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CATALOGUE NUMBER.

NUMBER 6. JUNE, 1904.

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Entered February 18, 1903, at Denton, Texas, as second-class matter, under Act of Congress of July 16, 1894.

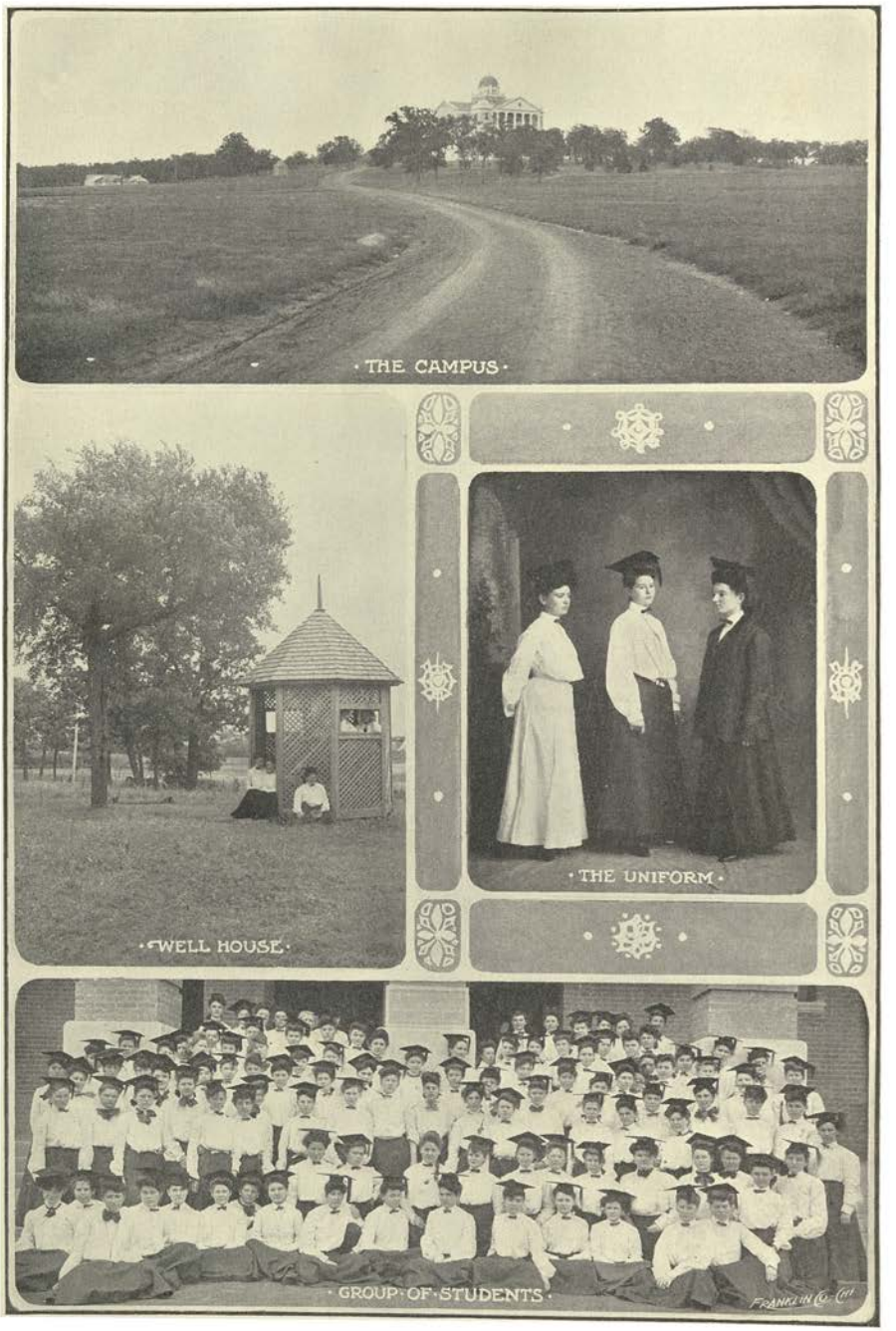
Course of Study.

Girls Industrial College

of Texas

Located at Denton

Second Year Begins September 21, 1904.



THE CAMPUS, WELL HOUSE, ETC.

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September 21, 1904.

AUSTIN, TEXAS:
VON BOECKMANN-JONES COMPANY, PRINTERS
1904.

CALENDAR, 1904.

January

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CALENDAR, 1905.

January

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September

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24	25	26	27	28	29	30
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COLLEGE CALENDAR.

1904.

First Term of Thirteen Weeks Begins	Wednesday, September 21.
Entrance Examinations and Registration	Wednesday and Thursday, September 21 and 22.
Organization of Classes	Friday, September 23.
Class Work Begins	Saturday, September 24.
Reception to Students by the Faculty	Monday evening, September 26.
Thanksgiving—Holiday	Thursday, November 24.
First Term Ends	Thursday, December 22.
Christmas Vacation Begins	Friday, December 23.

1905.

Christmas Vacation Ends	Tuesday, January 3.
Second Term of Eleven Weeks Begins	Wednesday, January 4.
Washington's Birthday—Holiday	Wednesday, February 22.
Texas Independence Day—Holiday	Thursday, March 2.
Second Term Closes	Saturday, March 18.
Third Term of Twelve Weeks Begins	Tuesday, March 21.
San Jacinto Day—Holiday	Friday, April 21.
Baccalaureate Sermon	Sunday, June 4.
Demonstration and Exhibition Day	Monday, June 5.
Class Day	Tuesday, June 6.
President's Reception to Graduating Class	Tuesday evening, June 6.
Commencement Day	Wednesday, June 7.
Summer Term of Four Weeks Begins	Thursday, June 8.
Summer Term Closes	Thursday, July 6.

BOARD OF REGENTS

OF THE

GIRLS INDUSTRIAL COLLEGE

HON. A. P. WOOLDRIDGE, *President,* Austin.

MISS M. ELEANOR BRACKENRIDGE, *Vice-President,* San Antonio.

MRS. HELEN M. STODDARD, *Secretary,* Fort Worth.

HON. JOHN A. HANN, *Treasurer,* Denton.

HON. CLARENCE OUSLEY, Fort Worth.

MRS. CONE JOHNSON, Tyler.

HON. ROSSER THOMAS, Bonham.

Address inquiries to the President of the College,
CREE T. WORK, Denton.

FACULTY.

MR. CREE T. WORK, *President.—Psychology, Ethics, Manual Training.*
State Normal School, Indiana, Pa.—B. E. D., 1890; M. E. D., 1892. Boston Sloyd Training School—Diploma, 1893. Columbia University—Teachers College Higher Diploma, 1900. Honorary Life Diploma of the State of Colorado, 1901. Superintendent of Schools, Du Bois, Pa., 1890-1892. Director of Industrial Department, State Normal School of Colorado, 1892-1900. Fellow in Manual Training, Teachers College, 1899-1900. Supervisor of Manual Training for the City of San Francisco, 1900-1903.

MISS LUCY E. FAY.—*English Language and Literature.*
Student in Kleinburg School, Virginia. Tulane University—Newcomb College—A. B., 1895. University of Texas—A. M., 1901. Private Tutor, 1896-1897. Teacher in Whitis School, Austin, Texas, 1901-1903.

MISS JESSIE H. HUMPHRIES.—*History and Economics.*
Howard Payne College—A. B., 1896. University of Chicago—A. B., 1899. Teacher Elementary Schools. Instructor in English and History, Bonham High School, 1900-1902; Dallas High School, 1902-1903.

MRS. GESSNER T. SMITH.—*Modern Languages and Latin.*
Student in Berlin and Madrid, 1885-1886; at the Sorbonne, Paris, 1900-1901; University of Chicago, 1897. Mistress of Modern Languages, Industrial Institute and College of Mississippi, 1886-1888. Student and Teacher, Tuskaloosa Female College, Ala., 1892-1895. Teacher in East Tennessee Institute, 1895-1900. Mistress of Modern Languages and Instructor in Latin, Industrial Institute and College of Mississippi, 1901-1903.

MR. A. L. BANKS.—*Mathematics.*
Marvin College—A. B., 1880. Student at University of Virginia and University of Chicago. Agricultural and Mechanical College of Texas—B. S., 1892; M. S., 1894. Professor of Mathematics, Marvin College, 1880-1883. Professor of Mathematics, Salado College, 1883-1884. Principal Bryan High School, 1884-1891. Associate Professor of Mathematics, Agricultural and Mechanical College of Texas, 1891-1903.

MR. C. N. ADKISSON.—*Physical Science and Photography.*
Central College, Texas—A. B., 1890. Graduate in Bacteriology, University of Louisville, 1891. Student Vanderbilt University, 1892. Instructor in Science, Polytechnic College,

Fort Worth, 1892-1897; Granbury College, 1898; Randolph College, 1899-1901; Terrell University School, 1901-1903. Instructor in Chemistry and Physics, Colorado Chautauqua, 1902-1903.

MISS HARRIETT V. WHITTEN.—*Biological Science and Geology.*
University of Texas—B. S., 1898; M. S., 1900. Student Assistant in Geology, University of Texas, 1897-1899. Tutor in University of Texas, 1899-1902. Instructor in Geology, University of Texas, 1902-1903.

MISS MARY LOUISE TUTTLE.—*Domestic Science, Dairying, Laundering.*
St. Margaret's Diocesan School, Waterbury, Conn., 1885. Diploma in Domestic Science, Teachers College, Columbia University, 1902. Supervisor of Domestic Department, Waterbury Hospital, 1898. Domestic Manager, Pennoyer Sanatorium, Kenosha, Wisconsin, 1901. Assistant in Domestic Science, Teachers College, 1901-1902. Tutor in Domestic Science, Teachers College, 1902-1903. Student Connecticut Agricultural College, 1903.

MISS ELMA B. PERRY.—*Domestic Science.—Cookery.*
Ohio State University—B. Sc., B. Ph., 1901. Fellow and Assistant Teacher of Botany, Ohio State University, 1901-1902 —Post-Graduate Work. Student at Wesleyan University. Director Department of Domestic Economy, Stout Manual Training School, Menomonie, Wisconsin, 1902-1903.

MRS. HELEN B. BROOKS.—*Domestic Art.—Sewing, Dressmaking, Millinery.*
Graduate Beck's Commercial School, Ohio, 1898. Pratt Institute, Brooklyn, New York—Domestic Art, 1903. Commercial Secretary, 1899-1901. Instructor in Sewing, St. Bartholomew's Industrial School, New York City, 1902-1903. Assistant Instructor, Pratt Institute. 1902-1903.

MISS AMELIA B. SPRAGUE.—*Fine and Industrial Arts.*
Cincinnati Art Academy, 1887-1891. Designer, Decorator and Teacher at Rookwood Pottery, Cincinnati, 1899-1902. Pratt Institute, 1899-1900, 1902-1903. Private Teacher of Drawing, Water Color, Basketry and China Painting. Normal Art Instructor, Madisonville, Ohio, Public Schools, 1902. Instructor in Hand-work in Asacog and Greenpoint Social Settlements, Brooklyn, N. Y., 1903. Instructor in Art and Hand-work, Ohio State Normal School, Miami University, 1903.

MISS JESSIE MCCLYMONDS.—*Elocution, Physical Culture, Vocal Music.*
State Normal School, Edinboro, Pa., B. E. D., 1887; M. E. D., 1889. Instructor in Music, Public Schools, Colfax, Wash.,

1891-1892. Instructor in High School, Colfax, Wash., 1892-1894. Emerson College of Oratory, Boston, Mass., 1901. Public Readings, 1901-1903. Post-Graduate Course, Emerson College of Oratory, 1903. American Institute of Normal Methods (Music), Boston, 1903.

MR. HARRY GORDON ALLEN.—*Commercial Art.*

Ottawa University, Kansas. University of Chicago, 1899-1901. Expert Court Reporter. Accountant. University Stenographer. Director Commercial Department, High School, Dubuque, Iowa, 1901-1903.

MISS REBECCA M. EVANS, M. D.—*Physician and Lecturer on Physiology and Hygiene.*

Mount Union College—Normal Department, Alliance, Ohio, 1892. Northwestern University, Woman's Medical College, Chicago, 1902. Teacher High School, 1893-1898. Interne New England Hospital for Women and Children, Boston, 1902-1903.

MR. WALTER J. STOVALL, *Secretary.*

MR. A. J. SEIDERS, *Landscape Gardener.*

MR. R. H. MCSPADDEN, *Gardener.*

MR. C. W. FERGUSON, *Engineer.*

FACULTY COMMITTEES.

Curriculum.

MR. ADKISSON. MISS TUTTLE. MISS SPRAGUE.
MISS HUMPHRIES. MR. ALLEN.
MRS. BROOKS. MR. BANKS.

Classification.

MR. BANKS. MISS FAY. MISS PERRY.
MISS HUMPHRIES. MRS. SMITH.

Affiliation.

MISS WHITTEN. MR. ADKISSON. MISS HUMPHRIES.

Graduation and Certification.

MR. ADKISSON. MISS TUTTLE. MISS FAY.
MISS SPRAGUE. MR. ALLEN.

Attendance.

MISS HUMPHRIES. MISS PERRY. MISS WHITTEN.

Literary Societies.

MR. ALLEN. MISS MCCLYMONDS. MISS FAY.

Exhibition.

MISS SPRAGUE. MRS. BROOKS. MISS PERRY.

Press.

MISS FAY. MISS PERRY. MR. ALLEN.

Athletics.

MISS MCCLYMONDS. MRS. BROOKS. DR. EVANS.

Boarding Arrangements.

MRS. SMITH. MR. BANKS. MISS TUTTLE.
DR. EVANS. MRS. BROOKS.

