modern times. During the reign of Queen Elizabeth a law was passed forbidding any person to work at a trade without having first served an apprenticeship of seven years. Although this law was denounced by Adam Smith as tending to form labor monopolies, and the courts had decided it did not apply to any trade not practiced at the time of its enactment, it was not repealed until the year 1814. The English and American apprentice laws still provide for indenturing a lad to a master mechanic, but such indentures are seldom made except by the overseers of the poor for pauper lads. An indenture between a master plumber of New York and three of his "helpers" was recently published in trade journals as a curiosity. The old apprenticeship system perished, not because the indenture was looked upon as a species of slavery, nor because its results were unsatisfactory. It perished because the conditions of society under which it was possible no longer exist. The apprentice in former times lived with his master, sat at his table, and worked under his eye. For his conduct during his term of service and his skill when he became a journeyman, his master was responsible. The modern apprentice is merely a hired boy, who, while making himself useful about a workshop, learns what he can by observation and practice. If he sees the interior of his master's house, it is to do some work in no way connected with his trade, and which may not increase the idea of the dignity of labor in the minds of such of his associates as are employed in stores or offices. In old times skill more than capital made the journeyman into a master. The master worked with his men. The more apprentices he could employ and the more thoroughly he could teach them, the greater his profit. The act of Elizabeth was intended to secure the lad's labor to the employer, not to be a law, as it afterwards became, to limit the number of workers. The master now rarely works at his trade. His time is more profitably spent in seeking for customers, purchasing material, or managing his finances. The workshop is put in charge of a foreman whose reputation and wages depend on the amount of satisfactory work that can be produced at the least cost. The foreman has no time to teach lads, and as there is but little profit in their untrained labor, does not usually want them. There still survives from the old apprentice system of former days the idea that a lad employed in a workshop shall, when he becomes a man, be a skilled workman and capable of earning a journeyman's wages. This theory fixes a certain amount of responsibility upon an employer, which he is not always willing to incur. Business may increase or diminish. At one time many workmen may be wanted; at other times few or none. If lads are employed with the understanding that at the expiration of a certain time they are to be converted into skilled workmen, there may be times during the customary four years of service when there will be nothing for them to do. If retained they will be a burden on the employer; if discharged the lad will not unreasonably feel that an agreement has been broken. It is not, however, with the employer that all the difficulty of learning how to work is to be found. The different trades are organized into trades-unions, and one of the accepted theories of the unions is the advantage to be derived from limiting the number of workers. Instead of the fact that work makes work, that one busy class gives employment to other classes, it is assumed that there is a certain amount of work to be done, and the fewer there are to do it the higher wages will be. It is, therefore, sought to make each trade into a monopoly, and although these efforts have been uniformly unsuccessful, they have marred the lives of thousands of young men, and still continue to do so. Such monopolies are not possible, because foreign mechanics, attracted by wages several times greater than they could earn at home, with living but little, if any, dearer, can-

not be prevented from crossing the ocean to better their condition in life; neither can mechanics be prevented from coming to the cities from country towns, and as the strength of a union depends upon the enrollment of nearly all the workmen in the trade the union represents, these mechanics are not only invited to join, but pressure is used to force them to do so. Thus, as the exclusive policy of the unions is powerless against the stranger, its force is directed against city-born young men. This term is used because in country towns there are no unions, and consequently no opposition is made to a lad's learning a trade, if he can find some master workman who is willing to employ him. In the country, however, the standard of workmanship is not so high as it is in cities, and country mechanics cannot usually compete on even terms with city workmen. Under union rules the employer is usually allowed from two to four lads, the term of service being from four to five years. This does not allow an employer to graduate under the most favorable circumstances more than one skilled workman each year. As there are not many employers even in the largest cities in any one trade, and, as already stated, some do not want young men, it becomes a matter of no small difficulty to learn how to work. So it often happens that although a lad may be willing to work and may have strong predilections for certain kinds of work, he is more likely to meet with rebuff than encouragement. His first lesson in life teaches him that he has been born into a world where there is nothing for him to do. This lesson as he grows older he will unlearn. He will discover he was standing in a busy market-place, importuning the crowds to buy when he had nothing to sell. He was willing to do anything; there was nothing he knew how to do.

The old apprentice system is not likely to be revived. The life of the system was the personal supervision of the master, which the lad cannot have again. It may be for the interest of the master mechanic to train good workmen, but it is not his duty. The attempt to teach any large number of lads would be troublesome, even if permission could be obtained from the unions. The workmen of the future must learn how to work before they seek employment. All professional men do this. What scientific schools are to the engineer and architect, what the law school and the medical college are to the lawyer and the physician, or what the business college is to the clerk, the trade school must be to the future mechanic.

Manual instruction in schools especially designed for the purpose is not a new thing. Its rapid development in modern times is due less to the decay of the apprenticeship system than to the discovery that without such instruction the trades themselves were deteriorating. Transmitting a handicraft from man to boy carries with it wrong as well as right ideas. The practice of a trade may be taught; the theory on which that practice is based may be forgotten. The tendency of all shops is to subdivide work. A boy learns how to do one thing, and is kept at it. He has no chance to learn his trade. Trade schools first came to be regarded as important to the welfare of the state on the continent of Europe about the middle of the last century. In England, as in this country, they are of more recent origin. The report of the Royal Commissioners on Technical Instruction, London, 1884, shows not only the extent of technical instruction in European countries, but the value that is placed upon it by the people. This report gives descriptions of schools for the building trades, for weaving in wool and silk, for iron-work, furniture, clock and watch making, pottery, for the making of beer and sugar, indeed for almost every industry in which men and women are engaged. Many of these European schools, both those for general instruction in the mechanic arts and for special trades, are on a magnificent scale. At the Imperial Technical School at Moscow the annual expenses are $140,000 per annum. The Technical School at Verviers, in Belgium, chiefly a school for weaving and dyeing, was built at a cost of $100,000, the annual expenses being upwards of $13,000. The Chamber of Commerce of Crefeld, in Prussia, a town of 83,000 inhabitants, having reported that the silk industry was languishing because of the superiority of the French training-schools, an establishment costing $210,000 was begun, to which the state contributed $137,000 and the municipality $60,000, the remainder being raised by subscription. This town exports upwards of twenty millions of dollars of silk products, nearly all of which goes to England and the United States. At Chemnitz, in Saxony, now the rival of Nottingham in the hosiery business, and also the center of an iron industry, is a technical school which costs $400,000. The report referred to says there is not a manufacturer in Chemnitz whose son, assistant, or foreman has not attended this school. At Hartman's locomotive works in the same town, employing nearly three thousand men, all the boys between fourteen and sixteen years of age are obliged to attend the technical school. To allow sufficient time to do so, their hours of labor terminate at four o'clock in the afternoon twice each week.



