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BULLETIN

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INDUSTRIAL ARTS

COLORADO STATE TEACHERS
COLLEGE

1927



GREELEY, COLORADO

Published by The College

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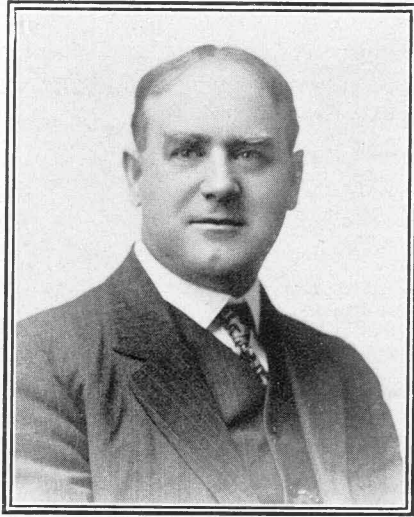
Acting Assistant Professor of Industrial Arts

KENNETH I. PERRY

Assistant Professor of Industrial Arts



GEORGE WILLARD FRASIER, PH.D., LL.D.
President



SAMUEL MILO HADDEN
Head of the Department of Industrial Arts

FOREWORD

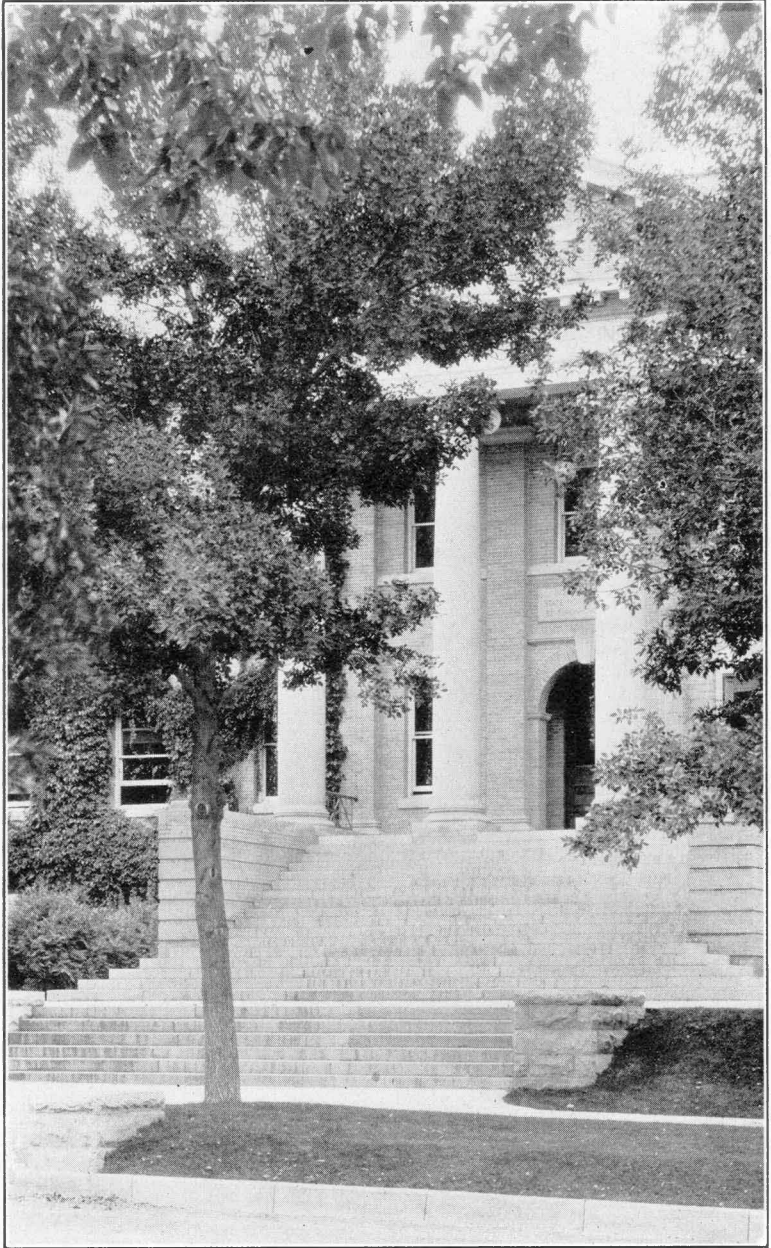
IN THE INDUSTRIAL ARTS is found the outlet for that great surging desire and ambition for a vocational career as distinguished from the professional on the part of the big army of boys and girls in the high schools of the country. It is in the high schools that the foundation is laid for many life careers in mechanical drawing, drafting, printing, binding, art leather craft, and the other industrial arts.

Whether or not the high school student intends to go on to college or university or enter immediately on graduation from the secondary school into pursuit of his desires in any one of the many branches of the industrial arts, it is highly important that the foundation he has laid in the high school be sound. Much of his success later depends on the kind of training he has had in the classroom. The school that conducts work in the industrial arts for the mere sake of saying that it has such courses and is indifferent to the methods pursued and the ability of the instructor is not fair either to the pupil or to itself as an educational institution. Unfortunately, many schools are attempting work in the industrial arts along just such lines.

DEMAND FOR TEACHERS IS HEAVY

It is not enough, either, that those engaged in training high school boys and girls be versed in the practical knowledge of any one or all of the branches included under the heading of industrial arts; they should be teachers, too, and that means that they must be trained in the profession of teaching itself. It is equally important that the teacher in industrial arts in the public schools, colleges or universities have the qualifications of the professional teacher as the teacher in academic subjects. He must know *how* to teach as well as *what* to teach.

The rapid development of the industrial arts as a part of the curriculum in the high schools has found many institutions of higher learning, and particularly the teachers' colleges, backward, and poorly equipped to turn out teachers in this subject.



GUGGENHEIM HALL OF INDUSTRIAL ARTS

As a result, the demand for industrial arts teachers is much greater than the supply.

The professional teacher-training institution is naturally the place to find teachers, and the professional teacher-training institution that fulfills its mission trains teachers for all the branches of public school education.

Colorado State Teachers College is a state-maintained institution for the training of teachers for the public schools of Colorado, and it recognizes that its duty is to supply professionally trained teachers for all branches. In accepting its duty, Colorado State Teachers College recognized the industrial arts as an important subject in the high schools, and the training of teachers in these specialized subjects has kept pace with the work and advancement in all other departments of the institution.

The Industrial Arts Department at Colorado State Teachers College stands out as one of the most important departments on the campus, and it is recognized among institutions of higher learning throughout the land. Each one of the different branches in the department is highly specialized, with the inevitable consequence that those majoring in industrial arts at Colorado State Teachers College are in demand always and everywhere, and at attractive salaries.

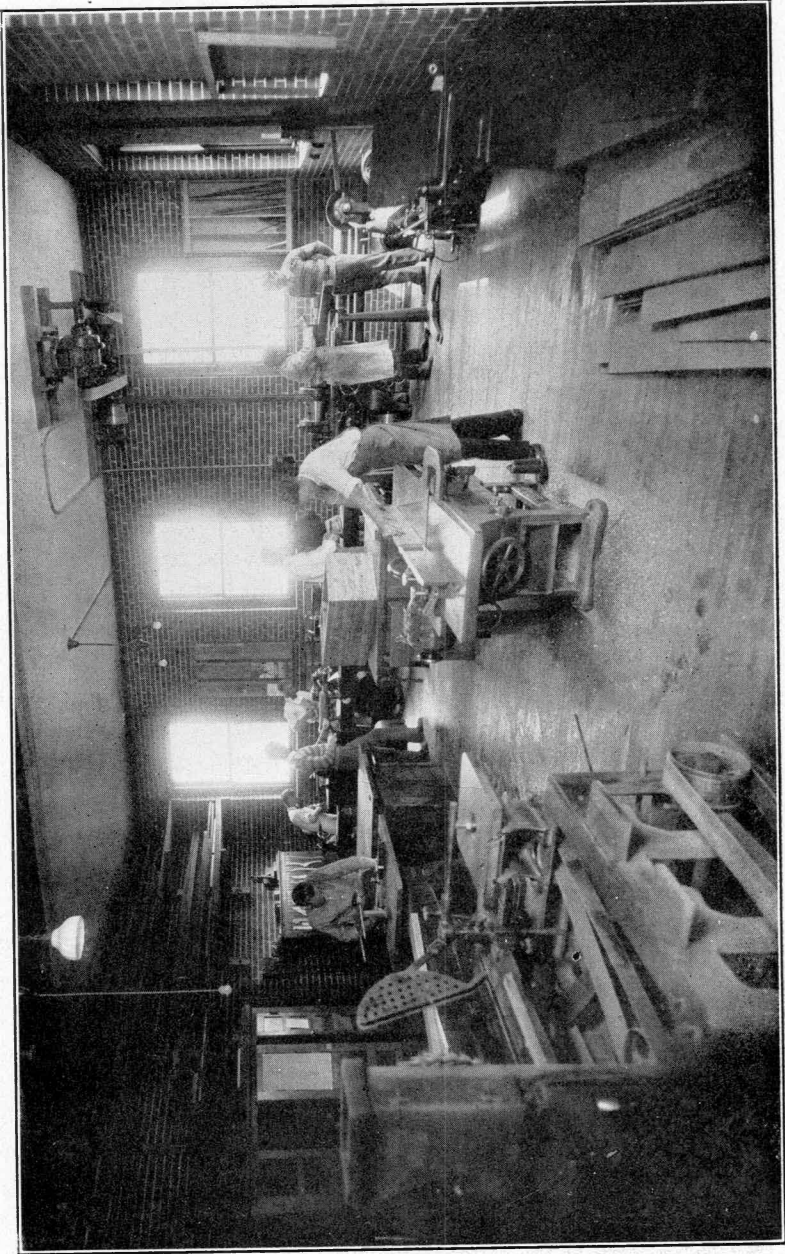
Graduates in Industrial Arts at Colorado State Teachers College are not only thoroughly trained in the practice of the arts, but are well trained to teach. Since the foundation of the department all of its graduates have found positions without waiting. There is always a demand for graduates of the