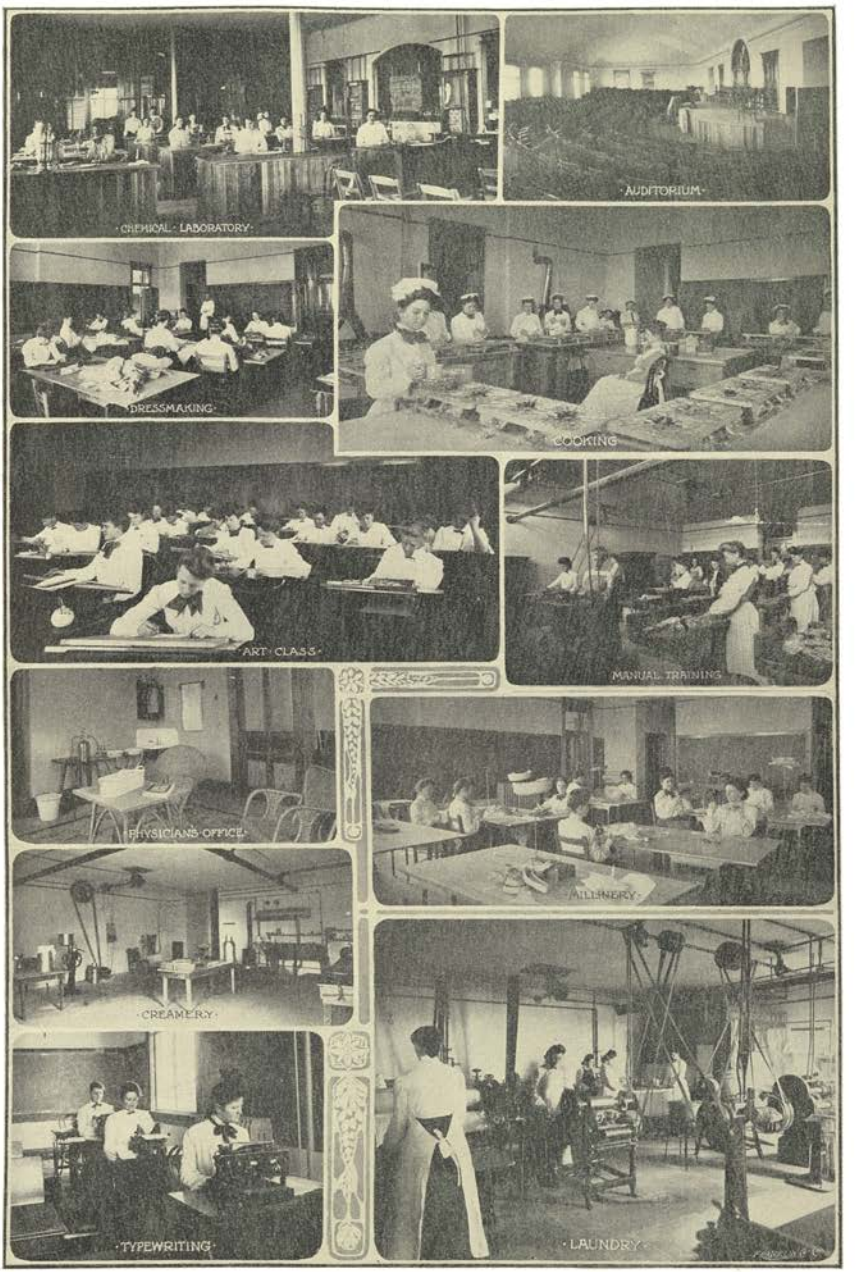
Entertainment.

MISS TUTTLE. MRS. SMITH. MISS SPRAGUE.

Mentor.

DR. EVANS. MR. BANKS. MISS WHITTEN.

The President is ex-officio a member of all Committees.



CHEMICAL LABORATORY, DRESSMAKING, ETC.

THE GIRLS INDUSTRIAL COLLEGE OF TEXAS.

HISTORICAL SKETCH.

The first formal effort to establish an institution in Texas for the industrial training of girls was the introduction of a bill in the lower house of the Twenty-second Legislature, in 1891, by the Hon. A. J. Baker of San Angelo. The bill passed in the Senate, but failed in the House. In 1897 a similar bill was introduced by Senator William J. Bailey, of Tarrant county. Again the bill passed the Senate, but failed in the House. In the Twenty-sixth Legislature, in 1899, a bill providing for a girls industrial institution was introduced by Judge V. W. Grubbs, of Greenville. Although this bill failed in the Senate, the agitation in its favor terminated in a formal demand in the platform of the Democratic party, in 1900, that an industrial institution for the training of girls be established. The bill, which finally became a law, and which was substantially the same as that introduced by Judge Grubbs, was introduced in the Senate of the Twenty-seventh Legislature by Senator Harris, and in the House by Messrs. Mulkey and Pierson. It became a law April 6, 1901, thus creating the "Texas Industrial Institute and College for the Education of White Girls of the State of Texas in the Arts and Sciences." The law provided that the Governor appoint a locating commission to choose a site for the College, said commission to consist of one person from each Congressional District. One of the duties laid upon this commission was: "They shall also take into consideration the healthfulness, moral and social environments and influences, accessibility, and other facts and circumstances affecting the suitability of the site in question as a location for said industrial institute and college." This commission, consisting of thirteen persons (Mrs. Helen M. Stoddard, of Fort Worth, being the only lady member), after making an extended tour of the State, on which they carefully inspected numerous available sites, finally, in February, 1902, located the College at Denton.

The law also directed "That the Board of Regents shall possess all the powers necessary to accomplish and carry out the provisions of this act, the establishment and maintenance of a first-class industrial institute and college for the education of white girls in this State in the arts and sciences, at which such girls may acquire a literary education, together with a knowledge of kindergarten instruction; also a knowledge of telegraphy, stenography, and photography; also a knowledge of drawing, painting, designing and engraving, in their industrial application; also a knowledge of general needle-work, including dressmaking; also a knowledge of bookkeeping; also a thorough knowledge of scientific and practical cooking, including a chemical study of food; also a knowledge of practical housekeeping; also a knowledge of trained nursing, caring for the sick; also a knowledge of the care and culture of children; with such other practical industries as from time to time may be suggested by experience, or tend to promote the general object

of said institute and college, towit: fitting and preparing such girls for the practical industries of the age."

The Governor appointed as the first Board of Regents, all of whom are still serving in that capacity, the Hon. A. P. Wooldridge, of Austin; Miss M. Eleanor Brackenridge, of San Antonio; Mrs. Helen M. Stoddard, of Fort Worth; Hon. Clarence Ousley, of Houston (now of Fort Worth); Mrs. Cone Johnson, of Tyler; Hon. Rosser Thomas, of Bonham, and Hon. Jno. A. Hann, of Denton. This Board went to work promptly, and, on January 10, 1903, in the presence of five thousand people, the cornerstone of The Girls Industrial College of Texas was laid. Several meetings of the Board and much time was employed during the spring and summer of 1903 in the selection of a Faculty. Meanwhile, the Building Committee of the Board put forth its most strenuous efforts in purchasing and placing the College equipment for the accommodation of the students. In February, 1903, the first number of the "Girls Industrial College Bulletin" was issued, containing a preliminary announcement of the opening of the College in September; in June, Bulletin No. 2 was issued, giving the "Plan and Scope" of the College; and in August the "Course of Study" was issued in Bulletin No. 3. The plan provided for four general departments—"English-Science," "Domestic Arts," "Fine and Industrial Arts" and "Commercial Arts"—with courses in each leading to graduation. Provision was also made for irregular students who might not be able to complete a full course. With a Faculty of fourteen specialists, selected from South, East, North and West, and from nine different States, the College opened its doors September 23, 1903. At the close of this, the first year, there have matriculated one hundred and eighty-six (186) students, representing eighty-eight (88) counties of Texas. These make as fine a body of young people as may be found anywhere throughout our land. In them not only the hope, but the pride of Texans may rightfully be centered.

LOCATION.

The Girls Industrial College is situated just in the outskirts of Denton, to the northeast, in a campus of seventy acres of rising ground overlooking the city and the surrounding country. About ten acres of this forms a beautiful slope in front of the College building. This portion is well supplied with large shade trees and is covered with Bermuda grass, with artistic walks and drives leading to the College. In the rear of the College is a fine grove of oaks, in the midst of which it is hoped to erect, before many years, a comfortable dormitory for the students. Lying still back of this, toward the north, are the orchard, berry and vegetable gardens, and grain fields. The College plant is provided with a good sewerage system which carries the sewage to the farm, many rods away from the building.

Denton is located in a prosperous agricultural region. It has a population of about 5,000, and is a city of good homes, intelligent people, and has an elevating moral and social atmosphere. The representative religious denominations have churches here. Denton is rapidly becom-

ing an educational center, it having not only a good system of public schools, including a high school, but also the John B. Denton College, the North Texas State Normal, and the Girls Industrial College of Texas. The city is in a healthful location, and is supplied with excellent water from an artesian well. It is within thirty-five miles of Fort Worth, about the same distance from Dallas, and is reached by the Missouri, Kansas & Texas and the Texas & Pacific railways.

EQUIPMENT.

The equipment of the College is the best that could be obtained, the policy of the Board being that the best is none too good for Texas girls, and that it is poor economy to get second-class equipment. The basement contains the creamery, equipped with churns, separator, cream ripener, butter worker, cream testers, wash sinks, bottling apparatus, scales, etc. In another well lighted apartment, with cement floor, is the laundry, with complete outfit for both hand and machine work, as tubs, washer, dry room, extractor, wringers, ironing boards, ironing machines, starcher, etc. Adjoining the laundry is a science lecture room for the theoretical work in laundering and dairying. In the basement is also located the manual training laboratory, equipped with benches and tools for light construction work, wood carving, Venetian iron work, modeling, cardboard work, etc. This laboratory also contains a lathe, a scroll saw, and other small machinery for skilled hand work suitable for women and for public school manual training work. The machinery in these departments is run by electric power. Across the corridor from these departments is the boiler room containing the heating plant, air compressor for forcing water from the well, a gas machine, to provide gas for kitchen, laundry and other laboratories, etc. Adjoining the boiler room is an apartment fitted up as a lunch room and cloak room. On the second floor are the President's, Secretary's and Physician's offices; the art room, with individual drawing tables, lockers, model stands, etc.; the mathematics, languages and English rooms, seated with comfortable cane-bottomed chairs with tablet arm; and the library, which already contains several hundred volumes, treating of all phases of the college work, and with twenty-five or thirty magazines and a good reading table. On the second floor is the Commercial room, with typewriters, tables and desks; the history room; the rooms for biological science, consisting of a lecture room, seated with eighty (80) oak opera chairs with tablet arm, and a laboratory with table, compound microscopes and other apparatus; and the large physical laboratory, equipped with twelve double experimental tables, lecture chairs, storage cases, hoods, basins, etc.; this room also contains a fine photographic equipment, china kiln, sunlight picture apparatus, an electric stereopticon, etc.; adjoining it are the instructor's private laboratory, an apparatus room containing an X-Ray equipment and much other apparatus for physics, a chemical store room, and a photographic dark room. On the third floor is a domestic science laboratory, domestic arts laboratory and the auditorium. The first consists of a lecture

department, with lockers for aprons and caps; a large kitchen, equipped with tile-topped cooking tables, built in the form of a rectangle, fitted on top with twenty-two two-place gas stoves, for each of which, beneath the table, are a bread board, drawer with cooking dishes, spoons, etc., and a roll front cupboard with pots, pans, etc.; the kitchen is also supplied with a large gas range, a coal and wood range, a thirty-gallon hot water boiler, six porcelain-lined sinks, a cupboard for extra dishes and equipment, a supply table in which are kept various provisions and materials, a fuel chest, a storage closet, a refrigerator, and a dumb waiter for raising materials from the basement. The domestic arts laboratory has a locker room for students' unfinished work, a large sewing room with small and large tables, a dozen sewing machines, a fitting and millinery room and storage closets. The auditorium has a raised floor and is equipped with good oak furniture—opera chairs, platform chairs, reading desk and piano, together with charts, blackboard, etc., for music classes. An electric program clock in the main office automatically calls off the time for change of classes by ringing small gongs in the corridors on all the floors. Only the central portion of the main building has as yet been erected. Additions are contemplated according to the growth of the school and the financial prosperity of the State.

Tennis and Basket Ball courts are located near the building. A large greenhouse has been built, in connection with which practical lessons in floriculture and horticulture are given; also a fine dairy barn, where a small herd of registered Jerseys is kept; and a poultry yard, which is supplied with incubators and brooders, and is stocked with a variety of blooded fowls. Artesian water is obtained from a deep well just in the rear of the building, from which it is pumped into a forty-thousand gallon cement reservoir; from this, when the sediment has settled, the clear, pure water is pumped into a ten-thousand gallon steel tank, standing on a sixty-foot steel tower, affording not only ample water supply for the College, but fire protection as well; this tank also supplies water for the water garden, which is being made on the front slope of the College campus.

CONDITIONS FOR ENTRANCE.

Who may attend the College? All white girls of good moral character who have attained the age of sixteen years, who have a knowledge of the common school subjects, who wish to acquire a higher education which includes a thorough practical training for life, who come to the school with the clear and earnest purpose of doing their best work and of complying with the regulations of the institution, and who pass satisfactorily the entrance examinations prescribed by the Faculty.

The examination for entrance to the First Preparatory and Irregular classes covers the subjects of Spelling, Reading, Political Geography, Arithmetic, Elementary Algebra, United States History, English Grammar and Composition. The examination in Political Geography will include the political divisions of the world, the distribution of

the waters of the earth, important cities, mountains, and location of same. In Arithmetic, ability to solve problems in Greatest Common Divisor, Least Common Multiple, Percentage, Square Root, and Cube Root is required. In Algebra, skill in solving problems in Common Divisor, Least Common Multiple, Fractions, and Simple Equations is required. The examination in History will embrace a knowledge of the leading facts of the History of the United States as given in such text-books as those adopted in the Texas Public Schools. For the examination in English Grammar the student must be able to analyze simple, complex, and compound sentences, and to parse all the words contained in those sentences. The requirements for composition are the ability to write intelligent sentences, and to write them neatly and punctuate them correctly. The questions for the entrance examination, in any subject, are not taken from any text-book or books, but are such as are reasonable for students who have made a proper study of the subjects indicated.

Applicants for advanced standing, not vouched for by the Affiliation Committee, will be examined in all subjects in the preceding years of the course of study. Those holding Second Grade State Certificates will be admitted to the Second Preparatory class without examination. Graduates of approved high schools, and those holding First Grade State Certificates will, at present, be admitted to the Junior Class without examination. Advanced students who have had work in other schools of high standing, equivalent to that required in any of the subjects of the course in the College, will be given due credit for the same.

Graduates from good high schools should be able to complete the work, as at present arranged, in two years.

IRREGULAR STUDENTS.

Students who, for reasons satisfactory to the Classification Committee, are unable to carry a regular program of work, may be classified as irregular students, taking such program of work as may be approved by said committee. All such students, however, will be required to pass the examinations for entrance to the First Preparatory Course, or to present credentials as indicated above. This arrangement for irregular students is intended for adults whose time is limited and who are not prepared to carry the regular work. Young students who fear that they may not be able to remain long enough to complete the entire regular course should carry it as far as they can rather than plan to enter as irregular students. Effort will be put forth to make all courses so practical and thorough at all points that the greatest good will be gained by taking the work in its regular order. The aim of the College will be to encourage thorough, earnest work in all departments, and the purpose of students who attend it should be to take enough time to do the work in a manner creditable to themselves and the institution.

Teachers who desire to prepare for teaching manual training, including sewing and cooking, in the public schools, will be welcomed to the

institution, and will be provided with courses in the theory and practice of work suitable for primary, grammar and high schools. Particularly would we encourage those in this work who are thoroughly interested in it and who have had successful teaching experience or a Normal School course, or both.

SPECIAL STUDENTS.

Students who wish to pursue work beyond that prescribed in the curriculum may arrange for special work if the candidate presents satisfactory qualifications to the Classification Committee. Special students may choose their course, subject to the approval of the respective teachers involved, and of the President. Certificates of proficiency in any branch will not be issued for less than one term's work in such branch.

CURRICULUM.