IN THE STONE-CUTTING ROOM.

At Arco, in the Austrian Tyrol, the founding of a small school with one teacher to give instruction in the manufacture of those articles in olive-wood which find so ready a sale to travelers, developed an important industry, orders being now filled from all parts of Northern Italy and from America. The city of Paris maintains a school on the Boulevard de la Villette for workers in wood and iron. Full wages are obtained, it is claimed, by the graduates from this school. A similar school is maintained in Paris by the Roman Catholic Church, with the idea of combating the irreligious sentiments of Parisian workmen. Besides the technical schools in various parts of France, free evening lectures are given in the large towns on scientific subjects connected with the trades. In Sweden, according to a report made by Professor Ordway to the Massachusetts State Board of Education, there are about three hundred schools where manual instruction in the use of tools for wood and iron work is given. As a curiosity of technical education, it may be mentioned that in Ireland the Royal Agricultural Society maintains a model perambulating dairy, which, mounted on wheels, is drawn from village to village, the inhabitants being invited to witness the most approved methods of making butter and managing a dairy. In England the subject of technical education is now attracting much attention. A very fine school for apprentices has recently been completed by the city and guilds of London, and these

guilds also encourage technical education by subsidies to schools in different parts of the kingdom.

Some idea of the need of instruction in the mechanic arts in the United States was probably present in the minds of the Senators and Representatives when the Land Grant Act of 1862 was passed. A clause in this act reads as follows: "The leading object shall be, without excluding scientific and classical

TEACHER AND PUPIL.

studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts in such manner as the States may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life." The report of the Secretary of the Interior, on Industrial Education, 1882, gives a list of forty-two different schools and colleges in various parts of the union which owe their existence to this land grant. Most of these are agricultural and engineering colleges. The words in the act in regard to teaching such branches of learning as are related to the mechanic arts being usually interpreted to mean instruction in the use of carpenter's and machinist's tools. Of these land grant schools, the best known are the Massachusetts Institute of Technology in Boston and the Hampton Institute at Hampton, Virginia. Each of these illustrates an interesting experiment in industrial education. The Massachusetts Institute of Technology might properly be called a school for foremen, as its graduates can be found superintending industrial establishments all over the United States. The pupil in weaving, for instance, is required to design or copy a pattern, and then work it out on the loom. In molding he makes a drawing, models the wooden pattern from it, and casts the pattern in the metal. The course of instruction is four years,—mathematics, chemistry, history, and the modern languages forming a part of the educational scheme. Hampton Institute was founded by General S. C. Armstrong as a normal school for colored teachers. General Armstrong, while serving as a staff-officer at Fort Monroe, during the war, was brought in contact with the fugitive slaves who took refuge at the fort. When slavery was abolished, and four millions of men, women, and children became the wards of the nation, General Armstrong conceived the idea that they could best be educated and civilized by the aid of their own people. It was as necessary to teach this vast multitude who had never been beyond the sound of a master's voice how to work for themselves, and how to care for themselves, as it was to teach them to read and write. Manual instruction was therefore a necessity at the Hampton Institute. The male graduates were to be leaders on the farm or in the workshop as well as teachers. The female graduates were to be capable of cooking, sewing, or caring for the sick. How thoroughly and successfully this scheme has been carried out need not be stated here. Another type of the industrial school is to be found in the Worcester (Mass.) Free Institute. At this institution three and a half years of general education is combined with instruction in mechanical engineering, in carpentering, and in machinist's work. This school more nearly approaches the trade school, as many of its graduates are returned as "journeymen mechanics." The Worcester school was founded by private liberality. Without such aid, it may be added, neither the Massachusetts Institute of Technology nor Hampton Institute could have reached its present usefulness. In the European technical schools provision is made for instructing young men already in the trades by a course specially adapted to their wants. In this country this important branch of industrial education has received but little attention. The Carriage Makers' Association in this city maintain a school in designing and construction for the young men in their trade. The Master Plumbers of Philadelphia, Baltimore, and Chicago have plumbing schools for their "helpers." The Cambria Iron Works in Pennsylvania, and several private firms like R. Hoe & Co. of this city, give scientific instruction to their lads, while two railroad companies, the Pennsylvania and

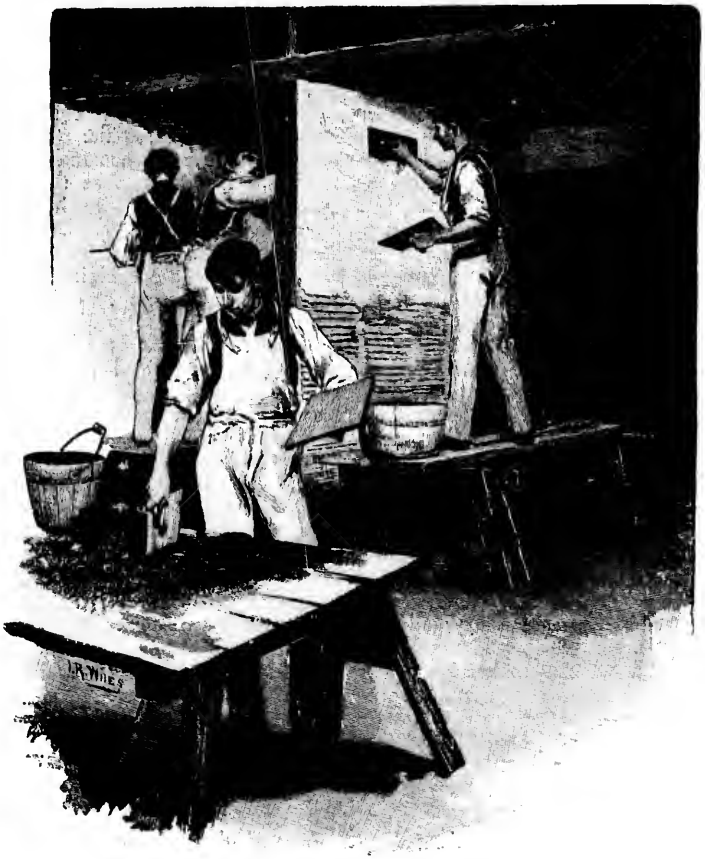
the Baltimore and Ohio, have shown not only what it is possible to do, but how much can be done at a trifling cost for the young men in the employ of great corporations. Beyond this short list, little has been done to supplement shop-work with systematic instruction. In the Baltimore and Ohio R. R. Company's shops at Baltimore five hundred young men are employed. They are placed in charge of a graduate of the Stevens Institute whose duty it is to see that they are not employed too long at one kind of work. He can change their work as often as it may seem desirable for their future interests. He can also take parties of them from their work at any time to explain to them the machinery they may be engaged upon or may see around them. A neat building has been erected for their use, which contains a library and class-rooms for instruction in mechanics and drawing. The lads are required to wear a uniform, which, besides giving them a jaunty appearance, tends to habits of personal neatness. What is done by the Baltimore and Ohio R. R. Co. could be done in any manufacturing town by the union of a few large employers.