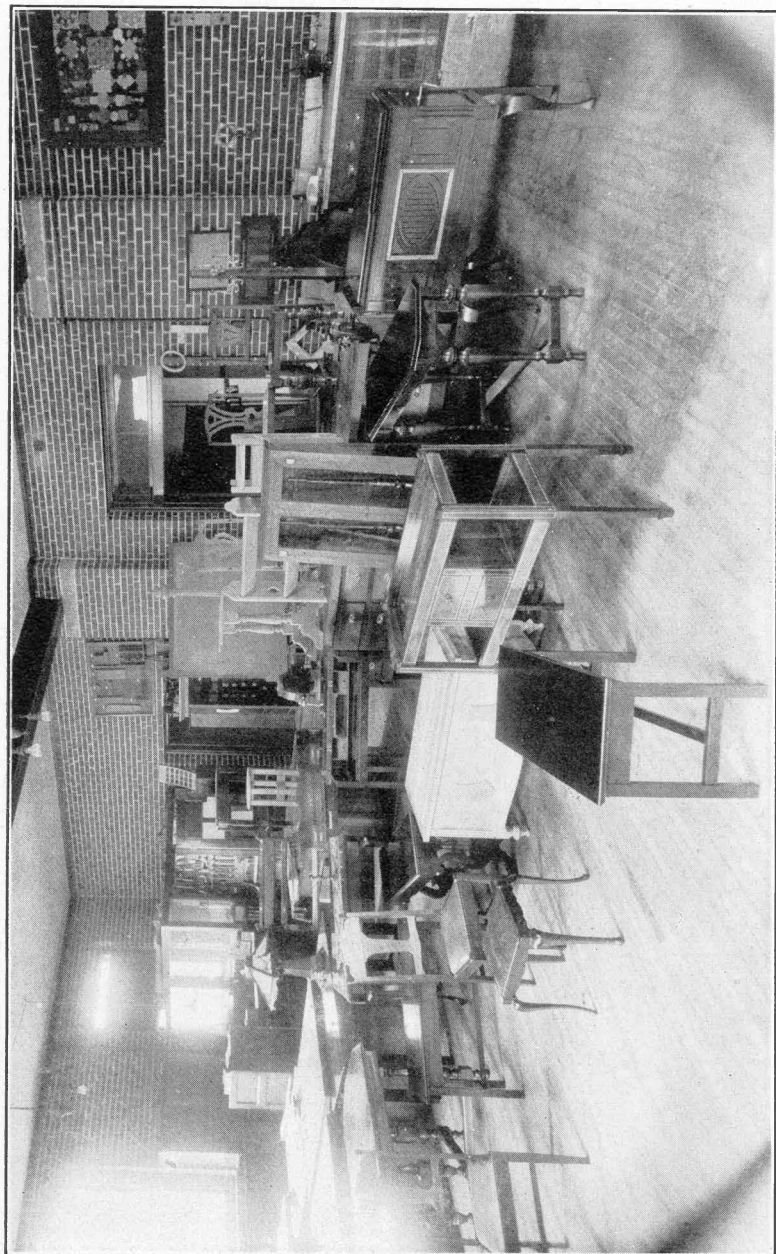
CHARLES MEAD FOULK
Professor of Industrial Arts
In charge of woodworking



IN THE WOODWORKING DEPARTMENT



THE EQUIPMENT IS THE MOST MODERN



SOME OF THE FURNITURE MADE BY STUDENTS IN THE WOODWORKING DEPARTMENT

department long in advance of the graduation of each class. These graduates are to be found in well-paying positions as teachers and heads of departments in all parts of the country.

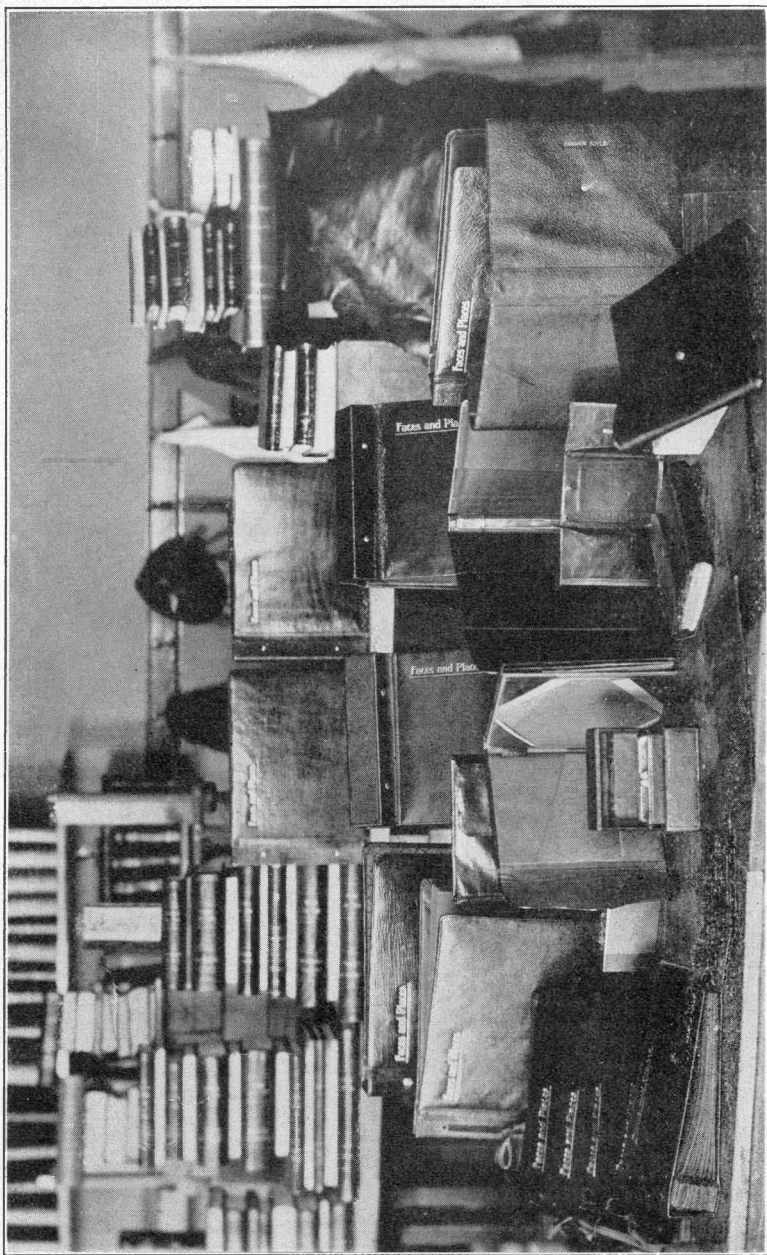
DEPARTMENT HOUSED IN FINE BUILDING

The Industrial Arts Department had its beginning in the second year of the institution when Mr. C. T. Work introduced some courses in sloyd of the type that Gustaff Larson brought over from Dr. Otto Solomon's Institute at Naas, Sweden; a rigidly laid out course in woodworking sequentially organized. This was gradually changed to fit conditions here, adding courses in woodturning, mechanical drawing, and printing. This was the second normal school or teachers college to introduce a printing course for teachers. Through the influence of the department, courses were added in art, home making, and commercial work.