The field to be covered by the work of the Girls Industrial College is so large that it has been impossible at this time to inaugurate all of the courses contemplated in the law. Therefore only the subjects for which there is the most urgent present demand, and which seem to be of the most vital importance in the practical education of our girls, are at present introduced. These are arranged under four courses, known as the "English-Science Course," "Domestic Arts Course," "Fine and Industrial Arts Course," and "Commercial Arts Course." As the College develops, additional courses will be organized and other subjects introduced.

English-Science Course. This course is adapted to the needs of those who want to give their chief attention to scientific and literary subjects. It involves more collateral reading and a larger proportion of home study than other courses.

Domestic Arts Course. As the title indicates, this course places stress on training of a domestic nature. The literary and scientific features it includes contribute to make it a broad, practical course. While girls may have no need or desire to do everything required in the course after they leave school, they will be largely benefited by the training involved in each subject of the course.

Fine and Industrial Arts Course. This course includes numerous subjects of a practical nature, and is intended to prepare students for profitable remunerative occupations. Here again, work in literature and science is deemed essential to the most successful work, both during and after the completion of the course. In this and other practical courses a large amount of laboratory study and practice is required.

Commercial Arts Course. Here is offered a thorough course for those who wish to prepare for clerical work, reporting, etc. It is intended to meet the demand for more broadly intelligent and more

accurate office workers in commercial lines. The work ranks with that of other courses in extent and grade.

The regular course in any department includes the completion of all work indicated. All who satisfy the requirements of any portion of a course, either by examination or certificate, will be given due credit therefor; provided, that at least one year's work at the institution will be required of all candidates for a diploma of graduation.

In literary and scientific subjects much of the work is common to all courses. Wherever practicable, classes in the different courses recite together. The satisfactory completion of subjects not marked in the tabulated outline as optional, or as elective with a subject being taken by the student, is required of regular students in the several courses.

Students may pursue the work of two courses at the same time, subject to the approval of the instructors concerned and the Classification Committee. It stands to reason that such students can not expect to complete both courses in the same time as would be required for but one.

After entering upon the work of any course a student may not change to another course, or alter her program, without the approval of the Classification Committee.

All students will be required from time to time to attend lectures and demonstrations in Floriculture, Poultry Raising, Beekeeping and Dairying through one year. Sections will be formed and will report for this, as directed by the President.

It will be noticed that in all of the courses literary work has a prominent place. Industrial training is most valuable, but, taken by itself, it is not sufficient. Both for the purpose of training and that of giving information, literary work is indispensable in a thorough education. In the courses as arranged an effort has been made to furnish the two lines of work—industrial and literary—in proper proportions for the best, all-round, practical training for life's work. In the early part of the course the literary feature naturally receives emphasis, connecting with school work previously done by the students, and preparing them for the deeper appreciation of the scientific features of the industrial courses. During the Junior and Senior years emphasis is placed on the manual work, and special technique developed. Let no student come to the College with the idea that books are here laid aside. Books are among the tools of all of the departments of the Girls Industrial College of Texas.

COURSE OF STUDY.

FIRST PREPARATORY YEAR.

(For All Courses.)

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

First Term.		Second Term.		Third Term.	
Grammar and Composition	5	Grammar and Composition	5	Grammar and Composition	5
Reading	1	Reading	1	Reading	1
Texas History	3	United States History	3	United States History	3
Arithmetic	5	Algebra	5	Algebra	5
Physiology and Hygiene	2	Physiology and Hygiene	2	Physiology and Hygiene	2
Latin	4	Latin	4	Latin	4
or		or		or	
Sewing -|-2 Cooking -|-2 Drawing -|-1	-|-5	Sewing -|-2 Cooking -|-2 Drawing -|-1	-|-5	Sewing -|-2 Cooking -|-2 Drawing -|-1	-|-5
Physical Culture	-|-1	Physical Culture	-|-1	Vocal Music	1
Laundering	-|-2	Manual Training	-|-2	Manual Training	-|-2
*Required periods per week	16-|-3 or 20-|-3		16-|-3 or 20-|-3		17-|-7 or 21-|-2

SECOND PREPARATORY YEAR.

(For All Courses.)

First Term.		Second Term.		Third Term.	
Composition and Literature	3	Composition and Literature	3	Composition and Literature	3
Reading	1	Reading	1	Reading	1
Algebra	3	Algebra	3	Geometry	5
Physiology and Hygiene	2	Physiology and Hygiene	2	Political, Physical and Commercial Geography	5
Applied Botany	2-|-2	Political, Physical and Commercial Geography	5	Civics	3
Latin or English History	4	Latin or English History	4	Latin or	4
Sewing -|-2 and Cooking or Drawing -|-2	-|-4	Sewing	-|-2	Laundering -|-2 and Cooking or Drawing -|-2	-|-4
Physical Culture	-|-1	Cooking or Drawing	-|-2	Physical Culture	-|-1
Vocal Music	1	Physical Culture	-|-1	Vocal Music	1
		Vocal Music	1		
*Required periods per week	16-|-7		19-|-5		18-|-5 or 22-|-1

*The second amount indicated here is the time for those who elect Latin instead of Sewing, Cooking and Drawing.

FLORICULTURE, GREENHOUSE, ETC.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

JUNIOR YEAR—FIRST TERM.

I. English-Science Course.		II. Domestic Arts Course.		III. Fine and Industrial Arts Course.		IV. Commercial Arts Course.	
English	4	English	4	English	4	English	4
History	3	History	3	History	3	History	3
Latin or ‡Modern Language	4	Chemistry	2 +2	Latin or ‡Modern Language	4	Commercial Arithmetic	5
Geometry	4	Zoology and Botany	1 +2	Geometry		Bookkeeping	+10
Chemistry	2 +2	Cooking	2 +2	Chemistry	2 +2	Chemistry	2 +2
Zoology and Botany	2 +2	Sewing	+2	Zoology and Botany	1 +2	Elocution and Physical Culture and Vocal Music	2
Cooking or Sewing	+2	Dairying	+3	Drawing	+3	or German or Spanish	4
Elocution and Physical Culture	1	Dressmaking	+2	Elocution and Physical Culture	1	*Cooking or *Sewing	+2
Vocal Music	1	Elocution and Physical Culture	1	Vocal Music	1		
		Vocal Music	1	Dressmaking or Manual Training	+2		
				*Basketry	+2		
				*China Painting	+3		
				*Dairying	+3		
Required periods per week	21 +6		14 +13		16 +9		16 +12 or 18 +12

‡ French, German, Spanish.
* Optional.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

	I. English-Science Course.		II. Domestic Arts Course.		III. Fine and Industrial Arts Course.		IV. Commercial Arts Course.	
JUNIOR YEAR—SECOND TERM.	English ..... 4 History ..... 3 Latin or ‡Modern Language .. 4 Chemistry ..... 2 +2 Geometry ..... 4 Zoology and Botany.. 2 +2 Cooking or Sewing ..... +2 Elocution and Physical Culture..... 1 Vocal Music..... 1		English ..... 4 History ..... 3 Chemistry ..... 2 +2 Zoology and Botany.. 1 +2 Cooking ..... 2 +2 Dairying ..... +3 *Laundering ..... +3 Dressmaking ..... +2 Elocution and Physical Culture..... 1 Vocal Music..... 1		English ..... 4 History ..... 3 Latin or ‡Modern Language or Geometry .. 4 Chemistry ..... 2 +2 Zoology and Botany.. 1 +2 Elocution and Physical Culture..... 1 Vocal Music..... 1 Drawing ..... +3 Dressmaking or Manual Training ... +2 *Basketry ..... +2 *China Painting..... +3 *Dairying ..... +3		English ..... 4 History ..... 3 Commercial Arithmetic ..... 5 Bookkeeping ..... +10 Chemistry ..... 2 +2 Elocution and Physical Culture ..... 1 and Vocal Music..... 1 } 2 or German or Spanish ..... 4 *Cooking or *Sewing ..... +2	
	Required periods per week 21	+6		14	+11	16	+9	16 +12 or 18 +12

‡ French, German, Spanish.
* Optional.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

JUNIOR YEAR—THIRD TERM.

I. English-Science Course.		II. Domestic Arts Course.		III. Fine and Industrial Arts Course.		IV. Commercial Arts Course.	
English	3	English	3	English	3	History	3
History	3	Bacteriology	2	History	3	Chemistry	2 +2
Latin or ‡Modern Language	4	Chemistry	2 +2	Latin or ‡Modern Language or Higher Algebra	4	Commercial Geography	5
Higher Algebra	4	Zoology and Botany	1 +2	Chemistry	2 +2	Business Correspondence	3
Chemistry	2 +2	Cooking	2 +2	Zoology and Botany	1 +2	Bookkeeping	+10
Zoology and Botany	2 +2	Dairying	+3	Elocution and Physical Culture	1	Elocution and Physical Culture and Vocal Music	2
Cooking or Sewing	+2	Dressmaking	+2	Vocal Music	1	or German or Spanish	4
Elocution and Physical Culture	1	Elocution and Physical Culture	1	Dressmaking or Manual Training	+2	*Cooking or *Sewing	+2
Vocal Music	1	Vocal Music	1	*Basketry	+2		
		Bee Culture	+2	*China Painting	+3		
				*Dairying	+3		
				Drawing	+3		
Required periods per week	20 +6		12 +13		15 +9		15 +12 or 17 +12

‡ French, German, Spanish.
* Optional.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are 45 minutes in length.

SENIOR YEAR—FIRST TERM.

I. English-Science Course.		II. Domestic Arts Course.		III. Fine and Industrial Arts Course.		IV. Commercial Arts Course.	
English	3	English	3	English or Latin or ‡Modern Language	3	Political Economy	3
Latin or ‡Modern Language	3	Political Economy	3	Political Economy	3	History	3
History	3	History	3	Physics	2 +2	Commercial Law	4
Political Economy	3	Physics	2 +2	History	3	Stenography	6
Plane Trigonometry	4	Sanitation and Care of the Sick	2	History of Art	2	Typewriting	+5
Physics	2 +2	Cooking	2 +2	Millinery or Drawing and Design	+2	Elocution and Physical Culture and Vocal Music	2
Elocution and Physical Culture	1	Millinery	+2	Painting	+3	or German or Spanish	3
Vocal Music	1	Housekeeping	1 +1	*China Painting	+3		
Geology	1 +2	Floriculture	1 +2	Photography or Manual Training and Mechanical Drawing	1 +4		
		Vocal Music	1		14 +11		
Required periods per week	21 +4		18 +9				18 +5 or 19 +5

‡ German, French or Spanish.

* Optional.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

SENIOR YEAR—SECOND TERM.

I. English-Science Course.			II. Domestic Arts Course.			III. Fine and Industrial Arts Course.			IV. Commercial Arts Course.		
English	3		English	3		English or Latin or ‡Modern Language	3		Political Economy	3	
Latin or ‡Modern Language	3		Political Economy	3		Political Economy	3		History	3	
History	3		Physics	2	+2	Physics	2	+2	Commercial Law	4	
Political Economy	3		History	3		History	3		Stenography	6	
Analytical Geometry	5		Cooking	2	+2	History of Art	1		Typewriting		+5
Psychology	2		Housekeeping	1	+1	Psychology	2		Elocution and Physical Culture	1	2
Physics	2	+2	Millinery		+2	Millinery or Drawing and Design		+2	and Vocal Music	1	
Elocution and Physical Culture	1		Sanitation	1		Painting		+3	or German or Spanish	3	
Vocal Music	1		Invalid Cooking	1		*China Painting		+3			
			Psychology	2		Photography or Manual Training and Mechanical Drawing	1	+4			
			Poultry-keeping	1	+2						
			Vocal Music	1							
Required periods per week	23	+2		20	+9		15	+11		18 or 19	+5 +5

‡ German, French or Spanish.
* Optional.

COURSE OF STUDY.

The numbers indicate the recitation periods per week. Those preceded by + are laboratory or recitation periods only, requiring little or no home study. The periods are forty-five minutes in length.

SENIOR YEAR—THIRD TERM.

I. English-Science Course.		II. Domestic Arts Course.		III. Fine and Industrial Arts Course.		IV. Commercial Arts Course.	
English	5	English	3	English Literature or Latin or ‡Modern Language	3	Political Economy	3
Latin or ‡Modern Language	3	Physics	2 +2			History	3
History	3	Ethics	3	Physics	2 +2	Stenography	10
Physics	2 +2	Psychology	2	History	3	Typewriting	+5
Ethics	3	Cooking	2 +2	Psychology	2	Elocution and Physical Culture and Vocal Music	2
Psychology	2	Housekeeping	1 +1	Ethics	3	or	
Elocution and Physical Culture	1	Millinery	+2	Millinery or Drawing and Design	+2	German or Spanish	3
Vocal Music	1	Poultry-keeping	1 +2	Painting	+3		
		Floriculture	1 +2	*China Painting	+3		
		Vocal Music	1	Photography or Manual Training and Mechanical Drawing	1 +4		
Required periods per week	20 +2		16 +11		14 +11		18 +5 or 19 +5

‡ German, French or Spanish.
* Optional.

ENGLISH.

MISS FAY.

The work in this department includes instruction in grammar, composition and literature, and extends through the entire four years. All students are required to study English, no matter what course is taken, for any knowledge without the power to express that knowledge correctly, both orally and in writing, is inadequate.

The First Preparatory Year is devoted to the study of grammar and composition, and the student is trained primarily to write sentences and paragraphs correctly and clearly. In the Second Preparatory Year composition is continued (grammar for the first term, if necessary) and an outline course given in American literature, with especial study of selected texts. The Junior year offers more advanced work in composition, and a general course in English literature from Chaucer to the present time. In the Senior Year the work in English literature embraces the study of special authors of the Modern Period—and of the Victorian Era in particular. In the spring term a course in historical grammar and Chaucer is required of the English-Science students.

HISTORY AND ECONOMICS.

MISS HUMPHRIES.

Throughout the course, effort is made to lead the student to realize the unity of History; that each succeeding event is the result of what has gone before, and, in its turn, helps to produce that which follows; that History deals not with remote, fictional characters and obsolete problems, but with living influences and personalities which can help us to meet successfully the difficulties which confront us.

In planning the work of the History department, it has been assumed that the students have already had a considerable amount of work in the History of the United States and of Texas. The work offered in the First Preparatory Year consists, therefore, largely of reviews and parallel reading. It embraces careful study of the formation and deevlopment of our nation.

The first two terms of the Second Preparatory Year are given to the study of the History of England. The close relation existing between the histories of England and of America is emphasized. Thus the student acquires the necessary knowledge, and reaches a suitable point of view, for the profitable study of Civil Government in the United States. The text-book is supplemented by the Constitutions of the United States and of Texas, and other "Liberty Documents."

The greater part of the Junior Year is spent in the study of Ancient History. The ground covered my be indicated by the topics, "Ancient History from the Supremacy of the Orient to the Restoration of the Empire in the West by Charlemagne," or "The Transference of the Seat of Civilization from the Tigris-Euphrates Basin to that of the Rhine."