The difference between manual instruction and trade instruction is not always clear in the public mind. By manual instruction is meant teaching a lad how to handle certain tools, usually carpenter's and blacksmith's tools, for the purpose of developing his hands and arms, precisely as other lessons are given to develop his observation or his memory. This is not teaching a trade, although it would render the work of the trade school much easier. A lad who has gone through a course of manual instruction at a school would be more likely to be a better mechanic than one who had reached seventeen or eighteen years of age without ever having held a tool in his hands. Manual training-schools are meant to make a lad handy; trade schools to make him proficient in some one art by which he can earn a living. Manual instruction has already been incorporated in the public school systems of Boston and Philadelphia. The New York Board of Education has maintained for several years a workshop at the Free College. It now proposes to open schools all over the city where boys and girls will be taught to use their hands. A great impression was made last spring by the exhibition, held by the Industrial Education Association of New York, of children's handiwork, and of the different methods of teaching them how to work. Not only was it shown what varied and excellent work little fingers could do, but school-teachers and superintendents came to testify that the brain-work was benefited by the hand-work.

Admitting that trade education is practicable and that it is advisable both for the purpose of giving young men an opportunity to learn how to work and to keep the trades from deteriorating, it may be well to consider how such education can best be adapted to the wants of the American people.

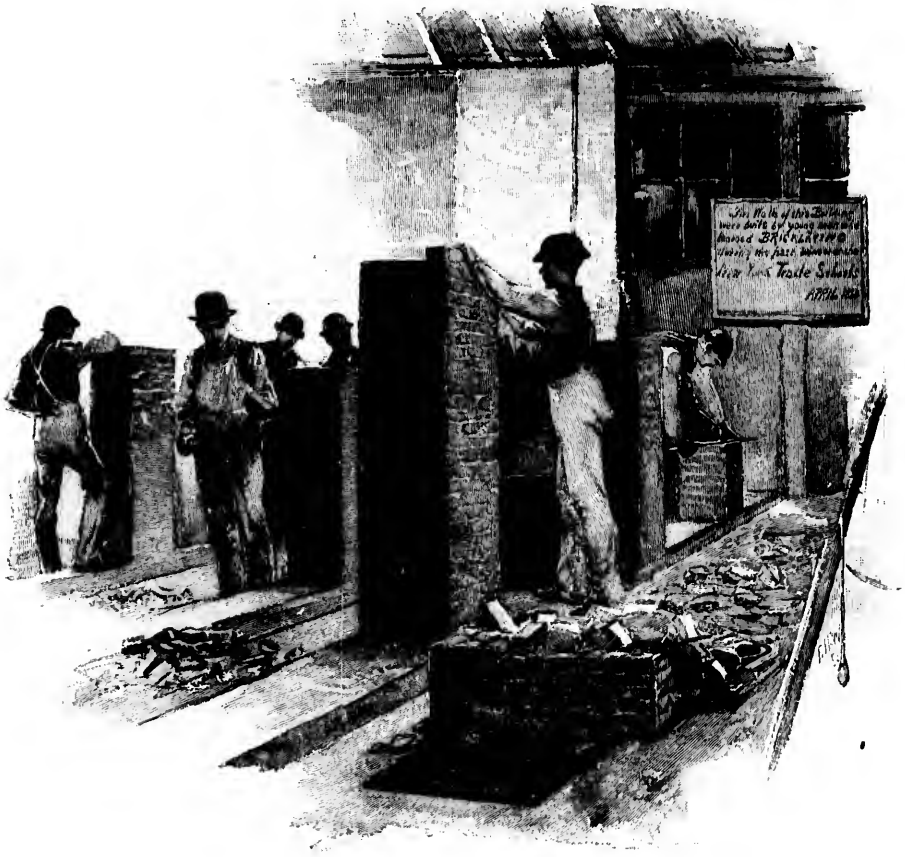
In most of the foreign trade schools the technical instruction is combined with a general education, the course extending over several years. This system is also followed at the Hampton Institute, at the Indian school at Carlisle Barracks, at the Worcester Free Institute, and at the reformatories and asylums in this country where trades are taught. Except in special cases there seems no need of combining instruction in the trades with a general education. It is duplicating the work of the public schools and adding greatly

WOOD-CARVING.