With the introduction of this phase of the curriculum, students began to be attracted to it, first with the thought of the possibilities for its use later as they went out to teach, and then it soon became evident that not only was there a great field developing, but that the high schools were already looking about for young men and women capable of teaching industrial arts.

A combination which early presented itself and which has continued to grow in importance is the athletic coach and industrial arts teacher. Schools everywhere found that they could combine these two positions, and Colorado State Teachers College, sensing the pulse early, directed its plans to the same end, with the result that a large number of schools are enjoying the benefits of such combination faculty members, young men who have excelled in athletics at this institution and who at the same time have demonstrated their abilities as teachers in the industrial arts.

Quickly, once the field was recognized, the department grew, and soon it was necessary to provide greater accommodations to satisfy the demand of those who wanted to become teachers in this new field. Today the department is housed in a magnificent building of its own—Guggenheim Hall of Industrial Arts. This was the gift of Senator Simon Guggenheim. It is



JUST A FEW SAMPLES OF LEATHER WORK TURNED OUT BY STUDENTS

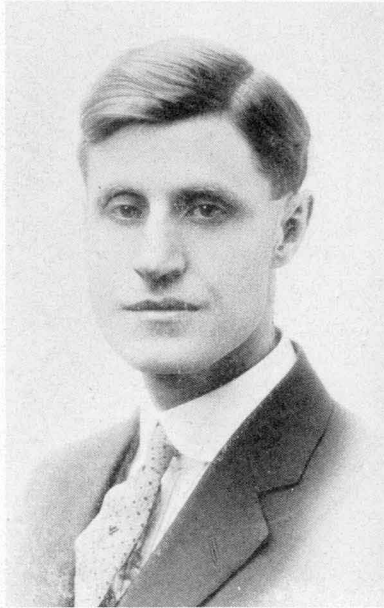
one of the best equipped plants of its kind to be found in any educational institution

The Woodworking Department, presided over by Professor Charles Mead Foulk, occupies the entire ground floor. It is equipped with machinery and tools of the latest design, which makes it possible to give the student training for a teaching position in this branch of the manual arts practical experience to the last degree. Here students each year turn out magnificent specimens of the woodworker's and cabinet maker's art.

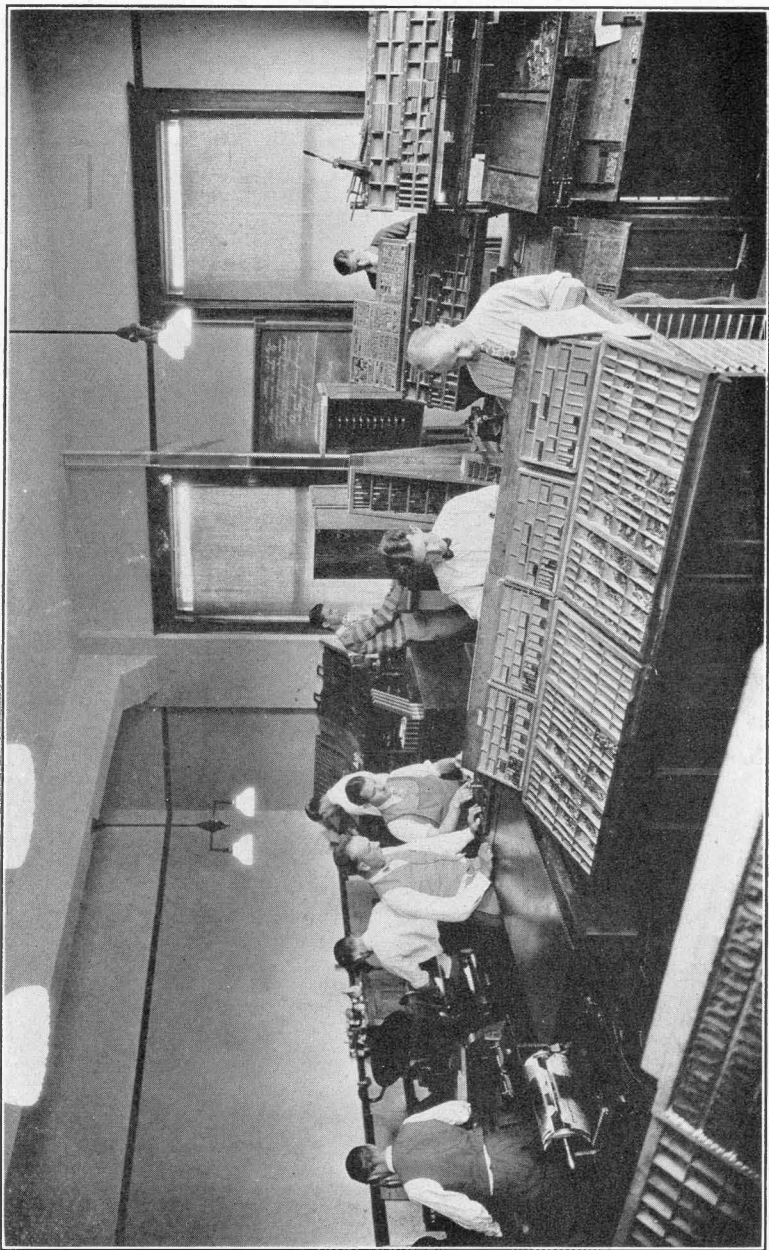
On the second floor of the building four departments are housed, namely, drafting, art metal, printing, and bookbinding. Professor S. M. Hadden, who is head of the Industrial Arts Department, directs the instruction in drafting, art metal, and industrial education. The drafting room is equipped with individual lockers where students must keep their work. The room is accessible at all times for students. Courses in Shade and Shadow, Architectural and Machine Drawing are offered. The department has a complete set of architectural slides, industrial slides, and various types of illustrative materials.

The Art Metal room is equipped with individual desks designed for work of various types, including etching, repousse, raising, planishing, hard soldering, and stone setting in a variety of materials, and power machines for cutting, buffing, and soldering. These arts are rich in illustrative materials from Oriental, Indian, and European countries.

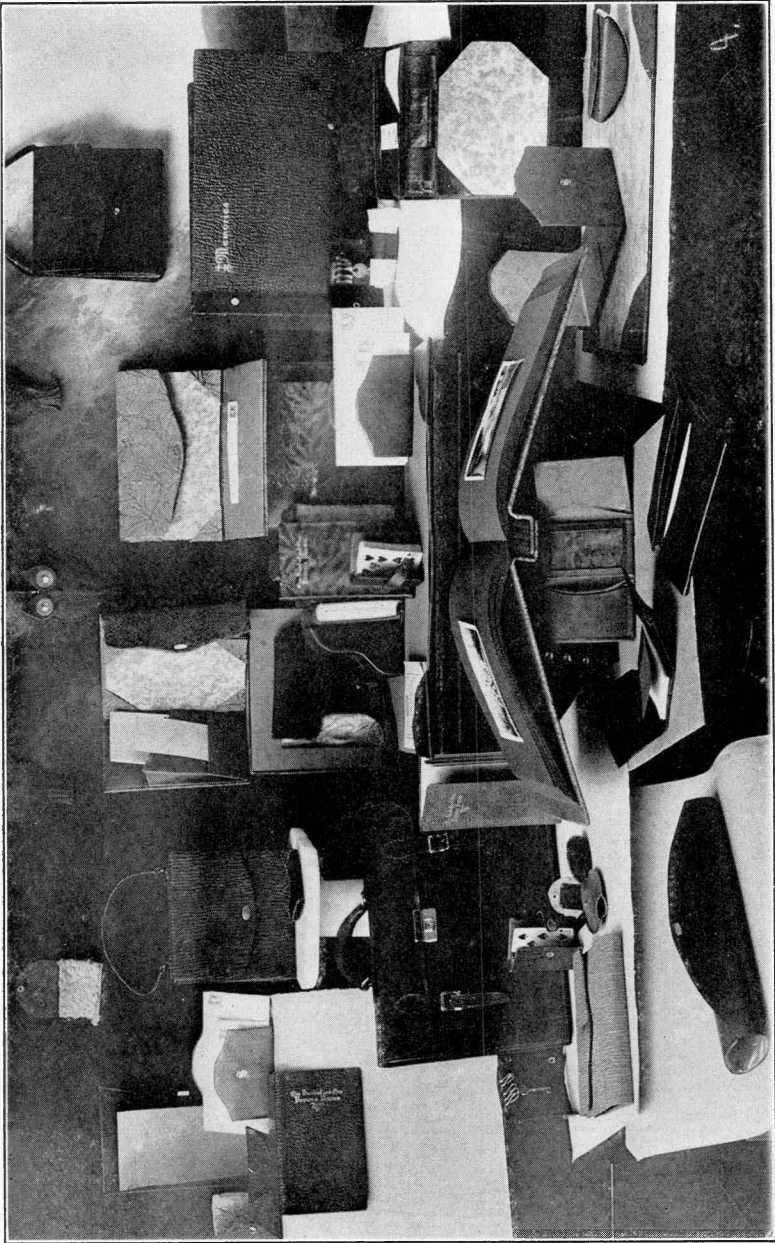
The printing department is under the direction of Professor