The latter part of this year and the first two terms of the Senior Year are devoted to Mediæval and Modern History. Opportunity is given for the study of the great political and economic problems of the present time.

During the last term the Senior class will choose one of the following courses in History, the course given being that chosen by the majority of the class.

1. Topical Survey of the History of the United States.
2. History of the United States during the Period of National Development.
3. History of Germany during the Protestant Reformation.
4. History of the French Revolution.

The purpose of courses 1 and 2 is that the student, after having had several years in the study of History, may return to the History of the United States and see it in its true relation to other nations, and enter upon an intelligent consideration of present-day problems in the United States.

Courses 3 and 4 offer intensive work in studying short but important periods of European History. Students not only acquire detailed information concerning these periods, but are taught how to carry on individual, systematic research work.

Supplementary to the work in History, the Senior class makes a critical study of the principles of Political Economy, and notes their application to the present conditions of the country.

Students prepare maps, plans, summaries, and illustrated note books. They are also required to do research and reference work in preparation of class reports and themes, and are encouraged and assisted in voluntary additional work.

LANGUAGES.

MRS. SMITH.

The Modern Languages and Latin are elective in lieu of certain other subjects, thus giving the pupil time for the study of at least one language. One Modern Language is required in the English-Science course. In the Commercial Arts Course students are advised to choose between Spanish and German.

In Modern Language the course extends over the Junior and Senior years. The work is made as practical as possible in the Junior year, the aim being to acquire a working vocabulary and the essentials of grammar as early as possible in the course; the language taught is spoken in the class room as far as is deemed expedient. Special attention is given to pronunciation and to training the ear to understand the spoken language. Pupils who have had the required work in any language will be admitted on examination to the class for which they are prepared.

The Junior German class studies German Grammar and begins at once to read simple German stories, followed by such easy texts as Aus meinem Königreich, Höher als die Kirche, and Immensee, supplemented

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by the memorizing of poems. In the Senior year the works of Goethe, Schiller and Lessing are studied, composition continued, and much attention paid to the study of lyric poetry.

The work in French is on the same lines as the German. Squair's & Fraser's Grammar is the text book chosen, and about 300 pages of easy French is read. The time alloted for reading in the Senior year is divided between the French Classics and the works of the best modern authors.

The main purpose of the course in Spanish is to fit the students for work in the commercial world, or as teachers in our Spanish-American possessions. The work, therefore, is principally of a practical nature. Grammar is taught by the conversational method as exemplified in the Introduccion á la Lengua Castellana by Marion and Garennes. The reading both in the Junior and Senior years is from the works of the best modern writers, and composition work is required throughout the course.

The course in Latin comprises four years. The First Preparatory year is devoted to studying a simple text book for beginners. The second year's work begins with the reading of Via Latina, followed by Cæsar with lessons in Grammar and Composition, based on the text. The Junior year is given to selections from Nepos and the reading of Virgil with composition work. The Senior year is devoted mainly to the reading of Cicero and Horace.

Collateral reading in connection with the Modern Language courses as well as the Latin is required.

MATHEMATICS.

MR. BANKS.

As a basis for the work in mathematics instruction is given according to improved text-books, in connection with sets of geometrical figures and instruments, supplemented by oral explanations and informal lectures. The student's knowledge of the subject is tested at the blackboard, and written solutions of selected problems and review exercises involving preceding work are frequently assigned. Prominence is given to practical applications and an effort made to train the mind to independent, logical thought, so that our girls may be prepared to consider intelligently those problems which arise in life, and for the solution of which we have no text-books and no rules for guidance.

Entrance. Students, who wish to enter the First Preparatory class and who are not vouched for by our Committee on Affiliated Schools, must pass a satisfactory examination in Arithmetic and in the elements of Algebra. Students, who wish to enter other classes, and who are not vouched for by our Committee on Affiliated Schools, must pass satisfactory examinations in all mathematics in preceding years of the course of study.

First Preparatory Year. A rapid, critical review of Arithmetic is given in the first term; during the second and third terms, Higher, or College, Algebra will be completed through radicals.

Second Preparatory Year. During the first and second terms the class recites Higher Algebra three times a week, and completes the subject through quadratic equations; during the third term the class meets five times a week for Plane Geometry, and completes three or four books.

Junior Year. In the English-Science course Plane and Solid Geometry is completed during the first and second terms, and Higher Algebra is completed during the third term. In the Fine and Industrial Arts course the same mathematics is required as in the English-Science course, or in lieu thereof Latin or a Modern Language may be substituted. In the Commercial Arts course Commercial Arithmetic is studied during the first and second terms.

Senior Year. In the English-Science course four recitations per week are devoted to Plane Trigonometry in the first term; in the second term Analytical Geometry occupies five recitations per week. The latter subject, by applying all preceding mathematics to the solution of problems, brings recognition of the fact that Arithmetic, Trigonometry, and Geometry are not disconnected, disjointed subjects, but that they are parts of a continuous, symmetrical whole.

COMMERCIAL WORK.

MR. ALLEN.

Commercial Geography. The purpose of this course is to present facts bearing upon commercial questions of the day, such as routes and growth of commerce, the production centers and markets of the world, waterways and railways, the staple articles of commerce, their relative value and importance, the localities where the raw materials are found, and how the latter are obtained.

Commercial Arithmetic. The object of this course is to develop facility in business transactions, in computing interest, percentage, etc., and to give an insight into commercial usages.

Bookkeeping. It is the aim of this course to give pupils a practical knowledge of business forms, papers and methods, and to make them familiar with the underlying principles of accounting. The course includes single and double entry—retail, wholesale, commission and corporation business. The following books and business papers are used regularly throughout the course: Books—day, journal, sales, ledger, invoice, pass, commission ledger, six column journal, stock journal, dividend stock subscription, installment and assessment. Business Papers—invoices, bills, checks, notes, drafts, statements of account, receipts, accounts, sales, bills of exchange, articles of incorporation, stock certificates and certificates of deposit. In connection with bookkeeping the student receives instruction in handling currency, notes, drafts, etc., in making deposits, and in banking and office usages.

Commercial Law. The object of this course is to prepare the student to understand her legal rights and obligations in business transactions and to enable her to determine how best to protect those rights and meet her obligations. Many practical illustrations are given, and daily discussions held on questions arising under the various heads considered.

The principal topics considered are, contracts, negotiable paper, agency, partnership, corporations, insurance, interest and usury, real estate, patents, copyrights, and trade marks.

Stenography. This course requires one year for completion. The first term is spent in mastering the theoretical principles of stenography, and in acquiring familiarity with word forms, phrases, etc. In the second term this is supplemented by assiduous practice in shorthand writing, with the reading of English classics, printed in shorthand, in order to acquire easy and ready familiarity with stenographic forms. By the beginning of the third term the student is ready for dictation, and for the accurate reproduction of letters, etc., on the typewriter.

Typewriting. This requires one year for completion. The first term is spent in gaining technical mastery of the typewriter by the touch system, all-finger movement. In the second term one period a day of practice is required, with special reference to accuracy. The third term, the student having now acquired the easy and rapid use of the machine, is ready to take dictation on the typewriter, or to transcribe thereon her stenographic notes.

Business Correspondence. In the Junior year a course in practical letter-writing is given, the student being required, after a drill in the essentials, to write original letters in the various important commercial lines. In the Senior year this will be supplemented by dictation, to be taken direct on the typewriter, or in shorthand for transcription on the typewriter.

PHYSIOLOGY AND HYGIENE.

The study of this subject is not confined to text-books alone. Instruction is given by lectures, quizzes, demonstrations and such laboratory work as can be done with simple apparatus.

It is the aim of the department to give a thorough and practical understanding of this subject in order that some of the other subjects taught may be better understood. All organs will be illustrated in their gross and microscopic appearences; likewise the fluids of the body.

Hygiene. In this course the following subjects are considered: rules for the preservation of the health, injurious effects of narcotics; injury to health from over eating, from improper food, poor ventilation and improper dress; how infectious diseases and epidemics may be prevented; what to do in case of accident; the care of the sick; a general practical study of the subjects pertaining to health.

PHYCHOLOGY AND ETHICS.

MR. WORK.

In the brief courses offered in Psychology the aim is to give a clear conception of the nature, operations and growth of the mind. The

study of Physiology in the earlier part of the College course will be taken as a basis. The course includes a study of the relation of body to mind; the senses and their relation to the mind; intellectual attributes and operations—as attention, reasoning, emotion, discrimination, association, perception, memory, imagination, instinct, will, habits, temperament. The work in this subject is experimental in a degree. Theories are examined in the light of experience and observation. A systematic study of children's doings and their development is a feature of the work. Reference reading and observation notes are required.

Ethics. This course embraces a study of moral principles, the vital moral questions involved in human life—both individual and social—and an outline and examination of ideals for future guidance.

The work in both Psychology and Ethics is sociological in its bearing, and is calculated to arouse interest in the intellectual and moral sides of active life, and to aid students in the solution of the problem of their own highest usefulness.

PHYSICS, CHEMISTRY AND PHOTOGRAPHY.

MR. ADKISSON.

The methods used in teaching these branches are intended to ground the pupil in the great principles of nature and at the same time familiarize her with the Physics and Chemistry of every-day life. The work is designed to lead the pupil into a realization of fundamental principles rather than to burden the mind with a mass of disconnected facts; and into an appreciation of the beautiful relation that one thing sustains to another. We desire to humanize these subjects by emphasizing those parts that pertain to household duties and industrial pursuits. Our laboratories are practical workshops where each pupil does her own work.

Chemistry. Upon entering this class each student is assigned a work bench with locker, which is supplied with chemicals and apparatus. The student is required to perform individually the experiments and to keep a record of all work in a note book. Students of Chemistry attend lectures and recitations, where they are instructed in the principles of theoretical Chemistry, nomenclature, and stoichiometrical computation, including thorough drill in writing chemical equations, determinations of atomic and molecular weights, volumetric and gravimetric calculations, etc. The electric stereopticon and sunlight picture machine are used to illustrate chemical action, electrolysis, crystallization, etc. The students of this class visit factories within reach of the College, thus obtaining broader views of the industries relating to chemical science.

Special courses in qualitative and quantitative chemical analysis and organic Chemistry are provided for special students.

Physics. This subject is taught both mathematically and experimentally. Students of physics are required to perform experiments individually, to record their results accurately and neatly in a note

book, and to apply their knowledge in the solution of concrete industrial problems offered by the institution. Pupils of this class make visits to the gas factory, and other places of special interest to the student of Natural Philosophy.

Photography. A photographic department is operated in connection with the Chemical Laboratory. This course embraces both theoretical and practical photography. Both portrait and view work is done. This work is elective with Manual Training in the Fine and Industrial Arts course.

BIOLOGY, GEOLOGY AND GEOGRAPHY.

MISS WHITTEN.

Biology is divided into the two branches, Botany and Zoology. In the first term of the Second Preparatory Year a course in Botany, as applied to Domestic Science, is given. This will consist of lectures and laboratory work in the study of starches, proteids, condiments, yeast plants, moulds, poisonous and edible fungi, important food plants and certain fibers. This course is followed in the second half of the Junior Year with a systematic study of the vital processes through which living plants go in germination, in growth, in respiration, in assimilation, and in reproduction, from the seed to the maturity of plant and blossom. This includes a short study of our North Texas flora.

Zoology. The first half of the Junior year is devoted to a brief general survey of the Animal Kingdom, beginning with the lowest forms and working to an intelligent understanding of the highest types. The major part of the time is put on the study of Arthropoda and Chordata.

Geology. The first term of the Senior year of the English-Science course includes a brief study of the elementary features of dynamical, structural and historical Geology.

Geography is studied in the second and third terms of the Second Preparatory year. The chief object of instruction is acquaintance with the theories and facts pertaining to the earth, its motions and relations to the sun; the development of the surface features of the earth and the agencies involved; the sea, its general characteristics, including divisions, movements, and deposits; elementary meteorology and Commercial Geography.

DOMESTIC SCIENCE—COOKERY.

MISS PERRY.

The aim of this course is a scientific study of the home and of the conditions of daily living, in order that our young women may come to see more in household duties than mere routine; that they may come to feel that the profession of homemaking is based upon the sciences and

the arts, and that by the rational application of these, women are better fitted to build ideal homes and an ideal nation.

In the Preparatory year of this course, the time is, of necessity, given mainly to the practical side,—to the preparation of simple dishes, and the care of the home. Talks on food and diet are given, which includes a classification of the different food materials, their occurrences in nature, preparation for market, food value, and the principles of cooking.

During the Junior year the study of foods is continued. Special attention is given to food value and money value. The principles of marketing and household buying are considered. The work in plain cookery is continued, including the preparation of cereals, vegetables, meats, soups, breads, cakes and pastries.

The work of the Senior year in the Domestic Arts Course includes: the planning of a dietary for a family; the consideration of the best location for a house, its hygienic and sanitary construction and arrangement. Foods suitable for infants, invalids and convalescents are prepared. Courses in fruit canning and chafing dish work are given. Setting of the table and serving receive attention. Each girl must be able to plan, prepare and serve a meal; course dinners are given by the class.

DOMESTIC SCIENCE—DAIRY WORK.

MISS TUTTLE.

This department is equipped for fully demonstrating scientific creamery work; the course includes laboratory and lecture work, with discussions and reference reading. The purpose is to give a scientific, practical knowledge of different lines of dairy work, particularly the art of butter-making, and the simple methods of cheese-making on the farm. Special attention is given to dairy bacteriology, the composition and food values of milk, butter and cheese. Practice is afforded in creamery management, and both creamery and domestic methods of butter-making are taught.

The following general topics are considered both theoretically and practically: care of milk on the farm; handling of milk for butter-making and for market, including straining, aerating and cooling; the pasteurization and sterilization of milk; use of hand and power separators; use of Babcock milk tester and lactometer; practice in ripening cream; acid testing; the churning of butter; also working, washing and preparing butter for market; care of machines and materials. The work is correlated with Chemistry and Bacteriology.

DOMESTIC SCIENCE—LAUNDERING.

MISS TUTTLE.

The courses in laundering aim to give the student knowledge of the scientific principles involved, with sufficient practical work to

produce skillful results. The laundry room is equipped for both hand and machine work. All students must first become proficient in hand-work; following this opportunity is given for practice on the different machines. The following general topics are studied: Laundry room, equipment; care of room and equipment; reasons for washing,—sanitary and æsthetic study of fibers and how to cleanse each, effect of soft and hard water, and how to treat; different cleansing reagents, preparation and use of each; study of, and experiments with, the common bluing; various stiffening materials, preparation and proper use. Practice work includes the various processes of laundering, such as flat work, thin and stiff starching, and the removal of stains.

Students who so desire are encouraged and given the opportunity to do their own laundering.

ART.

MISS SPRAGUE.

The work in this department aims to provide good technical work in drawing, applied design and painting. During the first year the work in drawing is from geometric solids and still life and flowers. When students have acquired some knowledge of form and mass, they are provided with more advanced work in decorative design painting and composition.

The work in applied design is planned to develop the imaginative and creative faculty from the very beginning, and to give the student instruction in practical methods along industrial lines.