PLASTERING.

to the cost of industrial education. A lad can hardly be taught and boarded, even at a school or college which is liberally endowed, for less than two hundred and fifty dollars per annum. For a four-years' course this would be a thousand dollars, and to this sum must be added the cost of clothing, traveling expenses, etc. Such schools would be beyond the reach of those who are likely to lay brick, cut stone, or work at any of the mechanic arts. A simpler, shorter, more economical course of instruction is wanted for the future mechanic. It must be remembered that although the law requires the parent to support the child, it is an established custom that after a certain age the child shall in some way contribute to the family support. No system of trade instruction will be successful that does not recognize this fact. From eighteen to twenty years would seem to be the best age to enter a trade school. The lad is then old enough to know what sort of work he likes and for what his strength is adapted. As regards the amount of instruction given, it would be wisest not to attempt to graduate first-class journeymen. That it is possible to do so in many trades there need be no doubt, but it would appear to be better to ground a young man thoroughly in the science and practice of the trade he has chosen, and leave the speed and experience that comes from long practice to be acquired at real work after leaving the school. Such a system would be more economical, as by it the cost of teaching and the waste of material would be greatly lessened. This probation course, as the time spent between leaving the trade school and becoming a skilled workman might be called, need not be long. Six months will suffice in most trades. Young men who begin work in this way are likely to get on better with their fellow-workmen than if taught entirely at a school,



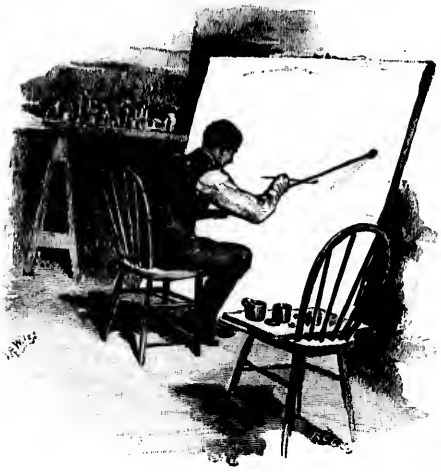
BUILDING PIERS IN THE BRICKLAYING ROOM.

and they will understand better how to accommodate themselves to different situations. Trade schools should not be free. They will be best appreciated when an entrance fee is required. Lawyers, physicians, engineers, architects, and clerks are expected to pay for their instruction, and there is no need to treat mechanics as objects of charity; neither do they desire it.

At the Hampton and Worcester schools the work of the pupil yields a revenue. At Hampton, contrary to the usual experience, a student's labor has been found to be of sufficient value to pay for his board and tuition. When the course of instruction at a trade school is short, it is best not to seek for any return from the pupil's work. The same temptation, otherwise, will exist as in the shop, of putting a lad at what he can do best instead of teaching him what he knows least about. The pupil's future is of more consequence than the material that may be wasted. In a well-organized trade school the waste is not a serious item, as the same material can be used many times.

In the belief that the most practical system was a combination of the trade school and the shop, of grounding young men thoroughly in the science and practice of a trade at the school, and leaving them to acquire speed of workmanship and experience at real work after their course of instruction was finished, the New York Trade Schools on First Avenue, between Sixty-seventh and Sixty-eighth streets, from which the accompanying engravings were made, were opened in the autumn of 1881. The schools were designed to aid those who were in the trades by affording them facilities to become skilled workmen not possible in the average workshop, and to enable young men not in the trades to make their labor of sufficient value to secure work and to become

skilled workmen in a short period after leaving the schools. The instruction was given on three evenings each week from November until April. Skilled mechanics were employed as teachers. How much it would be possible to teach during that limited time was unknown, neither were there any means to ascertain what effect the instruction received at the schools would have on the young man's success in life. Instruction was given the first season in two

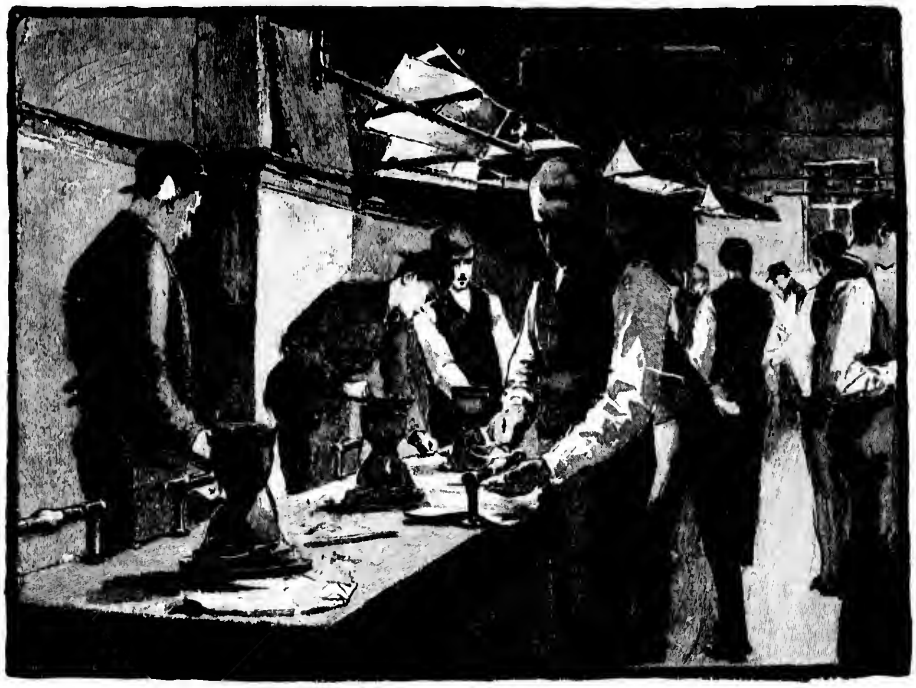


A FRESCO-PAINTER.

trades, plumbing and fresco-painting. The charge for instruction was made nominal to induce attendance. Twenty young men joined the plumbing class, about two-thirds of whom were in the trade as plumbers' "helpers," and thirteen joined the fresco class. Of this number one-third dropped off during the winter. The schools have now completed their fifth season. The attendance has increased from thirty-three the first season to three hundred and four the fifth season. The charges have been increased to a sum which it is hoped will ultimately meet the expenses of the schools. Instruction is now given in plumbing, fresco-painting, bricklaying, stone-cutting, plastering, carpentry, wood-carving, and gas-fitting. A class in pattern-making was abandoned for lack of support. Those who came to the schools from workshops surprised their employers and comrades by their suddenly acquired skill. Those who [illegible] to learn a trade have usually [illegible] work. There is a record at the schools of [illegible] better class, who, to use the expression of more than one of them, owe their success in life to having joined the schools. Serious difficulties have to be encountered in obtaining work on account of trades-union rules, but these difficulties have not been found to be insurmountable.