RALPH THOMAS BISHOP
Associate Professor of Industrial Arts
In charge of printing



A CLASS IN THE ART OF PRINTING



SOME MORE EXAMPLES OF ART LEATHER WORK TURNED OUT BY STUDENTS



A CLASS IN ARCHITECTURAL DRAWING

Ralph T. Bishop. This department is well equipped for the training of teachers in printing. It has a large supply of well-assorted hand type and other material that goes with such a collection of type, also a battery of three power presses, a paper cutter, punches, stitchers, and proof press. Much of the printing for the college is done here.

This institution was the first one in Colorado and the second in the United States to organize courses for the preparation of teachers in printing.

THE FACULTY HAS HIGH PROFESSIONAL STANDING

In the bookbinding department students are given wholly practical training in binding and leather work. The equipment consists of gluing tables, individual desks for twenty-one pupils, modern machinery for library bindings, a power stitching machine, equipment to do all leather craft work, gold lettering and hand tooling in gold, stamping machines for stampings in gold, imitation gold, and foils.

On the top floor of the building is located the department of fine arts.

Perfectly equipped as the department is, however, the tremendous success and the high attainment of the graduates are responsible in large measure to the ability and the professional standing of the members of the faculty.

Professor Samuel M. Hadden, head of the Industrial Arts Department, is a man of sound educational training, with wide



OTTO WILLIAM SCHAEFER
Associate Professor of Industrial Arts
In charge of leatherwork



A SECTION OF THE ART METAL DEPARTMENT

experience in the field of industrial arts. He obtained his early training in Kansas and then received his Ph.B. degree at Colorado State Teachers College and his A.B. and A.M. at Denver University. He has studied at Cooper Memorial College, at Teachers College, Columbia University; Chicago University, and one graduate year at the University of California, and six months in Europe studying vocational problems of the continuation school, with other vocational work in Germany, France, Switzerland, and England.

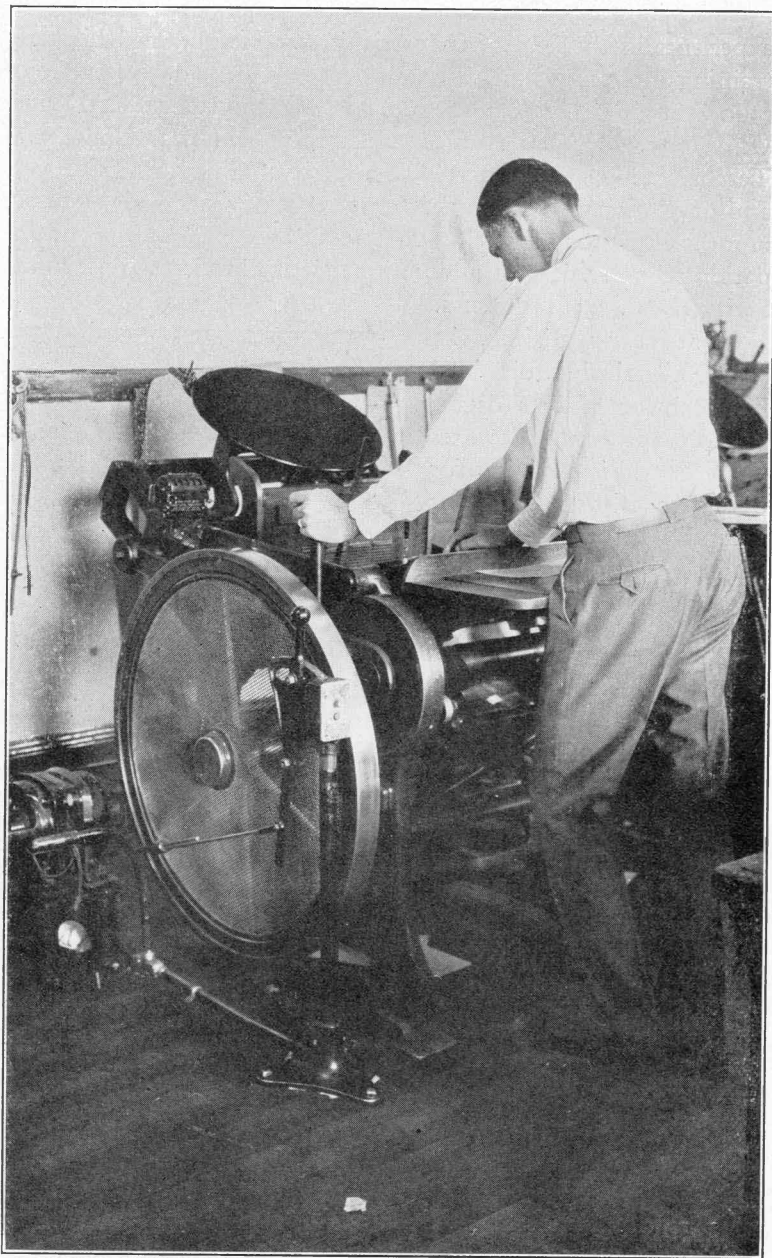
Professor Bishop, in charge of printing, obtained his bachelor of arts degree at Colorado State Teachers College, and is studying for a master of arts degree at Leland Stanford University. He is a graduate of the Western Illinois State Normal School, graduate of the Inland Printer Technical School, Chicago. He has been a student at Chicago University, and before coming to Colorado State Teachers College he taught printing in the Edmonton, Canada, Technical School.

Professor Foulk has a Pd.B. and Pd.M. from Colorado State Teachers College. He attended the Edinboro State Normal School in Pennsylvania and studied architectural drawing through extension fields. He served an apprenticeship in carpentry and joinery and was a contractor and served at various times as a building superintendent. He conducted classes in Trade Problems in Pennsylvania, Idaho and Colorado.

Professor Schaefer, who is in charge of the bookbinding and art leather work, was formerly head of the bookbinding department of the B. F. Wade Printing Company of Toledo,



KENNETH I. PERRY
Assistant Professor of Industrial Arts



ONE OF THE BATTERY OF PLATEN PRESSES

Ohio. He was a student of William Walker, art binder of Edinburgh, Scotland, head of binding departments in Cleveland, Detroit, Asheville, Riverside, and Los Angeles; and head of the stamping and finishing department of the Kistler Stationery Company, Denver, Colorado, before coming to Colorado State Teachers College.

Mr. Harry Thompson has his A.B. from Colorado State Teachers College.