To students in the Fine and Industrial Arts course, who show ability to draw their own designs, an optional course in China Painting is offered in the Junior and Senior years. In the Junior year the optional course in Basketry and Weaving enables the student to carry out in practical work designs she has made, and will teach the possibilities and limitations of textile art.

Practical art work and the history of art are supplemented by illustrated talks, the aim being to acquaint the student with both the historical and practical aspects of art and to furnish her a standard for the intelligent appreciation of works of art.

MANUAL TRAINING.

MR. WORK.

In a broad sense, all of the manual and laboratory work involved in the curriculum of the College is Manual Training. However, in the sense in which the term is generally used as applied to forms of hand-work suitable for public school purposes, the Fine and Industrial Arts course represents more fully and distinctly the Manual Training idea. The most common forms of Manual Training, or Construction Work, now being introduced in the public school system are wood-working,

sewing, cooking, weaving, basketry, Venetian iron work, cardboard work, carving, modeling. The leading educators approve such work, when properly taught, because of its practical value as well as for the intellectual and sense-training benefits derived from it. A laboratory has been equipped for this work, and courses are offered in several lines which are most directly correlated with other courses in the institution, and which meet the demand of teachers who desire to prepare themselves as instructors in elementary Manual Training. The first three subjects named below contain the work given to the First Preparatory Class. These, as well as the other subjects named, constitute the complete course for teachers.

Mechanical Drawing. This course includes geometrical constructions, the making of working drawings of simple objects, projections, plans for construction, etc. It lays the foundation for more advanced work in instrumental drawing. It is hoped that in the near future a regular technical course in architectural drawing can be offered.

Cardboard Construction. The course in this line includes the manipulation of pasteboard, cardboard and paper in the construction of various articles for service or ornamentation. For example, the students may make candy boxes, envelopes, geometric solids, etc. This work affords many opportunities for invention and design.

Wood Construction. This includes light bench work in wood, in which the student acquires good technique in the use of common woodworking tools, making, as far as possible, such articles as serve a definite purpose in other departments of her school work; for example, it may be a frame or a tray, to be decorated later by burning, painting or carving in the applied arts work; or, perhaps, a shelf to hold her books. Wood carving as a means of surface decoration, wood turning, and scroll sawing, supplement the regular bench work.

Venetian Iron Work. This course will include a variety of ornamental and useful objects.

Basketry. Simple basketry is well adapted to interest children and to teach firmness of touch and dexterity. The more advanced and artistic work may be made a source of profit. Instruction is given in the making of baskets of various weaves and shapes, from the most simple mats to the most complex baskets. Among the materials to be used are raffia, cane and rattan reed; knotting, braiding and all kinds of cord work are taught. This work is in charge of one of the teachers of the art department.

Cookery and Sewing. Special teachers' courses will be arranged in these subjects if demanded.

Manual Training Methods. In addition to the technical work, those preparing to teach elementary Manual Training receive lectures and demonstrations of methods of instruction in hand work, and pursue a course of reference reading.

DOMESTIC ARTS—DRESSMAKING AND MILLINERY.

MRS. BROOKS.

This division of the College work provides comprehensive courses of study in those branches which are related to the healthful and appro-

MEMBERS OF FACULTY

priate clothing of the body. The methods of instruction aim to instill the artistic and scientific principles underlying all good work, and to impress upon the students the value of economy, order and accuracy.

Sewing. The sewing course comprises all hand and machine sewing; principles of drafting; cutting and fitting undergarments and children's dresses. The course includes: models in hand sewing, afterwards applied on bed linen and table linen; aprons; patching, mending and simple repairing; drafting and making drawers, underwaists, skirts, night gowns, dressing sacques, flannel skirts, children's dresses and undergarments, and baby dresses.

Dressmaking. After the student has completed the above course in sewing she is amply qualified to master the more complex subject of dressmaking, beginning with the unlined shirtwaist dresses of washable material, and finishing with the more elaborate lined dresses of wool and silk. Exercises in dress finishing are given, and the student taught the adaptation of the design to the individual. The course includes: drafting, cutting, fitting and making unlined waists and skirts; drafting waists with charts; exercises with practice material in cutting, fitting and designing skirts and lined waists, and in making dress trimmings and finishings. It also includes a study of form, line and texture; the making of street, house and evening gowns; costume designing and the history of dress.

Millinery. The object of this course is to afford training in the practical and artistic principles of millinery, and also to cultivate taste in color and design. Originality is encouraged. Cheap materials are furnished to students for practice work. The course embraces: practice in foundation work, making bows, making and trimming hats in practice material; a study of form, line, color and textiles; designing, drafting and making buckram and wire frames, making and trimming covered hats. *Winter Season:* Making and draping toque, evening hat, street bonnet, velvet hat. *Spring Season:* Making hats and toques of fancy straw braid over frame; also lace and chiffon hats, and children's hats.

ELOCUTION.

MISS M'CLYMONDS.

In the teaching of Elocution, natural expression is cultivated. The aim of this department is to secure the harmonious development of the powers of expression in the individual. The methods of instruction in the development of the sixteen graded steps in the "Evolution of Expression" are based upon the fundamental laws according to which the mind unfolds.

Literary Interpretation. This includes a study of selections from the great orators, essayists, dramatists, and poets; drill work and criticism. Technique is developed by exercises for securing correct pronunciation, distinct enunciation and clear articulation; exercises for smoothness, continuity and volume of tone. Gesture is taught by drill in the

easy and natural use of the physical agents of expression in obedience to the dictates of the mind.

PHYSICAL CULTURE.

MISS M'CLYMONDS.

Training in Physical Culture is given according to the Emerson System, which seeks for the highest condition of health and beauty by the practice of such exercises as are required by the laws of the human economy. The aim is to free the surfaces while strengthening the vital centers. Exercises are given for securing a correct poise and good presence. Exerciss for the cultivation of grace and ease of manner, for unity and harmony of the physical agents; exercises for respiration and the cultivation of the muscular sense. Students are encouraged in taking out-door exercises, including the use of the grounds and equipment for Tennis and Basket Ball which have been provided.

VOCAL MUSIC.

MISS M'CLYMONDS.

All students receive instruction in Vocal Music. The aim is to provide a systematic course which gives training in time and tune and proficiency in sight singing. The chief divisions of the work are as follows:

Tune. Exercises are given for the development of tone perception. A systematic presentation of the Major, Minor, and Chromatic scales is given.

Time. A careful study of all time problems is made. Exercises are given for the development of Syncopation and Rhythm.

Technique. A study is made of all forms of notation, also a study of different qualities of voice. Exercises are given to develop smoothness, flexibility and brilliancy of tone.

Esthetics. An effort is made to develop intelligent and artistic expression. A study of all signs of expression is made. Tone color is introduced by Chromatic tones. Pupils are led to an appreciation of Classic Music. Choice selections are sung in good taste and style. The work is graded to correspond with the different years of the course.

TEXT BOOKS.*

(Partial List.)

English.†

BOOK.	AUTHOR.	CLASS.
English Grammar	Whitney & Lockwood	1st Prep.
Elementary Composition	Scott & Denney	1st and 2nd Prep.
Composition and Rhetoric	Herrick & Damon	Junior.
Representative English Literature	Pancoast	Jun. and Sen.
Brief History of the English Language	Emerson	Senior.

History.

United States History	Cooper, Estell & Lemmon	1st Prep.
History of Texas	Pennybacker	2nd Prep.
English History	Montgomery	2nd Prep.
Ancient History for Beginners	Geo. W. Botsford	Junior.
Mediæval and Modern History	Adams	Senior.
Civil Government	Fiske	Junior.
Political Economy	J. L. Laughlin	Junior.

Mathematics.

Higher Arithmetic	Sutton & Kimbrough	1st Prep.
Higher Algebra	Wells	All.
Plane and Solid Geometry	Wentworth	Junior.
Plane and Spherical Geometry	Taylor & Puryear	Senior.
Analytic Geometry	Bowser	Senior.

Commercial Work.

Bookkeeping and Business Training	Marshall	Jun. and Sen.
Shorthand Instructor	Isaac Pitman	Senior.
Rational Typewriting	Gregg Publishing Co.	Senior.
Practical Letter Writing	Loomis	Junior.

Science.

Commercial Geography	Adams	2nd Prep.
Physical Geography	Gilbert & Bingham	2nd Prep.
Physiology and Hygiene	Hall	1st Prep.
Physiology and Hygiene	Hewes	2nd Prep.
Ethics	Davis	Senior.
Psychology (Briefer Course)	James	Senior.
Inorganic Chemistry	Bradbury	Junior.
Qualitative Chemical Analysis	Noyes	Special.
Quantitative Chemical Analysis	Talbot	Special.
Organic Chemistry	Remsen	Special.
Physics	Henderson & Woodhull	Senior.
Botany	Leavitt	Junior.
Zoology	Colton	Junior.
Geology		Senior.

*These books and other school supplies may be purchased by the students at the college book store.

†This list will be supplemented with editions of the special texts to be studied in the courses in American and English literature.

Languages.

Latin.

BOOK.	AUTHOR.	CLASS.
Foundations of Latin	Bennett	1st Prep.
Via Latina	Collar	2nd Prep.
Cæsar	Low & Ewing	2nd Prep.
Virgil	Harper & Miller	Junior.
Nepos	Chase & Stewart	2nd Prep.
Cicero	Bennett	Senior.
Practical Composition	Collar	Junior.
Horace	Smith	Senior.
Latin Grammar	Bennett	2nd Pr., Jr., Sr.

German.

Maerchen und Erzaehlungen	Gnerber	Junior.
Hoeher als die Kirche		Junior.
German Grammar	Joynes-Meissner	Junior.
Das Lied von der Glocke	Schiller	Senior.
Aus meinem Koenigreich	Carmen Sylva	Senior.
Schiller's Wilhelm Tell	Deering	Senior.
Lessing's Minna von Barnhelm	Whitney	Senior.
Goethe's Iphigenie		Senior.
Heine's Prose	Buchheim	Senior.
Deutsche Lyrik	Buchheim	Senior.
German Composition	Harris	Senior.

French.

French Grammar	Squair & Fraser	Junior.
La Mere Michel et son Chat		Junior.
La Neuvaine de Collette	Schultz	Junior.
Madame Therese	Erckmann-Chatrian	Junior.
La Tulipe Noire	Daudet	Senior,
Un Pecheur d'Islande	Loti	Senior.
Le Siege de Berlin	Daudet	Senior.
Le Cid	Corneille	Senior.
Athalie	Racine	Senior.
Le Misanthrope	Moliere	Senior.

Spanish.

Introduccion a la lengua Castellana	Marion & des Garennes	Junior.
El Pajaro Verde	Valera	Junior.
El Capitan Veneno	Alarcon	Junior.
Dona Perfecta or Marianda	Galdos	Senior.
El Si de las Ninas	Moratin	Senior.
Spanish Prose Composition	Ramsay & Lewis	Junior.
Electra	Galdos	Senior.

SPECIAL ADVANTAGES.

Among the special advantages of the Girls Industrial College mention should be made of the convenience of Denton to all portions of the State. The town is centrally located with respect to the densest population of Texas. It is situated just on the boundary between the prairies and the cross-timber country, has good drainage and is considered one of the most healthful locations in Texas. Denton is a clean town morally. There are no saloons here. It is a place of Christian homes, churches, fine social atmosphere, and is permeated with a progressive educational spirit.

The complete equipment of the Girls Industrial College and the special qualifications of the members of the Faculty for the most thorough work in their respective lines should commend the institution to those who are seeking superior opportunities. Parents will appreciate the supervision of their daughters by a Faculty selected with special care as to their fitness for properly overseeing and directing the lives of maturing young women. Outside of the school the students are always subject to the supervision of the teachers. In the College chapel exercises are conducted each school day. The proper conduct and moral training of the girls are carefully looked after at all times. The churches of the different denominations in Denton welcome the students of the Girls Industrial College to their services and their Sabbath schools. It is expected that all students will attend the church to which they belong or which their parents or guardians prefer them to attend. Proper student organizations within the College will be encouraged, but no such organizations may be formed without the consent and approval of the President. All students will be required to conform to such regulations as may be adopted from time to time.

FACULTY.

The teachers of the Girls Industrial College are all specialists in their respective lines. They are persons of the most thorough training and of successful experience. In their selection the purpose and scope of the work of the institution has been carefully considered, as have also the many details of the proper instruction of the girls of Texas. Besides educational qualifications—which are indicated in connection with the names of the Faculty published on a preceding page—the matters of personal moral character, culture, tact, general disposition, habits, social qualities and special fitness for teaching girls, were fully considered. Parents may send their daughters to the Girls Industrial College with the confidence that their welfare in every respect—morally, intellectually and physically—will receive most conscientious care. Members of the Faculty will be glad at any time to answer inquiries of parents regarding their daughters. It is hoped that parents will visit the institution whenever they can make it convenient to do so.

PHYSICIAN.

The primary object in having a College Physician is to prevent sickness and to look after the general health of the students. All students are expected to report to her their state of health as often as she deems is necessary. Should a student feel ill, she is expected to send, or to come in person, to the Physician at once. The Physician has daily office hours, at which time students may report, or consult her professionally. In case of serious illness, the parents of the patient will be notified immediately. The Physician's services are free to students, medicines only to be paid for,—when prescriptions are filled at the drug stores. This applies to students only so long as they are in regular standing in the institution. The College is in no sense a sanitarium for invalids or semi-invalids, and applicants who come to the College principally for medical treatment.

RECREATION AND HEALTH.

Besides the physical culture required in all courses of the College, provision has been made for outside recreation, and students are encouraged to engage in out-door sports, such as tennis and basket ball. Grounds have been prepared for this purpose on the College campus. The College Physician has the special oversight of the health of the students, both in their boarding places and in the school. Besides the regular courses in Physiology and Hygiene, students receive special lectures on health, systematic exercise, sanitation, etc.

THE LIBRARY.

The library, consisting of 460 volumes, was opened for the use of the students during the second term. The books have been most carefully selected by the different teachers, and each department is represented by some special works along its own line. This is but the nucleus of what is hoped for the library in the future, as it is the intention of the College to add to the number of books each year,—and in such proportion as the funds provided will permit. About thirty magazines and periodicals have also been subscribed for, and it has been most gratifying to observe the pleasure the students have derived from these each month.

During the year the following gifts have been received: The International Cyclopædia of sixteen volumes, from the Hon. A. P. Wooldridge, Austin, Texas; also one copy of "Master, Man and Spirit" and "Southland Columbiad," from the author, Rev. William Allen.

LITERARY SOCIETIES.

Two literary societies have been organized,—the "Athene" and the "Georgic," which meet every two weeks, with occasional open meetings. Their programs consist of music, recitations, papers, etc. As literary

and vocal expression is an essential part of a College education, every student is urged to become a member of one of these societies.

* * *

UNIFORM DRESS.