As the time spent at the schools is short, the instruction is given on a prescribed course. Each pupil is required to begin at the beginning and is advanced as rapidly as his proficiency will allow. Although the classes are kept as much as possible on the same work, no one is allowed to leave his work until he can do it well. Progress is necessarily rapid. A skilled workman is constantly on hand to show how the work should be done and explain why one method is right and another wrong. Attention is also given to the way a lad stands and how he holds his tools. An awkward habit once contracted is not easily overcome. On two occasions additions were made to the schools by the bricklaying class. The work was done at the termination of the regular course of instruction, the young men being paid in proportion to the number of bricks laid. This practice was found to be of so much value that the evening instruction for the bricklayers is now supplemented by two weeks' day work. The brick-work of three stores and a large apartment-house has also been almost entirely done by trade school young men. Better or more conscientious work it would be difficult to find. Those young men who are old enough to do a full day's work usually get from one-third to one-half a day's wages on leaving the schools, and full wages in from six to eighteen months afterwards. Thus it seems to be proved that a course of carefully arranged instruction on three evenings each week for a term of not quite six months, puts it in the power of any young man to learn how to work. He no longer need beg the employer to teach him. He stands in the labor market with something to sell.

Although the system followed at the New York Trade Schools could perhaps be improved, it has the merit of giving those who are likely to attend such schools what they want. Many well-meant schemes have failed because this point was overlooked. A longer course would be better; indeed, some young men lengthen their term of instruction by laboring two seasons, but to many, an often to the best, even a single season is a heavy tax on their strength. To work all day for a present living, and then to begin again and work during the evening to acquire the skill necessary to obtain a living in the future, requires no small amount of energy and self-denial. Work in the shop ceases at six o'clock. Work at the school can hardly begin later than seven. This leaves one hour only for food, for rest, and for travel. The young men at the New York Trade Schools come from all parts of New York, from Brooklyn, Hobo-



PLUMBING.

ken, and Jersey City. Some have come from Staten Island, Newark, and Orange. Between two and three hundred young men thus assembled to learn how to work, and who have paid their hard-earned money for the privilege, may almost be said to form an impressive sight. These young men are employed in offices and stores, in mills and workshops, and at the various occupations for which boy labor is needed, but which have no future for the man. During the five winters the schools have been open, no rude or profane word has been heard within their walls. The young men are attentive to their instructors, and although often inconveniently crowded, are courteous to each other. Costly tools are scattered about, but they are cared for as if they belonged to those who use them. If they are fair specimens of a class which comprises fully two-thirds of the young men of this city, New York has reason to be proud of her sons.

It is often said that American parents are not desirous of having their children learn trades. The mothers, perhaps, may be responsible for this idea. The present custom of requiring a lad to work for four or five years before becoming a journeyman necessitates his beginning at an early age. Placing boys during ten hours a day with men of whose antecedents nothing is known is undoubtedly objectionable. Although less evil comes from it than is usually supposed, still injury may be done which a careful parent would guard against. A trade school not only avoids any danger of this kind, but it gives the parent an opportunity to ascertain for what sort of work the boy is suited. As it is now, the lad may work for several years at a trade and then find he has no taste for it. New places are not easily found; to change his trade may be impossible. He becomes a poor workman without interest or heart in his work. Six months at a trade school would be time well spent if it only taught the lad for what work he is fitted.

Could the opposition of the trades-unions to young men learning trades be overcome, a great source of wealth would be opened to those now approaching manhood. This opposition comes almost entirely from foreign-born workmen. The effect of their policy is a matter of indifference to them. Unlike the American, the foreigner cares but little for the future. He looks only to the number of dollars it is possible to extract for a day's work. He willingly surrenders his liberty and his judgment to his union officers. To keep their

places, these officers must be able to force the employers to obey the union rules. They not only believe in the advantages to be derived from limiting the number of workers, but they fear that if many lads are allowed to work, the employer, with the aid of his apprentices, can withstand a strike. This fear is as groundless as the theory of the benefit of trade monopolies is mistaken. Skilled work can only be done economically by skilled workmen. The master mechanics put but a small value on boy labor. Even the Chicago Master Plumbers, in their effort to educate their "helpers," do not make it easier to enter the trade. The Journeymen Stone-cutters' Union is the only union in New York which has shown any interest in the welfare of young men. The Journeymen Plumbers' Union lately passed a resolution which, if acquiesced in by the Master Plumbers' Association, will prevent three out of every four of the young men now learning the plumbing trade in this city from becoming mechanics. Until lately, the right of a man to follow any honest calling he may see fit, provided he does not violate the laws, has not been questioned. This right is now being reasserted. It is not the province of any body of men, certainly not of any self-constituted organization, to decide who or how many shall be allowed to work. No legislature is intrusted with such power. If a trade needs protection, it can be obtained in a legal manner. Lawyers and physicians seek to guard their professions and the public from incompetent men by legal enactments. The law requiring the examination and licensing of journeymen plumbers in the cities of New York and Brooklyn was intended to protect the public from ignorant workmen. Its provisions, with slight alterations, could be made to apply to any trade. The higher the standard of workmanship is made by which admission to a trade could be procured, the better for the trade and the public. Such a system would be better than "cards of protection" obtained by favor or by purchase. "An equal chance and no favor" are not idle words to the American mind. Mechanics did not invent their trades, they have no proprietary rights in them. Some trades have been handed down from remote antiquity. Some have deteriorated instead of improving. Roman masonry was better than our own. In metal-work we do not excel the mechanics of the middle ages. Furniture of the time of Louis XVI. is preserved in art collections for its elegance and the beauty of its workmanship. The demand for skilled labor all over the United States far exceeds the supply. To such work city-born young men are admirably adapted. They are handy, quick, and generally well educated. They should not only supply the home demand, but the demand which comes from villages that are becoming towns, and towns that in a few years will be cities. A thorough knowledge of a trade often yields its possessor, if he works but two hundred days in the year, an income equal to that received from twenty thousand dollars invested in government bonds. Is this harvest to be reaped by the stranger and the foreigner, or are our own people to have a share?

GOING HOME.

Richard T. Auchmuty.

From THE CENTURY *for October, 1886.*

HAND-CRAFT AND REDE-CRAFT.

A PLEA FOR THE FIRST NAMED.