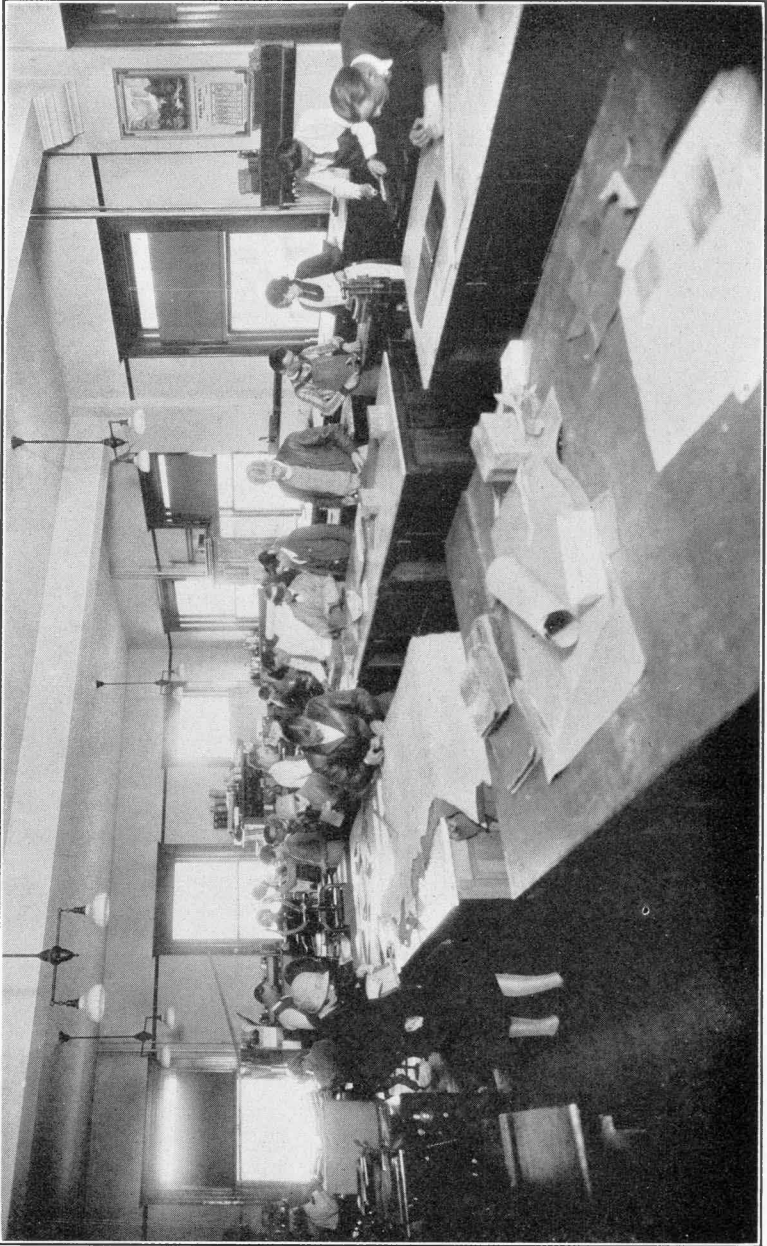
TEACHING OTHERS HOW TO TEACH

Mr. Kenneth I. Perry has charge of all of the industrial work for boys in the junior and senior high schools. He supervises college student observation and college student teaching in the junior and senior high school training department. Mr. Perry received his A.B. from Colorado State Teachers College. He taught in the junior and senior high school at Fort Worth, Texas, and the Grant Junior High School of Denver, Colorado.

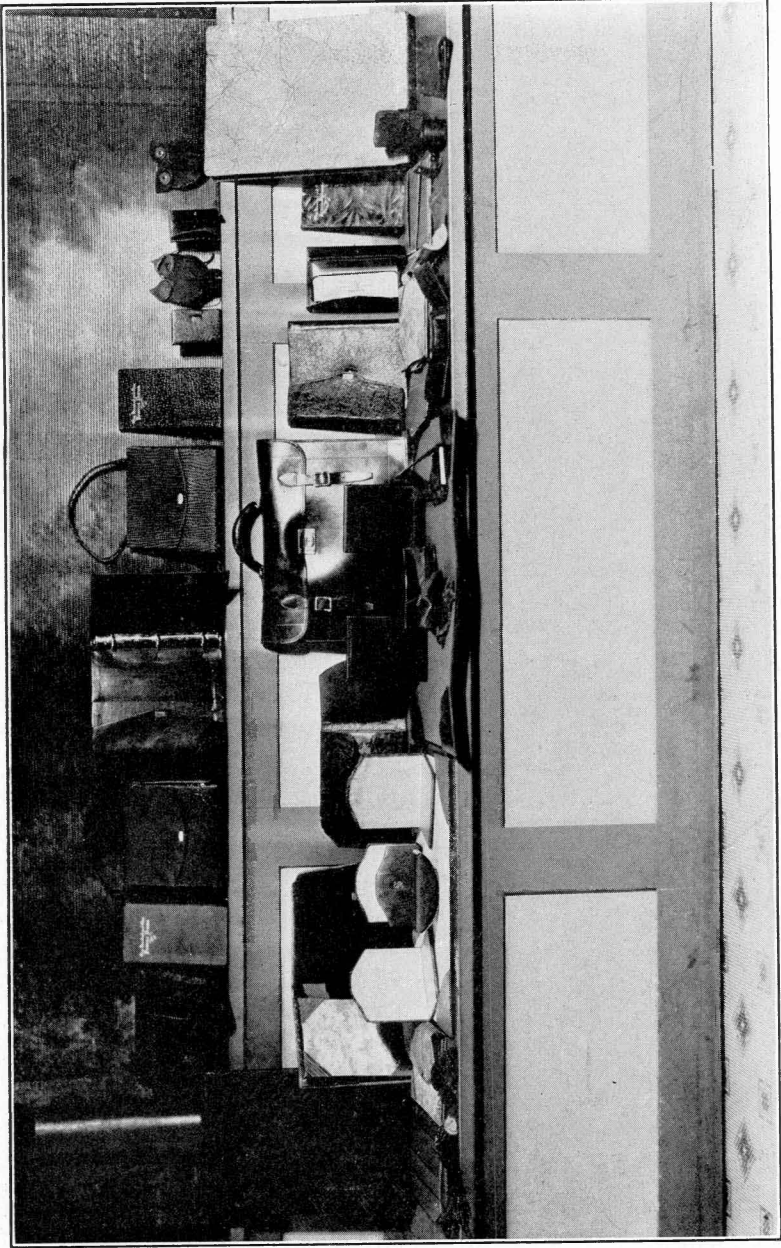
All in all the faculty of the Industrial Arts Department at Colorado State Teachers College is one professionally trained, both in the practical and academic phases—men who not only know how to teach the subject matter, but who are peculiarly fitted to teach students how to teach industrial arts.



HARRY THOMPSON
Acting Assistant Professor of
Industrial Arts



STUDENTS AT WORK IN THE BOOKBINDING DEPARTMENT

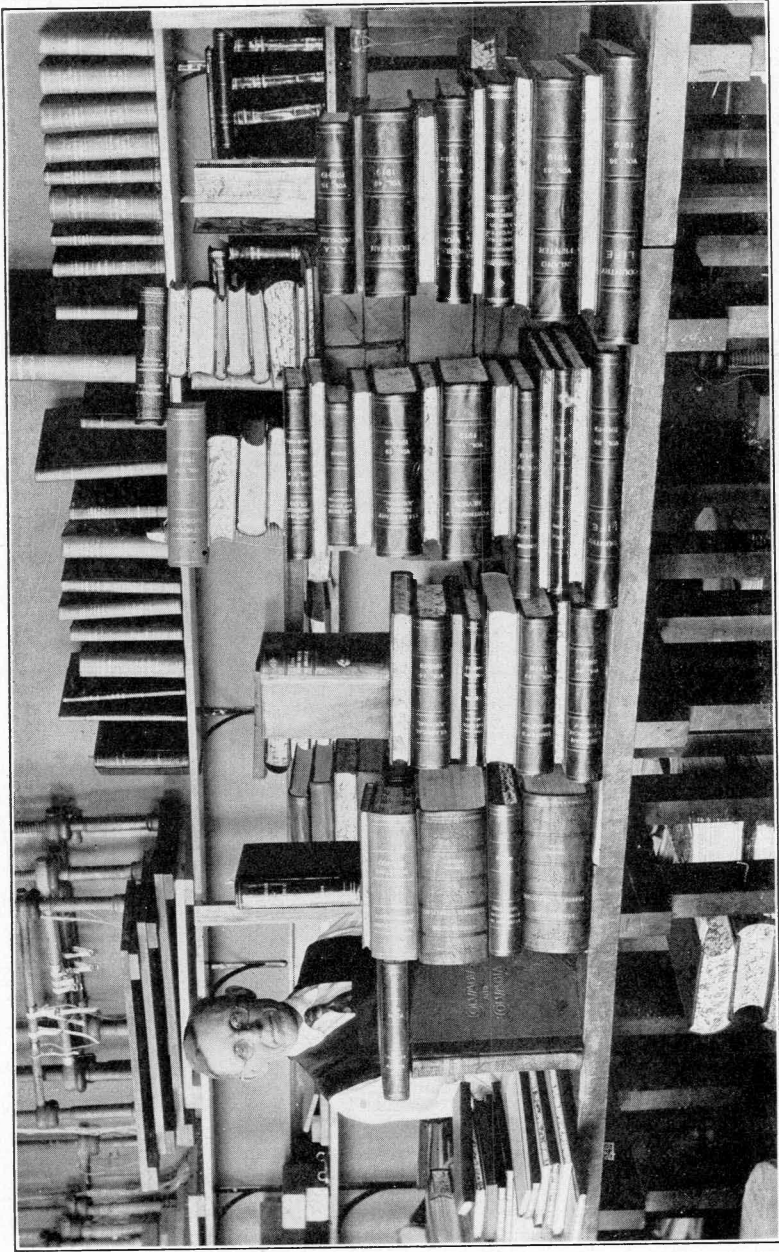


STUDENTS IN ART LEATHER DEPARTMENT MAKE MOST EVERYTHING

MANY ARE HOLDING GOOD POSITIONS

A few of the graduates who are holding responsible positions in the United States and possessions:

- Lester R. Finch, Supervisor Industrial Arts, Phoenix, Arizona
 Kenneth I. Kohl, Head of Industrial Arts Department, State Teachers College, Chadron, Nebraska
 Francis Osborne, Head of Industrial Arts Department, State Teachers College, Flagstaff, Arizona
 Harold Preston, Head of Industrial Arts Department, Public Schools, Flagstaff, Arizona
 Alfred Baxter, Junior High School Industrial Arts Work, Berkeley, California
 Alan Lytle, Technical Drawing, Rock Springs, Wyoming
 Clarence Finch, Head Industrial Arts Department, Public Schools, Chandler, Arizona
 J. C. Kestler, Head of Industrial Arts Department, Public Schools, Boulder, Colorado
 Alfred Laurence, Industrial Art Work, Reno, Nevada
 Dave Evans, Junior High Schools, Denver, Colorado
 T. G. Seivers, Junior High Schools, Denver, Colorado
 Waldo Miller, Junior High Schools, Denver, Colorado
 Homer Lee, Industrial Arts, Public Schools, Casper, Wyoming
 Arthur Carter, Industrial Arts Work, Redondo, California
 George A. Raeth, Charge Industrial Work, Glendale, California
 W. H. Reeder, Manual Arts, High School, Los Angeles, California
 Homer Gammill, Industrial Work, Lincoln, Nebraska
 E. W. Ingrahan, Industrial Work, Kingsport, Tennessee
 Asa Chestnut, Industrial Work, El Centro, California
 W. H. Hurley, Industrial Arts Work, Public Schools, Fresno, California
 V. C. Frickland, Head of Industrial Arts Department, State Teachers College, Kearney, Nebraska
 Milton Ballangee, Industrial Arts, Kamehameha School, Honolulu, Hawaii
 Miss Ora Nesbit, A.B., Leathercraft and Bookbinding, Long Beach High School, Long Beach, California
 Mrs. Maude Reinks, A.M., Leathercraft and Bookbinding, Byers Junior High School, Los Angeles, California
 Owen Gothard, A.B., Leathercraft and Bookbinding, Lincoln High School, Los Angeles, California
 Miss Grace Mabie, A.B., Leathercraft and Bookbinding, High School, Westfield, Iowa
 Dwight L. Reeder, A.B., Industrial Arts, High School, Greeley, Colorado
 Miss Oona Stauts, A.B., Leathercraft and Bookbinding, Carson City High School, Carson City, Nevada
 Henry V. Allen, Manual Arts, Public Schools, Akron, Colorado
 Archie Anderson, Industrial Arts, Public Schools, Jennings, Kansas
 Harlie R. Baker, A.B., Manual Arts, Public Schools, Pueblo, Colorado
 Milton Ballengee, A.B., Manual Arts and Coaching, Public Schools, Honolulu
 Owen Gothard, Leathercraft and Bookbinding, Public Schools, Los Angeles, California
 Dan A. Harmon, A.B., Manual Arts and Principal, Olin School, Greeley, Colorado
 Ralph M. Harmon, A.B., Manual Arts, Public Schools, Louisville, Colorado
 Chester Hatch, Industrial Arts and Principal, Public Schools, Evans, Colorado
 Kenneth Kohl, A.B., Industrial Arts, Public Schools, Chadron, Nebraska
 Ted Long, A.B., Manual Arts and Band, Public Schools, Las Cruces, New Mexico
 Charles Mashburn, Industrial Arts and Superintendent, Public Schools, Buckingham, Colorado
 Elmer Moore, A.B., Industrial Arts and Commerce, Public Schools, Ft. Collins, Colo.
 Victor Oliver, A.B., Manual Arts, Public Schools, Carbondale, Colorado
 Kenneth Perry, A.B., Manual Arts, Colorado State Teachers College, Greeley, Colorado
 Henry Person, Manual Arts and Athletics, Public Schools, Greeley, Colorado
 Harry A. Phillips, A.B., Y. M. C. A. Boys' Work, Denver, Colorado
 Dwight Price, A.B., Manual Arts, Public Schools, Sopris, Colorado
 J. F. Reynolds, A.B., Manual Arts and Superintendent of Schools, Silt, Colorado
 L. E. Stein, Manual Arts, Public Schools, Berwind, Colorado
 Eldred Timothy, A.B., Manual Arts, Public Schools, Seligman, Arizona
 Guy A. Van Buren, A.B., Manual Arts and Superintendent of Schools, Two Buttes, Colorado
 Warren Bussing, Industrial Arts and Junior High, Public Schools, Dolores, Colorado
 William Grove, Manual Arts, Public Schools, Frederick, Colorado
 Nathan Knowlton, Upper Grades, Public Schools, Lake City, Colorado
 Greeley Timothy, Manual Arts and Coaching, Public Schools, Leadville, Colorado
 Bernice Datson, A.B., Leathercraft and Bookbinding, Junior High School, Orlando, Florida



JUST A FEW OF THE COLLEGE LIBRARY VOLUMES WITH NEW BINDINGS

THE COURSE OF STUDY

1. **TECHNIC AND THEORY OF WOODWORKING I**—Fall, spring, and summer quarters. Four hours. Fee, \$2.00.

This course is arranged for beginners in woodworking who intend to major in the industrial field or those who wish to take the work as an elective. The purpose of the course is to give the student a fair knowledge of woodworking tools and a comprehensive idea of methods of construction. The construction of simple pieces of furniture is made the basis of this course.

2. **TECHNIC AND THEORY OF WOODWORKING II**—Winter and summer quarters. Four hours. Fee, \$2.00.

This course is a continuation of Course I and is designed for advanced students and majors. More advanced phases of woodworking are presented in technical problem form.

3. **WOODWORKING FOR ELEMENTARY AND SECONDARY SCHOOLS**—Spring quarter. Four hours.

This is a methods course and deals with such topics as equipment, materials used, where and what to buy, kind of work to be undertaken in the different grades, the preparation and presentation of projects, the making of suitable drawings, and the proper mathematics to be used in woodworking.

4. **CONSTRUCTION OF CLASS PROJECTS**—On request. Four hours. Fee, \$2.00.

The purpose of this course is to train the students in designing and carefully working out suitable projects to be used in the elementary and junior high classes.

*5. **PRINCIPLES OF TEACHING PRACTICAL ART SUBJECTS**—Fall and spring quarters. Three hours.

The aim of this course is to give a better understanding of the underlying principles essential in teaching, and involves a study of the class room, laboratory, shop and studio methods and practice. In general, the topics discussed will be what is to be taught in the practical arts field, the illustrative materials essential for good teaching, and the method of attack in the teaching of a single lesson or series of lessons, type and illustrative lessons, and the place of the arts in the curriculum of the public schools.

6. **REPAIR AND EQUIPMENT CONSTRUCTION**—Fall quarter. Four hours.

This course has for its base the building of various types of equipment and the use of power machines in working out these problems. This is an especially valuable course for those who wish to emphasize the large phases of vocational education.

8a. **ART METAL**—Fall and winter quarters. Four hours. Fee, \$2.00.

This course has in mind the designing and creation of simple, artistic forms in copper, brass, and German silver.

8b. **ART METAL**—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 8a. The course in general includes the designing and executing of simple, artistic jewelry pieces, such as monograms, simple settings of precious stones, and the development of advanced artistic forms in copper.

9. **CLASSIC ARCHITECTURE**—Fall quarter. One hour.

A general survey of the history of ancient and classic architecture from the standpoint of the history of peoples. Topical studies by members of the class, of selected monuments and of specific problems. Illustrated by lantern slides.

*10. **MECHANICAL DRAWING**—Fall and spring quarters. Two or four hours. For art majors. Fee, \$1.00 or \$2.00.

This course is designed to give a knowledge of the use of drawing equipment and materials. Problems presented include geometrical drawing, elements of projection, development of surface, isometric and oblique projecting, simple working drawing and lettering. This course is planned for beginners who have had no technical drawing.

* Given also by extension.

*11. PROJECTIONS, SHADE, AND SHADOW—Fall quarter. Four hours. Fee, \$1.00.

The purpose of this course is to give a student a working knowledge of the fundamentals of orthographic projection as applied to points, lines, planes, solids, shade and shadow, and applications.

*12. PRINCIPLES OF ARCHITECTURAL DRAWING I—Winter quarter. Four hours. Fee, \$1.00.