A uniform dress for the students has been adopted. All students, except those who, for weighty reasons, may be excused, are required to wear the uniform, which, for winter wear, consists of a navy blue, all wool, serge coat-suit, with the skirt of walking length, soft finish shirt waist of same quality, and Oxford cap. For spring and fall wear the uniform will be the same as the above, with the exception that a shirt waist of white Indian Head, soft finish, may be worn, and a white lawn sun bonnet, Standard pattern No. 7392, may be substituted for the cap for school wear. Students are required to wear their uniforms on all occasions, hence other dresses can be of no service except to wear in their sleeping apartments. The suits must be made of the same grade, weave and color of material.

Students will purchase their caps at the College, and their jackets, waist and skirt material from S. F. Grant & Company, Denton, Texas. Goods must not be purchased elsewhere. Goods not conforming in every detail to those adopted will not be approved. These goods are carried in stock for the students of the Girls Industrial College of Texas, and are sold to them at a special reduced price. They will not be sold except on a student's order from the College, and with the agreement that they are for the students' individual use. The white Indian Head cloth for shirt waists, the "Paula" collars (Corliss-Coon Company) and the blue silk string ties may be purchased at the store named. The skirt must be made according to Standard Pattern No. 7734, skirts to be opened down left side of front, closed at back; hooks on placket to be 1¼ inches apart; skirts to be hooked on waist with five hooks. The shirt waists are to be made by Standard Pattern No. 7944. The jacket by Standard Pattern No. 6999, lined with black Farmer's satin. In ordering jacket the bust measure should be taken over fullest part of bust; the sleeve measure, starting from center of back, over to arm hole, and, with hand on chest, continue measurement to hand. For special occasions, as church and Commencement, a white lawn dress may be worn, the shirt waist to be of the same design as the other uniform waists, the skirt of Standard Pattern No. 8059, the belt of same material as skirt, the collar of dark blue ribbon stock, with white turnover.

Students who are capable of making their own dresses will be allowed and encouraged to do so. The cost of the uniform complete, with two skirts and eight waists, will be approximately as follows:

Oxford Cap	$ 2 50	
One dozen collars and one tie	1 75	
Two skirts	6 00	(plus the making)
Six white shirt waists	3 00	(plus the making)
Two blue shirt waists	3 00	(plus the making)
One jacket	6 50	
Total	$22 75	

TEXT-BOOKS.

Text-books, for use in the College, are furnished from the College book store on the following terms: All students, on taking out books, are required to deposit the full value of the same with the Secretary. If the books are returned in good order at or before the close of the term, four-fifths of the deposit is returned. In the case of appointive students the entire amount of the deposit is returned. Students who desire to keep the books as their own property are allowed to do so by paying the cost price for them. College note books, bookkeeping blanks, stationery, etc., are sold at cost for cash. Students are subject to fines for damage to rented books.

BOARDING.

Boarding may be obtained in private families or in boarding houses within walking distance of the College. Students who so desire may have boarding places selected for them in advance of their arrival, or, if they prefer to select them afterward, this privilege will be accorded them. Students are not allowed to board except at such homes or boarding houses as have the approval of the President of the College. Boarding houses are not approved that do not have proper equipment and care, good sanitary conditions and wholesome and safe surroundings. It is allowable for students to room at one place and take their meals at another; provided, that both places have been approved. Students must plan to pay room rent and boarding in advance. The College will not have a dormitory this year.

EXPENSES.

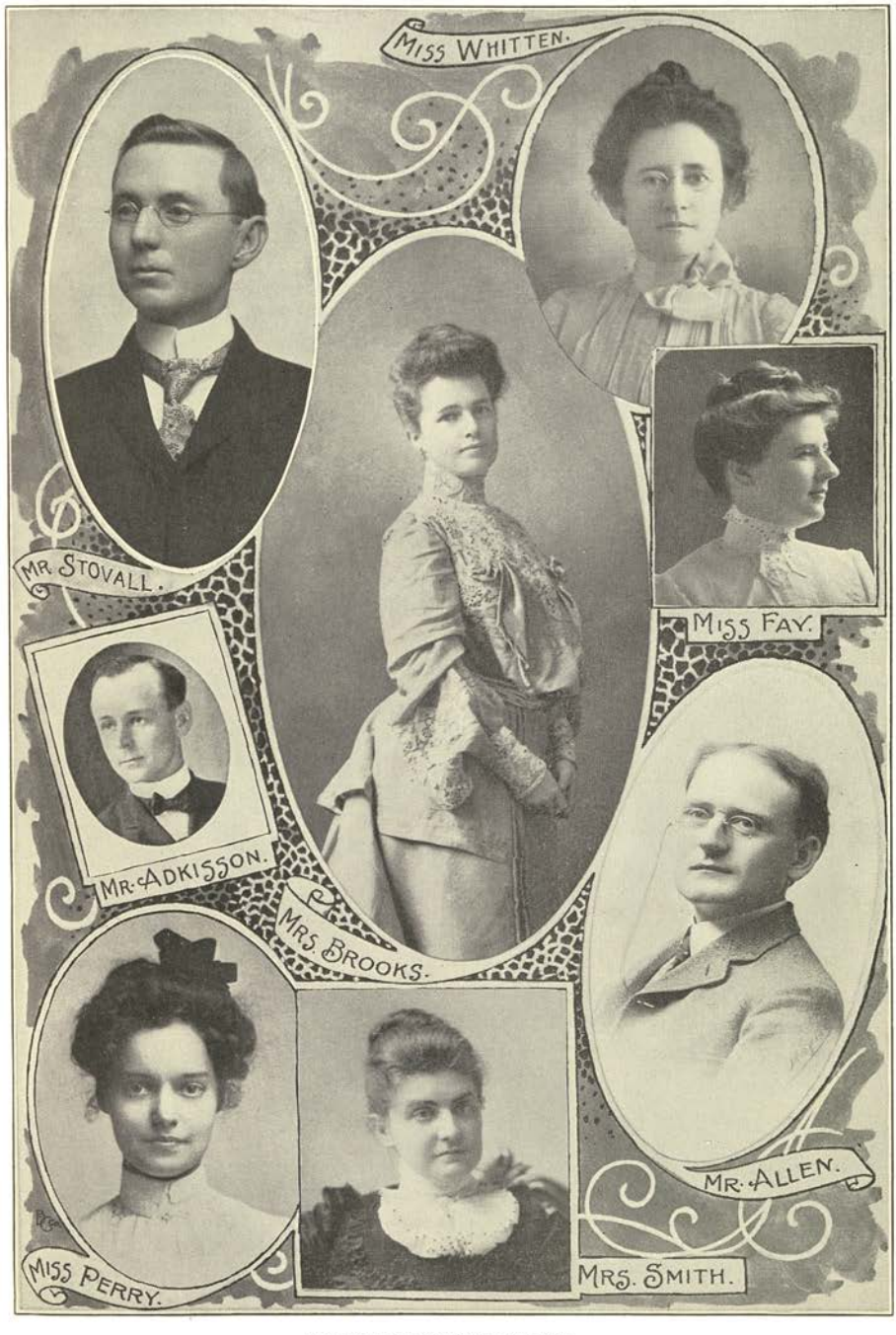
Tuition in the Girls Industrial College is free. The following are the essential expenses to be met by students:

Matriculation Fee, payable on first registration at the College	$ 5 00
Incidental Fee, of $5.00, payable at the first of each term	15 00
Text-books, etc., about	10 00
Boarding and room, per calendar month, two in a room, from $14.00 to	15 00

The most common rate for boarding is $14 per month.

Add to these proper allowances for clothing, laundry and other personal expenses; also railroad fare to Denton and return, and a small allowance for incidentals.

The fees are payable strictly in advance. The matriculation fee is paid but once for all time, but must be paid by all students, whether appointive or not, whether regular, irregular, or special. Appointive students receive credit for the incidental fees ($15) and will have the free use of text-books ($10). Special students are required to pay the same fees as regular students. Fees will not be refunded to students who leave school during the term. Students who desire to take private



MEMBERS OF FACULTY

lessons in music, which may be arranged for with special teachers in town, will be expected to pay from 50 cents to $1.00 per lesson. Students taking painting and designing must furnish their own brushes, pens, paints, etc. Also, those who take china painting must pay for the ware on which to paint. This is furnished to them at cost, and is their own property. All students are entitled to the free use of library facilities and apparatus in the different departments in which they work. They are held responsible for damage to equipment resulting from their own carelessness.

APPOINTIVE STUDENTS.

The Board of Regents of the Girls Industrial College, has, according to law, made provision for about two hundred appointive students, to be apportioned throughout the State on the basis of the number of educable white girls in the several counties. The March Bulletin, 1904, contains full information relative to this matter.

RECOMMENDATIONS TO PROSPECTIVE STUDENTS.

Be present on the opening day. Bring with you such of your textbooks as may be helpful in your work. Plan to make but one visit home during the year—at the Christmas vacation. Let your motto be, "Not how short, but how thorough." Plan to take time for your education. You will be required to make a uniform—or to have it made—immediately after you enter the College, if you do not have it when you come. If you want to make it before coming, send to S. F. Grant & Company, Denton, for materials. See a previous page. Read this entire Bulletin carefully. Write to the President or Secretary of the College two days in advance of your leaving home, stating the day and hour you expect to arrive in Denton, that we may meet you at the station.

SUMMER SESSION.

A four-weeks term of Industrial Training will be conducted in the College in 1905. Work will be provided in Domestic Science, Domestic Art, Manual Training, Industrial Arts and Rural Arts. Those interested are invited to write for further information.

A REQUEST.

All who expect to enter the College next fall are requested to fill out the following blank and to send it to the President as soon as possible. This is not a pledge and will not bind you to attend. It is simply a request for information that will assist us, particularly in the matter of providing ample boarding accommodations near the College for the students. So, if you think you will attend, please fill out the sheet. This request is made of appointive students as well as of others who hope to attend.

(BULLETIN NO. 6.)

INFORMATION BLANK.

THIS WILL HELP US IN PLANNING FOR YOUR ACCOMMODATION.

Fill the blanks below, cut out this sheet and mail it to President Cree T. Work, Girls Industrial College, Denton, Texas, at once.

Date....., 1904.

I am planning to attend the Girls Industrial College of Texas, beginning next September.

Name in full..... Age....

Postoffice.....

County.....

Have you an appointment to the College?

Name of parent or guardian. .....

If you have not had a high school course, in which grade were you when last in school? .....

What certificates or diplomas have you, if any?

.....

Do you expect to enter as a regular student, irregular student, or special student?

.....

In which department would you like to take your course? .....

.....

How much are you willing to pay per month for board?

.....

Do you want a boarding place selected in advance of your arrival?

.....

Add any other information or request here. .....

.....

.....

Give below the name and address of any friend who you think may be interested and might attend the College, to whom you would like a copy of this Bulletin sent.

Name.....

P. O..... County

ENROLLMENT AND CLASSIFICATION OF STUDENTS FOR 1903-04.

SENIOR CLASS.

Name.	Course.	Postoffice.	County.
Kincaid, Beulah	C A	Denton	Denton.

JUNIOR CLASS.

Name.	Course.	Postoffice.	County.
Barton, Jeannette	F I A	Terrell	Kaufman.
Bumpas, Lena	F I A	Oak Cliff	Dallas.
Cobbs, Gretna	E S	Denton	Denton.
Dwyer, Ynez	C A	El Paso	El Paso.
Eberhard, Erna	F I A	Seguin	Guadalupe.
Hofstetter, Adele	F I A	Austin (305 E. 13th)	Travis.
Kercheville, Nellie	F I A	Big Foot	Frio.
Kirkpatrick, Sara	F I A	McKinney	Collin.
Lovelace, Sallye Mae	E S	San Angelo	Tom Green.
Martin, Anna	D A	Goliad	Goliad.
Medlin, Topsye	F I A	Wolfe City	Hunt.
Miller, Pearl	C A	Bonham	Fannin.
Moore, Alice J.	F I A	Cranfills Gap	Bosque.
Nix, Lura May	F I A	Hembrie	Crockett.
Patterson, Emma	F I A	Denton	Denton.
Phillips, Grace I.	F I A	Sandy Point	Brazoria.
Pinson, Jennie	F I A	Forney	Kaufman.
Poynor, Marie	F I A	Bartlett	Williamson.
Pulliam, Bonnie	E S	El Paso	El Paso.
Sterrett, Carrie	E S	Beckville	Panola.
Sydnor, Belle	F I A	Austin (1407 Colorado)	Travis.
Weinert, Clara	F I A	Seguin	Guadalupe.

SECOND PREPARATORY.

Abadie, Laura	Austin (1225 W. 10th)	Travis.
Ashley, Flora	Beasley	Fort Bend.
Bass, Sallie	Pleasant Point	Johnson.
Bates, Susie	Denton	Denton.
Bilbrey, Etta	Avalon	Ellis.
Blackmon, Minnie	China Springs	McLennan.
Blair, Ora Elizabeth	Ponder	Denton.
Brownlow, Mattye	Denton	Denton.
Bryant, Georgia	Cedar Hill	Dallas.
Croxton, Rhue	Nocona	Montague.
Denny, Gertrude Josie	Iowa Park	Wichita.
Denny, Maggie Jane	Iowa Park	Wichita.
Easley, Emily	Chillicothe	Hardeman.
George, Jessie	Roanoke	Denton.
Glass, Mary	Franklin	Robertson.
Hedrick, Exa	Palmer	Ellis.
Hopkins, May	Waelder	Gonzales.
Huckaby, Willia	Van Alstyne	Grayson.
Kendall, Addie	McKinney	Collin.

Kidder, Rosa	Hidalgo	Hildago.
Matthews, Ida E	Leggett	Polk.
McIlvain, Nannie	Ponder	Denton.
McLeod, Katherine	Terrell	Kaufman.
McReynolds, Bessie	Seymour	Baylor.
Mills, Virginia	Canyon	Randall.
Mitchell, Laura	Turnersville	Coryell.
Orr, Vida	Hereford	Deaf Smith.
Parkey, Eulah J	Denton	Denton.
Punchard, Eloise	Rodgers	Bell.
Rehmann, Agnes	Arnim	Wharton.
Sellars, Keenie Mae	Durham	Borden.
Stockwell, Owena	Alvin	Brazoria.
Wheeler, Mabel	Corpus Christi	Nueces.
White, Beulah	Corsicana	Navarro.

FIRST PREPARATORY.