CALLS for more handicraft have been heard of late in many portions of this land,—sometimes a call for higher skill in the use of fingers and arms,—and sometimes a call for the *wider spread* of such skill among the people at large. Just now we wish to speak of some of the general aspects of a movement which is very complex as well as general, and at the same time is full of promise and hope.

We begin by using the word handicraft, for that is the form to which we are wonted in speech and in print; but we rather like the old form, "hand-craft," which was used by our sires so long ago as Anglo-Saxon days. Neither form is in vogue, as we know very well, for people choose nowadays such Latin words as technical ability, industrial pursuits, manual labor, dexterity, professional artisanship, manufacture, technological occupation, polytechnic education, and decorative art, not one of which is half so good as the plain, old, strong term, handicraft or hand-craft. We shall do what we can to bring back this old friend.

One reason why we like this word is that it includes so much, and yet is so clear that everybody knows what it means,—the power of the hand to hold, shape, match, carve, paint, bake, plow, or weave. Another reason why we like to say hand-craft is because of the easy contrast it suggests with another old word, which is likewise out of vogue, rede-craft, the power to read, to reason, and to think,—or as it is said in the book of common prayer, "to read, mark, learn, and inwardly digest." By rede-craft we find out what other men have written down; we get our book-learning; we are made heirs to thoughts that breathe and words that burn; we enter into the acts, the arts, the loves, the lore, the lives of the witty, the cunning, and the worthy of all ages and all places.

Rede-craft is not the foe but the friend of hand-craft. They are brothers, partners, consorts, who should work together as right hand and left hand, as science and art, as theory and practice. Rede-craft may call for books, and hand-craft for tools, but it is by the help of both books and tools that mankind moves on. Their union is as sacred as the marriage tie; no divorce can be allowed. The pleasure and the profit of modern life depend upon the endurance of their joint action.

Indeed, we should not err wide of the mark by saying that a book is a tool, for it is the instrument we make use of in certain cases when we wish to find out what other men have thought and done. There is a sense in which it is also true that a tool is a book, the record of past ages of talent engaged in toil. Take a plow, for example. Compare the form in use to-day on a first-rate farm with that which is pictured on ancient stones long hid in Egypt, ages old. See how the plow idea has grown; and bear in mind that its graceful curves, its fitness for a special soil or for a special crop, its labor-saving shape, came not by chance but by thought. It embodies the experience of many generations of plowmen.

Look upon a Collins ax, lay it by the side of such a tomahawk as was used by Uncas or Miantonomoh, or with a hatchet of the age of bronze, and think how many minds have worked upon the head and the helve; how much skill has been spent in getting the metal, in making it hard, in shaping the edge, in fixing the weight, in forming the handle. Take a cambric needle and compare it with the fish bone or the thorn with which savages sewed their hides. Or from simple turn to complex tools—the steam-engine, the sewing-machine, the dynamo, the telegraph, the ocean steamer; all are full of ideas. All are the offspring of hand-craft and rede-craft, of skill and thought, of practice put on record, of science and art. The welfare of our land, of our race, rests on this union. We can almost take the measure of a man's brain if we can find out what he sees and what he does; we can judge of a country or of a city if we know what it makes.

We need not ask which is the better, hand-craft or rede-craft. Certainly, "the eye cannot say to the hand, I have no need of thee"; at times, indeed, when the eye is blind, the hand takes its place, and the fingers learn to read, running over the printed page to find out what is there as quickly as the eye. To what realms of thought was Laura Bridgman, sightless and speechless, led by the culture of her touch!

It is wrong that so many people, some whose minds are full of ideas and some whose purses are full of gold (not to speak of those who have neither), are prone to look down upon hand-craft. They think only of the tasks

of a slave, a drudge, or a char-boy. They have never tasted the pleasure of making, the delight there is in guiding the fingers by the conscious and planning will. They like to hear, see, own, or eat what others have made, but they know nothing of the pleasure of production. Their minds may be bright, but their fingers are lazy. Many such persons work too long and too late with their eyes, poring over the story of what others have done, and keeping their brains alert with the tales of other people's skill; yet they never think of finding another sort of rest or relief in the practice of hand-craft. If you doubt this, put two notices in the paper, one asking for a workman and the other for a clerk, and you will see on the morrow which calling is popular. So it comes to pass that boys become men without being trained to any kind of skill; they wish, therefore, to be buyers and sellers, traders and dealers. The market, which is poorly supplied with those who are trained in the higher walks of hand-craft, is doubtless overstocked with clerks, book-keepers, salesmen, and small shop-keepers. Some young men who are poor in pocket and rich enough in talent go to college, allowing their mothers and their sisters to toil for their support, and many more accept the gifts of unknown helpers, and not because they prefer to do so, but because they have never learned how to produce with their own hands anything which the world is willing to pay for. Ask such a youth, "What can you do for your own support?" alas, how often will "Nothing" be the answer!

To some extent machinery works against hand-craft. In many factories the hand has but little to do, and that little is always the same, so that labor becomes tiresome, and the workman is dull. It is a marvel how machinery, which embodies the inventor's mind, takes the place of mind in the workman; machinery can cut statues, weave tapestry, grind out music, make long calculations in arithmetic, solve simple problems in logic,—alas, the machine has been brought into politics! Of course a land cannot thrive without machinery. How could the ore be brought to the surface and made current as coin without machinery; how could the prairies be tilled as they are without reapers and mowers; how could the corn, the beef, and the sugar be carried from our rich valleys and plains to the hungry of other lands; how could the products of their looms and foundries be brought back to us without the aid of those seven-league-booted giants, the locomotive and the marine engine? Nevertheless, he who lives by the machine alone leads but half a life, while he who uses his hand to contrive and adorn drives dullness from his path. It is hand-craft, the power to shape, to beautify, and to create, which gives pleasure and dignity to labor. A true artist and a true artisan are governed by one spirit; their brains are the masters of their hands.