This course includes the making of complete designs of simple one-story cottages, together with details and specifications of same.

*13. PRINCIPLES OF ARCHITECTURAL DRAWING II—Spring quarter. Four hours. Fee, \$1.00.

This course is a continuation of Course 12 and deals with the drawing of plans of cement, brick, and stone structures, culminating in complete plans and specifications for resident and public buildings.

14. CARE AND MANAGEMENT—Fall quarter. Three hours.

This course is designed to train students to care for, repair, and adjust hand and power tools of the woodworking department.

19. WOODTURNING—Winter and summer quarters. Four hours. Fee, \$2.00.

The aim of this course is to give the student a fair knowledge of the wood-working lathe, its care, use and possibilities. Different types of problems will be worked out, such as cylindrical work, working to scale, turning duplicate parts, turning and assembling, the making of handles and attaching them to the proper tools. Special attention will be given to the making of drawings such as are used in ordinary wood turning.

31a. ELEMENTARY PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

A course intended to acquaint the student with the various tools and materials of a print shop and to teach him the fundamentals of plain type composition, as he carries simple jobs through the various stages from composition to making ready and putting on the press.

31b. ELEMENTARY PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Continued work in fundamentals as applied to more complicated pieces of printing, involving rule work, borders, ornaments, etc.

31c. ELEMENTARY PRINTING—Spring quarter. Four hours. Fee, \$1.00.

Balance, proportion, simplicity, harmony, etc., as applied to the designing and producing of good printing.

32a. INTERMEDIATE PRINTING—Fall quarter. Two or four hours. Fee, \$1.00.

Added stress upon principles of good design and workmanship with a view to making the student more proficient in producing artistic work. An intensive study of typographic design in laying out and printing cards, tickets, letterheads, posters, etc.

32b. INTERMEDIATE PRINTING—Winter quarter. Two or four hours. Fee, \$1.00.

Production of title pages, covers, menus, etc.

32c. INTERMEDIATE PRINTING—Spring quarter. Two or four hours. Fee, \$1.00.

Continued practice in producing more pretentious pieces of work of the classes named in 32a and 32b.

* Given also by extension.

41a. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

This course aims to introduce the following: tools, machines, materials and uses, collating and preparing sheets for sewing, sewing on tape and cord, preparing end sheets, trimming, gluing, rounding and backing, headbanding, banding and preparing backs for covers, selecting cover materials, planning and making covers, and all steps necessary in binding of all kinds including full cloth, buckram, paper, spring or loose back, with plain and fancy edges. Besides the fundamental technic of bookbinding, a variety of individual projects are undertaken, such as memorandum books, writing pads, leather cases, boxes, cloth portfolios, and kodak albums.

41b. ELEMENTARY BOOKBINDING—Every quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 41a.

41c. ELEMENTARY BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

A continuation of bookbinding 41b.

42a. INTERMEDIATE BOOKBINDING—Fall and spring quarters. Four hours. Fee, \$1.00.

This course includes the binding of books in half leather, half morocco, cowhide, calf, sheep, and fancy leathers. Some of the type projects undertaken are the making of travelers' full leather writing cases, music cases and a variety of other art leather pieces.

42b. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42a.

42c. INTERMEDIATE BOOKBINDING—Winter quarter. Four hours. Fee, \$1.00.

A continuation of bookbinding 42b.

100. WOODSHOP PROBLEMS—On request. Four hours. Fee, \$2.00.

The course is designed to furnish an opportunity for students to become acquainted with the more advanced phases of technical shop practice as they may be worked out in school or factory.

*104. PRE-VOCATIONAL EDUCATION—Winter quarter. Three hours.

The purpose of this course is to discuss the educational needs of pupils in school, based on the community environment, vocational opportunities, and demand; recognizing that vocational needs vary with community conditions, and that vocational work fundamental and helpful in one community might be very unfit and unnecessary in another. We generally make a survey of the vocational activities of a nearby community. The entire course is a discussion of special, government, state, and community school problems in vocational fields, that we may learn something of the methods of attack used in planning special pre-vocational work, especially the junior high school problem.

105. ADVANCED ARCHITECTURAL DRAWING—Spring quarter. Four hours. Fee, \$1.00.

The course is designed to give the student a knowledge of great historic materials and their application in modern buildings. A study of columns, capitals, pediments, buttresses, arches, vaults, and their application in building will be stressed through this entire course. The work is intensive rather than extensive in its fundamental aspects.

106. ADVANCED REPAIR AND EQUIPMENT CONSTRUCTION—On request. Four hours.

This course is similar to Ind. Arts 6 but deals with a much more advanced type of work.

109a. ART METAL—Fall quarter. Four hours. Fee, \$2.00.

The base for this course is the designing, making and finishing of artistic jewelry in semi-precious and precious metals; also simple, artistic jewelry, with all the steps that are fundamental in stone setting and finishing.

* Given also by extension.

109b. ART METAL—Winter and spring quarters. Four hours. Fee, \$2.00.

A continuation of 109a, with the applications in teaching of jewelry work in the public schools. Advanced problems in design as applied to set metal, wire work, chasing, and repousse.

117. ELEMENTS OF MACHINE DESIGN I—Fall quarter. Four hours. Fee, \$1.00.

This course includes sketches, drawings and tracings of simple parts, such as collars, face plates, screw center, clamps, brackets, couplings, simple bearings, and pulleys. Standardized proportions are used in all drawings.

118. ELEMENTS OF MACHINE DESIGN II—Spring quarter. Four hours. Fee, \$1.00.

A study is made of the transmission of motion by belts, pulleys, gears, and cams. Sketches, details and assembled drawings are made of valves, vises, lathes, band saws, motor and gas or steam engines.

119. MEDIEVAL AND MODERN ARCHITECTURE—Winter quarter. One hour.

The architecture of the Middle Ages of the Renaissance. Lectures and readings on the principle which underlies the theory and the practice of architecture during this period, illustrated by lantern slides. Open to all students of the college.

120. ADVANCED WOODTURNING—On request. Four hours. Fee, \$2.00.

The topics emphasized in this course will include woods best suited for various work, glue, varnish, shellac, dowels, draft, shrinkage, and finish. The practical work will consist of patterns for hollow castings, building up and segment work.

121. ADVANCED CABINET MAKING—Spring quarter. Four hours. Fee, \$2.00.

The course is planned to cover advanced phases of cabinet work, including paneling, dovetailing, secret nailing and key joining. These technical processes will be worked out on individual projects.

124. MACHINE WORK—Winter quarter. Three hours.

This course is designed to give the student a general knowledge of the care and operation of woodworking machinery. The setting of cutters and their manipulation embraces the general basis of this course.

125. CLASS MANAGEMENT—On request. Four hours.

The purpose of this course is to give the student a thorough knowledge of the handling of an advanced class in woodworking and also give him an opportunity to gain a better understanding of the handling of high grade material than could be gained by working in elementary or secondary classes. Hours to be arranged with individual students.

133a. ADVANCED PRINTING—Fall and spring quarters. Four hours. Fee, \$1.00.

Advanced work in the complete designing and producing of printed matter, with a study of plates, papers, and inks. Advanced imposition and press work.

133b. ADVANCED PRINTING—Winter and spring quarters. Two or four hours. Fee, \$1.00.

Special work in cutting and printing of linoleum blocks. Hand-lettering and its application to printing.

103. CLASSIFICATION AND CATALOGING—Winter quarter. Three hours.

A study of the principles of classification, the decimal system particularly. Classification of books, pamphlets, pictures, and the varied items that may be obtained for the school library. Formation of the card catalog, alphabetizing, Library of Congress cards, shelf lists, arrangement of books on shelves.

104. REFERENCE WORK—Spring quarter. Four hours.

The subject covers a study of the standard works of reference, such as the principal encyclopedias, dictionaries, atlases, and reference manuals of various kinds. Bibliographies and reading lists, indexes and aids, public documents. Practical questions and problems assigned.

105. PERIODICALS AND BINDING—Winter quarter. Two hours.

Selection and purchase, checking in, relation to printed indexes, filing. Periodicals for certain definite lines. Methods of acquiring in schools. Use—Current and bound. Collating, selection and preparation for bindery. The binding of books with a study of materials.

106. SCHOOL LIBRARIES—Fall quarter. Three hours.

Evaluation and selection of children's literature. Illustrators. Planning and organization of the school library. Relation between the public library and the school.

107. HISTORY AND ADMINISTRATION OF LIBRARIES—By arrangement. Two hours.

Historical points in general library development. A study of traveling and county libraries with general administration.