Alexander, Lillie	Manchaca	Travis.
Anderson, Agnes	Denton	Denton.
Anderson, Ollie	Wilderville	Falls.
Beckman, Cressie	Austin (R. F. D. No. 2)	Travis.
Benton, Ora	Saron	Trinity.
Berry, Ola	Justin	Denton.
Blow, Pearl	Denton	Denton.
Bost, Allie	San Marcos	Hays.
Bowles, Bertha	Christian	Palo Pinto.
Brock, Susie	Grapevine	Tarrant.
Bryant, Mabel	Cedar Hill	Dallas.
Burke, Daisy	Howe	Grayson.
Burkhead, Mabel	Oak Cliff	Dallas.
Butler, Ada M	Mathis	San Patricio.
Chambers, Lizzie	Denton	Denton.
Collie, Evangeline	Heights, Ky	Marshall.
Corley, Mattie	Winnsboro	Wood.
Crossland, Nora	Denton	Denton.
Curry, Annie	Roans Prairie	Grimes.
Davis, Sallie	Denton	Denton.
Eads, Velma	Denton	Denton.
Ellis, Fannie	Dilley	Frio.
Ellis, Hattie Louise	Dilley	Frio.
Ellzey, Annie	Sharp	Milam.
Ethridge, Myrtle	Kyle	Hays.
Fain, Mary	Denton	Denton.
Floyd, Cora	Bolivar	Denton.
Floyd, Zula	Lloyd	Denton.
Foster, Laura	Sherman	Grayson.
Goodridge, Geneva	Palestine	Anderson.
Harrison, May	Coppell	Dallas.
Johnston, Minnie	Lone Oak	Hunt.
Johnston, Mamie	Lone Oak	Hunt.
Jonas, Elsie	San Antonio	Bexar.
Keirsey, Jewel	Chilton	Falls.
Kennedy, Julia Bell	Collier	Milam.
Lacey, Mattie Lee	Denton	Denton.
Lloyd, LaVerte	Temple	Bell.
Lyon, Ola Lee	Elmo	Kaufman.
Malone, Masie Etheleen	Brownwood	Brown.
Martin, Mary	Denton	Denton.
McKee, Minnie May	Haskell	Haskell.
Miller, Stella	Florence	Williamson.
Minnis, Effie Mae	Lewisville	Denton.
Palmer, Katye	China Springs	McLennan.
Panter, Josephine	Bridgeport	Wise.

Pirtle, May Bell	Denton	Denton.
Pollock, Sallie	Cook's Point	Burleson.
Reeves, Gertrude	Minden	Rusk.
Robertson, Phenie	Menardville	Menard.
Rushing, Fairie Mae	Walnut Springs	Bosque.
Russell, Menville	Curtis	Eastland.
Sanderson, Myrtle	Justin	Denton.
Sassman, Emma	Creedmoor	Travis.
Sharman, Zelma	Liberty	Liberty.
Shirley, Dora	Avalon	Tarrant.
Spell, Janie	Atlanta	Cass.
Spell, Linnie	Atlanta	Cass.
Stadler, Laura	West	McLennan.
Stiff, Varina	Denton	Denton.
Swaim, Minnie	Whitewright	Grayson.
Tabor, Lula	Aubrey	Denton.
Taylor, Annie	McKinney	Collin.
Thompson, Laura	Alvarado	Johnson.
Timmons, Ina Belle	Graham	Young.
Waite, Myrtle	Beaumont	Jefferson.
Wattam, Pearl	Denton	Denton
Wheeler, Bessie	Denton	Denton.

IRREGULAR STUDENTS.

Anderson, Kate	Denton	Denton.
Armstrong, Willie Sue	Comanche	Comanche.
Bellamy, Ida	Pirtle	Rusk.
Bell, Blanche	Tehuacana	Limestone.
Blackburn, Ethyl	Killeen	Bell.
Blount, Eva	Denton	Denton.
Braly, Bessie	Silverton	Briscoe.
Burkhead, Maude	Oak Cliff	Dallas.
Caldwell, Wilna	Pinkston	Navarro.
Chappell, (Mrs.) Lillie	Denton	Denton.
Clardy, Della	Audubon	Wise.
Cole, Anna	Alto	Cherokee.
Colley, Mattie	Mt. Vernon	Franklin.
Culver, Tommye	Longview	Gregg.
Day, Olive	Stephensville	Erath.
DeLaye, Rosa	Mt. Sylvan	Smith.
Easter, Lois	Franklin	Robertson.
Fisher, Willie	Cooper	Delta.
Florence, Willie	Glenwood	Upshur.
Fouts, Julia	Denton	Denton.
Freeman, Cora	Whitesboro	Grayson.
Gray, Mozelle	Plano	Collin.
Harris, Bessie	Dallas	Dallas.
Harris, Ethyl	Celeste	Hunt.
Harrison, Dixie	Dallas	Dallas.
Havlin, (Mrs.) Alberta M	Little Rock, Ark	Pulaski.
Hempel, Ida	Bartlett	Williamson.
Hemphel, Nettie	Bartlett	Williamson.
Hoard, Mary	Denton	Denton.
Hurn, Helen	Hurnville	Clay.
Hustead, Bertha	Duncanville	Dallas.
Johnson, Lollie	Mt. Vernon	Franklin.
Jones, Clementine	Henrietta	Clay.
Jordan, Swan	Stephenville	Erath.
Joynes, Susie Coloma	Rockdale	Milam.
Kiehl, Lillie	Wichita Falls	Wichita.
Kirk, Golda	Comanche	Comanche.
Marcom, Lela	Leonard	Fannin.
Martin, Gertrude	Goliad	Goliad.

McClung, Audie	Granbury	Hood.
Mondrick, Matilda J	Cameron	Milam.
Neale, Grace	Leonard	Fannin.
Neale, Laura	Leonard	Fannin.
Nelums, Mollie	Helena	Karnes.
Owsley, Jessie	Denton	Denton.
Perley, Maude E	Fort Worth	Tarrant.
Power, Dora Mae	Thomaston	DeWitt.
Robertson, Alice	Menardville	Menard.
Rucks, Lizzie Lee	DeBerry	Panola.
Ryan, Ada	Luella	Grayson.
Schmitz, Jessie	Denton	Denton.
Schmitz, Laura	Denton	Denton.
Schultz, Minnie	Seguin	Guadalupe.
Smith, Vera	Teneha	Shelby.
Steinmeyer, Melanie	Seguin	Guadalupe.
Storey, Nix	Lockhart	Caldwell.
Taylor, Lulu	Denton	Denton.
Triplett, Olive	Beaumont	Jefferson.
Watkins, Lillian	Henrietta	Clay.
Williams, Dorothy	Denton	Denton.
Worthington, Mamie	New Hope	Dallas.
Wright, Eulallie	Denton	Denton.

SUMMARY OF ATTENDANCE.

Seniors		1
Juniors:		
English-Science	4	
Domestic Arts	1	
Fine and Industrial Arts	15	
Commercial Arts	2	
		— 22
Second Preparatory		34
First Preparatory		67
Irregular		62
Total		186

THE GROWTH OF THE MANUAL TRAINING IDEA IN MODERN EDUCATION.*

PRESIDENT CREE T. WORK.

In the brief time allotted to me this evening, I cannot attempt to give a complete historic account of the establishment and development of institutions which make manual training a prominent feature of their work, nor can I give in detail an account of the chronological or geographical introduction of manual training in our public school system; neither shall I attempt to review foreign educational systems nor to describe or define the slight differences existing between ourselves and foreign educators on the subject of manual training. While not biased enough to believe that "modern education" means exclusively American education, or that we of the free soil are sufficient unto ourselves in education any more than we are in other spheres of activity, yet I am not forgetful that our educational work is not only becoming a potent factor in lands where our aggressive political influence is recognized, but that American education is penetrating the centers of learning in Europe, that it is commanding the respect of thinkers of all lands, and that it is rapidly becoming a great factor in world-wide intelligence and efficiency. Therefore, in what I have to say, I shall accept the American system of public education as representing some of the latest developments in modern education.

It may be well, at the beginning, for us to recall the fact that, broadly speaking, the manual training idea is not of modern origin. In practice it is as old as the race itself; in the theory of education it has been in evidence from the earliest times—often, it is true, as but a vague corollary, at other times, however, partaking of the nature of a direct proposition. The early Hebrews believed in the moral, social, and economic value of manual education. At the beginning of the Christian era, Quintilian taught the doctrine, which, at a later time, was elaborated by Froebel. But in the early centuries, when Greece and Rome held sway with their erratic philosophy, false culture and immoral practices, the spark was almost smothered, until near the close of the fifteenth century, when it was again fanned to life by those who had the hardihood to combat the degeneracy of the times. The fathers of the Reformation period cherished hopes for the introduction of more manual work in education; the Renaissance furnished numerous strong, positive advocates of the manual training idea, which developed further in the older technical schools of Europe, as well as in a clearly defined effort to secure the recognition of hand work as a desirable feature of intermediate and primary education. Erasmus, Luther, Rabelais, Zwingli, Montaigne, Comenius, Milton, Locke, Petty, Bellers, Fénelon and Francke, followed later by Rousseau, Pestalozzi, Froebel, Cygnæus, Herbart and others, all made direct and positive contributions to the development of the idea that properly directed manual work has edu-

*Address before the State Teachers' Association, Marlin, Texas, December 30, 1903.

cational value. Germany, Finland, Sweden, England and other European countries have, for many years, been successfully interested in developing the manual training idea in the elementary and secondary systems of education. The name usually applied to the work, as it is carried on in European countries, is that of industrial education. While this term seems to imply the training for industries, yet, more broadly speaking, and judging from the nature of the work actually done, the term Industrial Education should be taken to include both Manual Training, as we usually understand the term, and Technical Instruction.

Technical instruction in the United States dates back more than half a century, when it was introduced in different places as a means of retaining for the youth of the country the advantages of the then rapidly declining apprentice system. It would be interesting to follow the history of this feature of the work, with its trade schools, manual labor institutions, etc.; but as teachers we are particularly interested in the manual training feature of industrial education as it is being applied in our public school system, hence the specific consideration of trade schools must be passed by for the present.

Manual training is hand work for educational purposes; it is the training of the mind through the hand—psychomanual training; it is hand and head training,—sense and brain training,—combined; it is the utilization of mechanical and material means and the constructive tendency of children in the process we call education.

Manual training work in the United States was inaugurated through two distinct lines of effort,—the kindergarten and the manual training high school, the former having been introduced in the early 60's, the latter following it more than a decade later. The educational exhibit at the Centennial Exposition at Philadelphia in 1876 contained a display of work from the Imperial Technical School at Moscow, Russia, which stimulated Prof. John D. Runkle of Boston, to inaugurate, the same year, in the Massachusetts Institute of Technology, of which he was President, a "series of instruction shops" for the training of students of civil engineering in the chief mechanics' arts. This was the beginning of the School of Mechanics Arts of the Institute. Dr. C. M. Woodward of Washington University was also prompted by the Russian exhibit to systematize the work which had for some time been carried on in the University. This resulted in the establishment of what was termed the Saint Louis Manual Training School, in 1879, to which boys were admitted at the age of 14 years. Within four or five years following the opening of the Saint Louis School came the establishment of the manual training schools of Baltimore, Chicago, Toledo, Philadelphia, Cleveland and other cities—all patterned after the general plan of the Saint Louis School, including in the curriculum shop work in wood and iron, together with most of the ordinary high school subjects. Many cities have since established manual training high schools, or have introduced the manual training work as a department in the schools already in existence. There are now more than one hundred cities in the United States having manual training in their high schools. We also have in this country forty-two technological institutions of collegiate grade, besides twenty or more high grade

special schools of arts and sciences in which manual training holds a prominent place.

The high school manual training soon began to work its way downward into the grammar grades, and was introduced in the grammar schools of many cities where no high schools existed. Meanwhile the kindergarten spirit was pervading the primary schools of the land, bringing to them busy work, paper and cardboard work, and other forms of manual training suitable for the primary grades. In many schools the two lines of effort have met, making a complete system of manual training from the kindergarten through the high school. In other cities there is still a gap between the higher and the lower work, which, in most cases, is being rapidly filled by the introduction of suitable manual training. There are now in this country about 225 cities, of 8000 population or more, having manual training in the primary or grammar grades, or in both, and twenty-five others which have it in the high school alone. In other words, there are 250 cities in the United States having manual training in their public school systems, all of which have introduced it within the past twenty years. One hundred of these have introduced the work within the past five years. Many of the State Normal Schools have introduced manual training into their professional and model school departments, making a certain amount of the work a requirement for graduation.

With this glimpse of the growth of the manual training work in education, let us take a brief review of some of the leading ideas which have prompted the work, and which are believed to justify the continuance and enlargement of the manual training element in the public school curriculum. From the beginning the practical or utilitarian idea has characterized the theory of manual training. There has also been from the first a belief in the intellectual and moral influence of hand work, although neither of these values was clearly defined or proven in the earlier stages of the movement.

Manual training, like all matters of development, was conceived in idea before it was wrought into a system. The earliest evidence of the manual training idea in America appeared in 1642, when the province of Massachusetts passed a law which said in part: "This court, taking into consideration the great neglect in many parents and masters in training up their children in learning and labor, and other employments which may bee profitable to the common wealth, do hereupon order and decree, that in every towne the chosen men appoint for managing the prudenciall affaires of the same shall hencefourth stand charged with the care of the redresse of this evill, so as they shalbee liable to bee punished or fined for the neglect thereof, * * * and for this end they, or the greater part of them, shall have power to take accompt from time to time of their parents and masters, and of their children, concerning their calling and impliment of their children, especiallity of their ability to read and understand the principles of religion and the capital lawes of the country, * * * and they shall have power (with consent of any Court or magistrates) to put forth apprentice the children of such as they shall find not to bee able and fit to imply and bring them up, nor shall take course to dispose of them themselves; and they are to take care that such as are set to keep cat-

tle bee set to some other impliment withall, as spinning up on the rock, kniting, weveing tape, etc., * * * and for their better performance of this trust committed to them, they may divide the towne amongst them, appointing to every of the said townsmen a certeine number of families to have speciall oversight of; they are also to provide that a sufficient quantity of materialls, as hempe, flaxe, etc., may bee raised in their severall townes, and tooles and implements provided for working out the same; and for their assistance in this so needfull and beneficiall impliment, if they meet with any difficulty or opposition which they cannot well master by their owne power, they may have recourse to some of the magistrates, who shall take such course for their help and incuragment as the occasion shall require, according to justice." For two hundred years following this, during which time other colonies and States followed the example of Massachusetts, the only effort made in the line of manual training was for the same purpose, namely, that of atoning for the benefits lost through the waning of the apprenticeship system. This recognition of the practical value of manual work for children contained in embryo the manual training idea. The next step forward was that of providing opportunity in schools, and of establishing schools, in which the same end might be accomplished. Sewing for girls was one of the first, if, indeed, not the first, branch of manual work to be engrafted into the common schools. This was begun in Boston in 1835, when sewing and knitting were introduced in the second and third classes of the grammar schools. The Worcester Free Institute, opened in 1868, was one of the first institutions established in this country for the training of skilled workmen. About the same time The Massachusetts Institute of Technology and Washington University at Saint Louis offered students the opportunity of supplementing their courses by practical mechanical work.