In other climes and in other times, hand-craft had more honor than it has with us. The touch of Phidias was his own, and so inimitable that not long ago an American, scanning with his practiced eye the galleries of the Louvre, discovered a fragment of the work of Phidias long separated from the other fragments by that sculptor which Lord Elgin had sent to London. The artist's stroke could not be mistaken,—it was his own, as truly as our sign-manuals, our autographs. Ruskin, in a lecture upon the relation of art to morals, speaks of a note which Dürer made on some drawings sent him by Raphael. It was this: "These figures Raphael drew and sent to Albert Dürer in Nürnberg,—to show him his hand." Ruskin well compares this phrase with other stories of the hand-craft of artists,—Apelles and Protogenes showing their skill by drawing a line; Giotto in striking a circle. There is a custom, if not a law, in the royal households of Prussia that every boy shall learn a trade. The emperor is said to be a glazier, and the crown prince a printer; not long ago, as a birthday gift, his Majesty received an engraving by one prince and a book bound by another, both sons of the heir-apparent. In one of the most famous shrines of education in Paris, two paintings adorn the chapel walls, not of saints or martyrs, not of apostles or prophets,—perhaps I should say an apostle and a saint. *Labor* and *Humilitas;* Industry the apostle of happiness, and Modesty the divine grace. Is it not worthy of note that Isaiah, telling of golden days to come, when the voice of weeping shall be no more heard in the land, nor the voice of crying, when the child shall die an hundred years old, and men shall eat of the fruit of the vineyards they have planted, adds this promise as the greatest of all hopes, that the elect of the Lord shall long enjoy the work of their hands?

If now we really value hand-craft, we shall find many ways of giving it honor; we can buy that which shows it, or if we are too poor to buy, we can help on with our looks and words those who bring taste and skill into the works of their hand. If your means are so small that you can only buy what you need for your daily wants, you cannot have much choice; but hardly any who reads these pages is so restricted as that: almost, if not quite, every one buys something every year for his pleasure,—a curtain, a rug, a wall-paper, a chair, or a table, not truly needed, a vase, a clock, a mantle ornament, a piece of jewelry,

a portrait, an etching. Now, in making such a purchase to please the eye, to make the chamber, the parlor, or the office more attractive, choose always that which shows good handiwork. Such a choice will last. You will not tire of it as you will of commonplace forms and patterns, and your children after you will value it as much as you do.

Let us not forget, however, that hand-craft gives us many things which do not appeal to our sense of beauty, but which are nevertheless of priceless value,—a Jacquard loom, a Corliss engine, a Hoe printing-press, a Winchester rifle, an Edison dynamo, a Bell telephone. Ruskin may scout the work of machinery, and up to a certain point in his enthusiasm for hand-craft may carry us with him. Let us say without a question that works of art—the "Gates of Paradise," by Ghiberti, a shield by Cellini, a statue by Michael Angelo, a portrait by Titian—are better than any reproductions or imitations, electrotypes by Barbedienne, plaster casts by Eichler, or chromos by Prang. But even Ruskin cannot suppress the fact that machinery brings to every cottage of our day comforts and adornments which in the days of Queen Bess, or even of Queen Anne, were not known outside of the palace,—and perhaps not there; and let us be mindful that it is modern hand-craft which has made the machines of such wonderful productivity, weaving tissues more delicate than Penelope ever embroidered, and cutting the hardest metals with a precision unknown to Vulcan's forge. Machinery is a triumph of hand-craft as truly as sculpture or architecture. The fingers which have shaped the *Aurania* or the Brooklyn suspension bridge are as full of art as those which have cut an obelisk from granite or molded the uplifted torch of Liberty. Rowland's dividing engine, which with its unerring diamond plow traces forty thousand furrows upon an inch of the concave grating, silently and ceaselessly at work from day to day, that men may see more than they ever have yet seen of the glories of the sun—a machine like this has beauty of its own; not that of the human form nor that of a running brook, but the beauty of perfect adaptation to a purpose, secured by consummate hand-craft. The fingers which can make a mountain stream turn myriads of spindles, or transform rag heaps into perfumed paper, or evoke thousands of handy objects from brass and iron, are fingers which the nineteenth century has evolved. The hand-craft which has made useful things cheap is already making cheap things beautiful. See how rapidly, for example, pottery in this country has become a fine art. Let us hope that Americans will learn from the Japanese how to form and finish, before the Japanese learn from us how to slight and sham.

There is another duty to be enforced, which is this. All who have to deal with the young, whether parents or teachers, should see to it that children acquire hand-craft while they are getting rede-craft. Mothers begin right in the nursery, teaching little fingers to play before the tongue can lisp a sentence. Alas, this natural training has too often been stopped at school. Books have claimed the right of way; rede-craft has taken the place of honor; hand-craft has been kept in the rear. But now the ghost of Pestalozzi has been raised; the spirit of Froebel is walking abroad in the land; changes are coming in schools of every grade. The changes began at the top of our educational system and are fast working down to the bottom. What mean the new buildings which have appeared of late years in all our thriving colleges? They are libraries and laboratories,—the temples of rede-craft, and of hand-craft; they tell us that in universities, the highest of all schools, work-rooms, laborplaces, laboratories, are thought to be as book-rooms, reading-rooms, libraries; they show that a liberal education means skill in getting and in using knowledge; that wisdom comes from searching books and searching nature; that in the finest human natures the brain and the hand are in close league. So too in the lowest schools, as far as possible from the university, the kindergarten methods have won their place, and the blocks, straws, and bands, the chalk, clay, and scissors, are in use to make young fingers deft.

Intermediate schools have not yet done so well. There has even been danger that one of the most needful forms of hand-craft would become a lost art, even good handwriting, and schools have been known to send out boys skilled in algebra and in a knowledge of the aorist who could not write a page of English so that other people could read it without effort. The art of drawing is another kind of hand-craft which has been quite too much neglected in ordinary schools. It ought to be laid down as a rule of the road to knowledge that everybody must learn to draw as well as to write. The pencil is a simpler tool than the pen. The child draws pictures on his slate before he learns the pot-hooks of his copybook; savages begin their language with gestures and pictures; but we wiseacres of the school-boards let our youngsters drop their slate-pencils and their Fabers when we make them practice with their Gillotts and their Esterbrooks. We ought to say, in every school and in every house, the child must learn to draw as well as to read and write. It is the beginning

of hand-craft, the hand-craft which underlies a host of modern callings. A new French book has lately attracted much attention, "The Life of a Wise Man by an Ignoramus." It is the story of the great Pasteur, whose discoveries in respect to germ life have made him world-famous. If you turn to this book to find out the key to such success, you will see the same old story,—the child is father of the man. This great physiologist, whose eye is so keen and whose hand is so artful, is the boy grown up, whose pictures were so good when he was thirteen years old that the villagers thought him an artist of rank.

Sewing, as well as drawing and writing, has been neglected in our ordinary schools. Girls should certainly learn the second lessons of hand-craft with the needle. Boys may well do so; but girls must. The wise governor of a New England State did not hesitate, a short time since, to say upon a commencement platform how much he had often valued the use of the needle, which was taught him in his infant school. How many a traveler can tell a like tale? It is wise that our schools are going back to old-fashioned ways, and saying that girls must learn to sew.

Boys should practice their hands upon the knife. John Bull used to laugh at Brother Jonathan for whittling, and "Punch" always drew the Yankee with a blade in his fingers; but they found out long ago over the waters, that whittling in this land led to something,—a Boston "notion," a wooden clock, a yacht *America*, a labor-saving machine, a cargo of wooden ware, a shop full of knick-knacks, an age of inventions. Boys need not be kept back to the hand-craft of the knife. For indoors there are the type-case and the printing-press, the paint-box, the tool-box, the lathe: and for outdoors, the trowel, the spade, the grafting-knife. It matters not how many of the minor arts the youth acquires; the more the merrier. Let each one gain the most he can in all such ways, for arts like these bring no harm in their train; quite otherwise, they lure good fortune to their company.

Play, as well as work, may bring out hand-craft. The gun, the bat, the rein, the rod, the oar, all manly sports are good training for the hand. Walking insures fresh air, but it does not train the body or mind like games and sports which are played out-of-doors. A man of great fame as an explorer and as a student of nature (he who discovered in the West bones of horses with two, three, and four toes, and found the remains of birds with teeth) has said that his success was largely due to the sports of his youth. His boyish love of fishing gave him his manly skill in exploration.

I speak as if hand-craft was to be learned by sport. So it may. It may also be learned by labor. Day by day, for weeks, the writer has been watching from his study window a stately inn rise from the cellar just across the road. A bricklayer has been there employed whose touch is like the stroke of an artist. He handled each brick as if it were porcelain, balanced it carefully in his hand, measured with his eye just the amount of mortar which it needed, and dropped the block into its bed without straining its edge, without varying from the plumb-line, by a stroke of hand-craft as true as the sculptor's. Toil gave him skill.

The last point which we make is this: Instruction in hand-craft must be more varied and more widespread. This is no new thought. Forty years ago schools of applied science were added to Harvard and Yale colleges; twenty years ago Congress gave land-scrip to aid in founding at least one such school in every State; men of wealth have given large sums for such ends. Now the people at large are waking up. They see their needs; they have the money to supply their wants. Have they the will? Know they the way?

Far and near the cry is heard for a different training from that now given in the public schools. Nobody seems to know just what is best; but almost every large town has its experiment, and many smaller places have theirs. The State of Massachusetts has passed a law favoring the new movement. A society of benevolent women has been formed in New York to collect the experience of many places, and make it generally known. The trustees of the Slater Fund for the training of freedmen have made it a first principle in their work that every school which is aided by that fund shall give manual training. The town of Toledo, in Ohio, opened some time ago a school of practice for boys which has done so much good that another has lately been opened for girls. St. Louis is doing famously. Philadelphia has several experiments in progress. Baltimore has made a start. In New York there are many noteworthy movements —half a dozen of them, at least, full of life and hope. Boston was never behindhand in the work of promoting knowledge, and in the new education is very alert, the liberality and the sagacity of one beneficent lady deserving praise of high degree. These are but signs of the times, examples to which our attention has been called, types of efforts, multiform and numerous, in every part of the United States.

But it must be said that the wise differ very much as to what might, should, and can be done. Even the words which express the

wants are vague. Something may be done by an attempt, even though it be rude, to put in classes the various movements which tend toward the advancement of hand-craft. Let us make an attempt, and present the following schedule:

FOR THE PROMOTION OF HAND-CRAFT.

Four Preliminary Needs.

(a) Kindergarten work should be taught in the nurseries and infant schools of rich and poor;

(b) Every girl should learn to sew, and every boy should learn to use domestic tools, the carpenter's or the gardener's, or both;

(c) Well-planned exercises fitted to strengthen arms, fingers, wrists, lungs, etc., should be devised, and where possible, driving, riding, swimming, rowing, playing ball, and other out-of-door sports should be encouraged;

(d) Drawing should be taught as early as writing, and as long as reading, for all, and everywhere.

SUBSEQUENT POSSIBILITIES.

(a) In elementary schools lessons may be given in the minor decorative arts,—such as those of the Leland methods, for example.

(b) The use of such common tools as belong to the blacksmith's forge and the carpenter's bench may be taught at slight cost, as a regular class exercise, in secondary schools for boys, whatever be the future vocation of the pupils.

(c) In towns, boys who begin to earn a living when they enter their teens may be taught in every school to practice brick-laying, plastering, plumbing, gasfitting, carpentry, etc., as is done and well done in the Auchmuty schools in New York. Trade schools they are called; "schools of practice for workmen" would be a clearer name.

(d) In high schools, technical schools, and colleges, youth may learn to work with extreme precision in wood and metal, as they are taught in the College of the City of New York, in Cornell University, and in many other places.

(e) Youth who will take time to fit themselves to be foremen and leaders in machine shops and factories may be trained in theoretical and practical mechanics, as at Worcester, Hoboken, Boston, and elsewhere; but the youth who would win in these hard paths must have talent at command as well as time to spare. These are schools for foremen, or (if we may use a foreign word like kindergarten) they are Meisterschaft schools, schools for training masters.

(f) Youth who wish to enter the highest department of engineering, must follow long courses in mathematics and physics, and must learn to apply their knowledge; if they wish to enter upon other branches of advanced science, they must work in the scientific laboratories now admirably equipped in every part of the country. These are technical colleges for engineers, for chemists, for explorers, for naturalists, etc.

(g) Art instruction must be provided as well as scientific, elementary, constructive, decorative, and professional education.

At every stage, the language of the pencil and of the pen must be employed; rede-craft must be practiced with hand-craft; and there must be no thought of immediate profit from that which is done in the early and rudimentary stages of the training.

D. C. Gilman.