The second clearly defined item to be added to the manual training idea was that of systematic and progressive courses of instruction. This advance came directly from the Russian exhibit at the Centennial Exposition, where, as already stated, it was eagerly seized upon by President Runkle and Dr. Woodward. The systematizing of the work began to dignify it and to gain for it recognition in the field of Education. At this time the courses of instruction were based upon separate tool exercises, which were executed for the training and skill they imparted rather than for useful or pecuniary results, the products themselves having no value, and the intellectual value of the work being considered as sufficient reward. Manual training work characterized by such exercises came to be known as the Russian sytem of manual training because it was copied after the Moscow exhibit already referred to. It has had great influence in systematizing the manual training work. The benefits to be obtained from manual training at this stage of the work (in the early 80's) were thought to be: 1. The desirability and value of a knowledge of tools and material things. 2. Physiological benefit and the development of skill of hand and eye. 3. Ability to earn a livelihood, with a taste for labor. 4. The learning of the elements of all trades rather than the mastery of but one.

In 1887 came the establishment of the Boston Sloyd Training

School, bringing to us the Swedish idea of manual training as it was being demonstrated by Otto Salomon in the Sloyd Seminarium at Naas. Salomon and Herr Abrahamson, his uncle, had imported the idea from Finland where Uno Cygnaeus had developed it from the kindergarten system as taught by Pestalozzi and Froebel. The influence of the Boston Sloyd Training School, under the Principalship of Mr. Gustaf Larson, has probably done more to promote the growth and success of manual training in our country than any other single effort or institution. As contrasted with the Russian system, the Swedish sloyd gives more consideration to the nature and interests of the pupils; the object made, for example, must be something useful from the pupil's point of view—something that will arouse his interest and enlist it as a motive power; this is the fundamental idea brought to us by the sloyd system. However, there are other elements in our manual training work for which we are largely or wholly indebted to the Boston Sloyd Training School, among these are: 1. The suitableness of manual training for children below the high school. 2. The need of trained teachers as instructors in the work. Before the opening of this school, artisans, or, as in some cases, technically but not pedagogically trained young men, were looked to as the proper persons to teach the work. One of the most serious hindrances to the progress of educational manual training in this country has been the acceptance of the idea that any mechanic can teach the subject. The successful teaching of this work requires as thorough pedagogical training as does any other subject. 3. A third item that has come to characterize our manual training work, and for which the Boston Sloyd Training School is to be largely credited, is the necessity of careful gradation as well as variety in the exercises constituting the work. 4. Hygienic working positions must be maintained. The Sloyd Training School has graduated more than two hundred teachers. Its greatest work has been accomplished in filling the gap in the manual training system between the kindergarten and the high school.

Cookery, as a feature of manual training, came to us from England, where it was well established when our first manual training schools were opened. In the United States systematic instruction in cooking was first introduced by the Young Woman's Christian Association in 1880, since which time it has been added to the courses of many high schools and grammar schools.

The Industrial Educational Association organized in New York City (in the early 80's, I believe), was the beginning of what has proven to be another potent factor in the development of our manual training work. This association first organized a practical school for training working girls in domestic science and domestic art, a little later organizing classes for teachers, with a model or training school attached, in which tool work, sewing and cooking were taught to the boys and girls. Thus began the "New York College for the Training of Teachers," afterward known as "Teachers College," which has since grown to great proportions and is now the Pedagogical Department of Columbia University. This institution has emphasized the manual training idea, has developed it as a special department, and is training many teachers for all lines of manual training work. It stands pre-eminently for the

recognition of manual training as a part of our school system in all grades, for the analysis and study of all phases of the problem of manual training, for its adoption and correlation in the curriculum, and for the higher and broader training of teachers for this work, both practically and theoretically, as for all other work of the profession. Teachers College holds the doctrine that education is for the purpose of contributing to all-round social efficiency, and that manual training is one of the important means to this end.

Just as the development of any new idea requires changes and additions in the subject matter representing it, so in the growth of the manual training idea the content of the work has been a variable quantity, adapting itself to the growth of the main idea. Particularly has this been noticeable in the choice of materials and implements. The adaptation of the manual training work to pupils of different grades and ages and to the different classes of schools has been receiving much attention. This, in fact, is one of the ever present problems for teachers and promoters of manual training. The tools, processes, machines and materials already developed and brought into use by the human race have been freely drawn upon in equipping our manual training laboratories. Since wood is a universal material, it was most natural that the craft and tools of the wood-worker should be the first form of manual training taken up. Iron-working, too, naturally came in near the beginning. The first theory on the part of some was, that since the crafts of the blacksmith and the carpenter offered such large variety, they would prove sufficient. Even yet there are some friends of these forms of manual training who can not see the need of other forms. But just as we are growing away from the idea that our public school manual training is for educating artisans, and that it is for broader, although not less specific, purposes, we are also coming to see that the range of means and materials must be broad—selected from all sources that offer that which is practicable for school conditions and which will well subserve the end of our educational effort. Besides joinery and wood turning, and wrought iron work and casting, we have introduced other forms of wood-work, as whittling, carving, etc., as well as modeling, Venetian iron-work, leather work, pyrography, paper and cardboard work, string work, weaving, basketry, raffia and reed work, combinations of various materials, as in apparatus making, toy making, etc. From the fixed course of carefully (and often arbitrarily) graded exercises and their analysis, we have passed through, or by, various so-called "series" of models, arranged according to different ideas as to what constitutes a proper order of sequence; along by another row of "series," each worked out in a different medium; through groups of objects representing "spontaneous effort," unhampered by the presence or experience of a teacher; emerging finally into a spirited but wholesome rivalry in the invention of new "courses" and other improved means and methods. We have had "bench work," "shop work," "desk work," "school-room work," "playground work," and even "home work" in manual training. Mechanical drawing was made a part of the manual training in the higher schools from the first. With all the variations in tools and materials we have introduced different kinds of drawing, to give clearness, to heighten the interest or to add to esthetic re-

sults,—as the free-hand sketching of plans and elevations, perspective views, the designing and sketching of models and decorations, water color illustrations and decorations, etc. A few years ago basement rooms were considered good enough to use as laboratories, regardless of the quality of light, ventilation or general plan of the rooms. Today many schools select the best rooms in the building for the manual training work. New school buildings are being planned with special arrangements for carrying on this branch of study. This is one of the most substantial proofs of the recognition of manual training as a desirable feature of education.

The need of providing differentiation in the work for the two sexes, as they approach maturity, has received considerable attention, and great progress has been made by the introduction of sewing, dressmaking, cooking and numerous branches of fine and industrial art,—all under the protecting influence of the name "manual training."

Numerous attempts at the correlation of manual training with other school work have met with varying degrees of success. Enough has been accomplished in this direction to demonstrate clearly the feasibility and desirability of utilizing more of the methods and experience of the industrial world in our system of education. In the requisition which we have made on the arts and sciences for tools and materials, we have not been acting without forethought or foresight. We have consulted with practical and professional men and women, we have experimented with classes and with individuals, we have studied results, we have endeavored to let go all useless accumulations and to hold to the elements of worth. We have assumed the right of using any portion of the material world which will contribute to our purpose, and to adopt or modify any methods or contrivances of industrial life which prove to have positive educational value.

With our rapidly increasing manual training schools and departments, and with the enrichment of the work by improved equipment and additional materials, we have naturally been developing the method and philosophy of the work. The idea of making manual training teach trades, and that of substituting it for the apprentice system, did not flourish well in connection with the plan and purpose of our public school system; but the idea of development through manual work seemed to correspond to our system, and is now generally accepted by American educators, although recognition of the development doctrine was not gained without a struggle. Previous to 1880 there were not more than a dozen advocates of the intellectual value of manual training among the educational leaders of our land. The first committee of the National Educational Association on manual training, of which committee General Frances A. Walker was chairman, reported at the Saratoga convention in 1882, recommending the general introduction of manual training in grammar and high schools, "for developing skill of hand in the fundamental manipulations connected with the industrial arts, and also as a means of mental development." This recommendation brought on an animated discussion, in the course of which a prominent city superintendent (A. P. Marble, of Worcester, Mass.) said: "Now, the schools we have to conduct are to train boys and girls in those directions that are common to everybody, and one of the things that the boys and

girls ought to learn in those schools is how to get information from books. There is no information stored up in the plow, hoe-handle, steam engine; but there is information stored up in books. If a boy is prepared to get information from books, he can make indefinite progress. If you take out of his hand the books and put there the handsaw and the hammer, and ask the teacher—who is most likely a young girl—to teach them, when she does not know anything about them, the whole matter will simply become 'a bore' to all parties concerned. The saw is brought into the recitation room, and the teacher says: 'Now, saw.' It is a thing that does not belong to the school at all. It belongs outside, and ought to be attended to outside."

During the seven years following this (from 1882 to 1889) the subject of the intellectual value of manual training was much discussed throughout the country, as well as in the meetings of the National Educational Association and the National Superintendents Association. The tenacity with which some held out against the manual training idea was illustrated by the strong opposition still urged against it at the Washington meeting of the Superintendents in 1889, and at the Nashville meeting of the National Educational Association the same year. At the former meeting one of the then leading educators of the country (Dr. Emerson E. White) said: "My fear is that public attention and the attention of educators is being called away from the great reform that ought to be made in teaching—a reform that touches every branch of knowledge and demands that it be taught in harmony with the nature of the child, and is being fixed upon work-shop training, which, at best, is mere cornice work in general education. My fear is," said he, "that the attention of our teachers and others is being diverted from true teaching to work-shop manual training, which Dr. Woodward says can be best begun at 14 years of age. If needed reforms in teaching are to be diverted to such a side show, we shall certainly not gain by the movement." The esteemed gentleman who uttered these words lived to see the "side show" opened to thousands of girls and boys in scores of cities, even before they had reached the age of 14, and to see the manual training movement take its place as a part of the greatest reform in teaching that the world has ever undertaken. In these national meetings in 1889, to which I have just referred, was raised the last loud protest that has been uttered in the bodies constituting them, against the recognition of the intellectual value of manual training. The subject of manual training has been discussed at most of the meetings of these great associations held since that time, but only to be received with enthusiasm and the endorsement of the membership.

Manual training has become a part of the broadening process in our educational growth, and our conception of it, like our ideas of all education, has been influenced by the better understanding of child nature, the teachings of modern psychology, and the modification of our definition of education. While we have never abandoned the argument of the practical or utilitarian value of manual training, we have combined with it other ideas to clarify and strengthen it. The practical argument for manual training appeals to the American people the more strongly, perhaps, on account of our freedom from royalty, aristocracy

and snobbery. We have had no caste prejudices to overcome. We have not passed so far from the pioneer days as to lose sight of the educational value which accompanied the manual experiences incident to home building and other necessities of colonial times. Our people are ready to accept the evident fact that manual training atones for the loss of valuable experience and training which characterized our former methods of living, but which in more recent years have become obsolete. Having accepted the democratic idea that education, like civil government, is for all the people, and having come to realize that most of the people must be doers as well as thinkers, it becomes clearly consistent with our theories to teach the children how to do as well as how to think. Thus it is that we have been unable to push aside the general utilitarian idea of manual training. Classical scholars have accused the manual training movement of robbing our education of cultural possibilities, of teaching materialism and of quenching the ambition of the young for a higher education. These charges are all being refuted by the results of the manual training work.

Physiological psychology has done much to justify and promote the manual training movement. It teaches that the energy which is the birthright of every normal child, which has often been considered an unfortunate inheritance, and which teachers have for ages tried to curb, is a most potent means of education if directed to right and definite ends. The manual training system has come as a method of directing this constantly outgoing energy of youth. At certain stages of the child's growth manual training is of first importance as a means of expression. Visual or concrete impressions are incomplete without the confirming experience of corresponding expression. Expression by words, gestures or pictures is not sufficient. Although making is not so universal a means of expression as language, or even as drawing, it is more fundamental than either of these in laying the foundation for clear and correct elementary ideas. It gives a large and valuable store of sense knowledge, and sense training of the highest order. The recognition of these facts has done much to open the way for manual training in the primary grades.

The interest-arousing character of manual training has had great influence it gaining for it recognition as a valuable method in education. It affords opportunity for the exercise of the constructive instinct, for gratifying lofty emotions, etc. It encourages investigation, invention and the making of useful things, thus training children to be producers. It develops in the pupil appreciation of his material environment in the home, in the school, and in social and industrial life. It might be said that it becomes a means of translating or understanding his environment; in an additional sense it becomes a part of and enriches his environment. Manual training develops the desirable quality known as self-activity, which is largely motor in form, and includes self-seeing, self-planning, self-doing, self-impelling.

While the esthetic element in manual training has not been developed as it should be, the promoters of the work are thoroughly awake to the desirability of making the manual training a means of esthetic training. Much of the primary work—basketry and weaving in particular—lends itself well to the decorative art.

Only a beginning has been made in the correlation of manual training with other school work; but enough has been done to demonstrate clearly the feasibility of fitting it in with other subjects in such manner as to enhance their value as well as its own. Manual training has many correlation possibilities, as in drawing, arithmetic, geometry, physics, geography, history, botany, and even in literature. It seems to me that the subject of correlation, not only in the manual training work, but in our entire public school curriculum, is one of the most important questions demanding the attention of our profession. Just as it is necessary that our text-books be revised from time to time, or that they be replaced by those that are better, so we need to revise the curriculum as a whole, including in the process not only the subjects but the subject matter as well. The trend of advanced educational thought in this country is clearly in the direction of the reorganization of most of the present school subjects—the shifting of educational matter, means and methods,, the throwing out of all that is cumbersome, and the bringing together of those things of knowledge and discipline which have an affinity for each other, for child nature and for the highest purpose of education. We are learning, though slowly, it sometimes seems, that children are not made to fit our educational code, but that the code must be adopted to the nature of the children. We are finding that no one subject of the curriculum can be made an exclusive method for the development of certain so-called powers—abstract qualities formerly supposed to be the uniform inherent right and possession of each normal individual born into the world. We have arrived at the point of discovering the child as an individual, a living whole, an energy in which many powers are united, blended together, interdependent,—a combination which can be properly and fully developed only by using all good means and methods in conjunction. We are finding it necessary in manual training, as in other features of education, to cast aside or to modify Old World theories and forms, and to work out means and methods better adapted to American conditions.

The recognition of the fact that manual training promotes study in the general curriculum has done much to allay the feeling of certain jealous pedagogues that it is a rival of other school subjects. It may rival some of them in the interest it arouses, but not in the sense that it aims to supplant them. It simply comes in to provide some necessary features of training that other subjects do not contain. It would put more practical problems into the curriculum, more opportunities for concrete expression, more possibilities for sense and motor development, larger scope for invention and executive experience, more of the spirit of social living in this industrial age.

The popularity of manual training with parents and pupils throughout the country, wherever it has been properly introduced, is strong evidence that it is supplying a want of the people. City Superintendents, State Superintendents, College and University Presidents and other prominent educators now unite with philosophers, statesmen, financiers and other great thinkers and men of experience in approving the manual training idea, and in doing all they can to promote its growth. School reports from all over the land bear testimony to the value of manual training; almost every prominent educational gathering dis-

cusses the subject; the annual reports of the United States Commissioner of Education recount its progress. In a quarter of a century it has made its way into all corners of our country, into our system of pedagogy, and into the hearts of the people. When the system has been improved and refined by study, experience, labor and time, we may not recognize in it our beginning efforts, but the manual training idea will be there as one of the dominant features of modern education, and as the friend and patron of the new American culture.

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