108. PRACTICAL WORK IN THE LIBRARY—By arrangement. Five hours. Time required, two hours a day for one quarter plus optional work by the student.

This is allowed only to those who have taken courses 102, 103, and 104, and calls for certain responsibility on the part of the student.

*For further information concerning the Industrial Arts
Department write to the President of the College.*

may be taken in the summer quarter, provided the individual is not a resident student. Any group work must be included in the 16-hour limitation.

4. All extension courses must be completed within six months from the date of enrollment. For sufficient reasons an extension of three months may be granted by the director of the Extension Department upon the request of the student.

5. No student may enroll for more than one course at a time between June 1 and September 1.

6. No enrollment can be made until the necessary fees have been paid. Note that the fees are \$2.50 per quarter hour, plus 25 cents per quarter hour for postage.

7. No enrollment can be made in any given course until the instructor shall have prepared and presented to the Extension Department the study units required for the given course.

8. In all cases the detailed instructions relative to method of study and preparation of manuscripts as outlined in the Hand Book of the Extension Department must be strictly adhered to.

9. A subject begun in residence cannot be completed in non-residence and a subject begun in non-residence cannot be completed in residence. The two types of work are entirely distinct.

10. It is the prerogative of any instructor to ask any student to drop a course for which the student is clearly not prepared. In this case the fee is returned.

11. Students finishing graduation requirements by extension work must write to the Registrar for application for graduation blank at least 30 days before the close of the quarter in which they expect to graduate.

FEEES FOR COLLEGE CORRESPONDENCE STUDY

Each course costs \$2.50 per credit hour with an additional 25 cents for postage. This makes a three-hour course cost \$8.25 and a four-hour course cost \$11.00. For this tuition fee the student receives mimeographed outlines and study units for each course. The instructors grade and return the papers to the Extension Department. The Extension Department, through its clerical force, handles the transfer of units from the teachers to the instructor and the instructor back to the teacher.

The group or individual extension course costs the teacher approximately one-third as much per credit hour as residence courses would cost with the added advantage to the teacher that she is able to earn a salary while the extension work is being carried on.

REFUNDS, TRANSFERS, AND REINSTATEMENT

No money will be refunded after thirty days from the date of enrollment. In no case will money be refunded after the completion of three study units.

2. Use clean letter-size paper. Remember that the character of the teacher is often judged by the care with which she prepares manuscripts. *It pays to be neat.*

3. Leave a margin one inch wide on left hand side of each sheet for the criticisms and suggestions of the instructor.

4. Always copy the number of the item or question or assignment with your answer; i. e., let your answer bear the same number as the question you are answering.

5. The student is expected to answer every question asked, or else when it is not possible to work out a fairly satisfactory answer independently, to ask questions of the instructor. The instructor expects to do as much teaching as the course requires.

6. Similarly the student is expected to work out all assignments (such as "List the factors—," or "Illustrate—," etc.) with deliberate care, or else to ask questions of the instructor, and work out the assignment later.

HOW MAIL IS FORWARDED

Please send all study units to the Extension Department in large envelopes. Do not send your manuscripts or any other kind of mail to the Director of Extension Department or his assistants but directly to the EXTENSION DEPARTMENT, COLORADO STATE TEACHERS COLLEGE, GREELEY, COLORADO.

The reason for this request is that both the director and his assistants are frequently out of Greeley for a week or ten days at a time, and mail addressed to them must wait for their return; while mail addressed directly to the department is acted upon promptly, and in case it is necessary for the director to pass upon the point in question, this can be done later.

LIMITATIONS OF EXTENSION STUDY

ALL EXTENSION STUDENTS ARE HELD RESPONSIBLE FOR ALL FACTS STATED IN THE FOLLOWING RESTRICTIVE PARAGRAPHS

1. Credit earned by correspondence cannot apply beyond the requirements for the A. B. Degree.

2. Students in residence are not permitted to do correspondence work except as a means of completing a course which has been begun at least three months before the residence enrollment was made. In such cases the residence work must be correspondingly restricted and written permission of the Vice-President of the College must be presented to the Director of the Extension Department.

3. Not more than one-third as much work can be taken in any given school year by extension as in residence. The standard amount of residence work in any year at Colorado Teachers College is 48 quarter hours. Sixteen quarter hours is, therefore, the maximum amount of extension work allowed in any given school year. An additional four quarter hours

DETAILS RELATIVE TO THE GROUP PLAN

The University of Colorado, the University of Denver and Colorado State Teachers College have agreed upon the following conditions for granting credit:

1. Standards—The standard of the work done shall be of such type as to be acceptable for regular undergraduate credit at each of the above-mentioned institutions.
2. Instructors—No work shall be accepted for credit except that given by instructors duly approved by the institution in which credit is desired.
3. Class Period—The period of each class shall be ninety (90) minutes, requiring seventeen (17) sessions for three (3) quarter hours' credit. The minimum time requirements for a whole course shall be 1,500 minutes spent in class recitation.
4. Fees—The fees shall be \$10.00 per student per class yielding 3 quarter hours' credit.

THE NATURE OF INDIVIDUAL EXTENSION COURSES

Each Extension Course consists of (1) a set of "study units" containing *questions* such as might be asked in class, *assignments* such as might be made in residence study, and *explanatory sections* corresponding to the explanations which instructors often make in class; (2) a "materials sheet" which informs the student fully in regard to all the books and other materials needed for the course.

The Extension Department sends the student the first four study units of the course he has chosen. He studies the books as directed and works out his first recitation paper—covering the work outlined in the first study unit and sends this to the Extension Department for correction.

The date on which the paper is received in the Extension Department is recorded on the student's enrollment card and stamped on the back of the study unit, which is then passed without delay to the instructor in charge. When the instructor has read, commented on, and graded the paper he returns it to the Extension Department, where the date of its return and the grade given it are recorded on the enrollment card. The first recitation paper is then returned to the student with the fifth study unit, after which the student may mail to the Extension Department his second recitation paper, together with any additions.

HOW MANUSCRIPTS ARE TO BE PREPARED

1. Each recitation paper must show clearly on the first page the following information:
 - a. The Student's *Name* and *Address*.
 - b. The *Name* and *Number of the Course*.
 - c. The *Number of the Study Unit*.

DETAILED INSTRUCTIONS

RELATIVE TO GROUP AND INDIVIDUAL EXTENSION COURSES

The College enrolls students under the following classifications:

1. RESIDENCE—In this type of enrollment, students must successfully complete a minimum of twelve quarter hours each quarter, in order that it be counted as one of the required residence quarters.
2. PART TIME—Students may, with the consent of the College, enroll for any number of hours less than twelve.
3. EXTRAMURAL—In this type of enrollment, students are enrolled in classes not taught upon the campus, but taught by faculty members.
4. EXTENSION—These students are enrolled in classes taught by extension instructors duly approved by the College.
5. CORRESPONDENCE—These students are enrolled in correspondence courses.

MINIMUM RESIDENCE REQUIREMENT

The College does not grant any certificate or degree for less than three full quarters of resident study, during which time the student must have earned at least forty-eight quarter-hours of credit. If the student's first graduation is with the Bachelor of Arts degree, only three quarters are required. Students who have already taken the Life Certificate (two-year course) must spend in residence at least two additional quarters for the Bachelor of Arts degree. Correspondence students when enrolling in residence should apply to the extension department for an extension of time which will permit the completion of correspondence courses at a time when the student is not enrolled in residence courses. Students in residence are not permitted to enroll in correspondence courses during vacations except during the vacation between the end of the summer quarter and the beginning of the fall quarter. Extra-mural classes and part time enrollment classes conducted by members of the College faculty are considered as resident work and may be counted as such to the extent of one quarter for the Life Certificate (two-year course) and one of the two resident quarters required beyond that for the Bachelor of Arts degree.

TWO DISTINCT TYPES

There are two distinct ways in which extension work can be carried on. One is known as the *group plan*, and the other as the *individual plan*.

The former is intended to meet the needs of teachers who can gather in sufficient numbers to justify (twenty is the minimum number in all cases where a college faculty member does the teaching) the organization of a class and the selection of an instructor.

The latter is planned for persons who are too far removed from the larger centers of population to make a cooperative scheme feasible.

STATE TEACHERS COLLEGE

2. Nominee's Personal Record

A brief summary of all the educational institutions attended, previous teaching experience, and an accurate list of references.

3. Professional and Educational Record

This sheet enables a superintendent to tell at a glance the field for which the nominee is best prepared.

4. Copies of Original Recommendations

The Placement Bureau assembles confidential reports concerning each graduate. The reports are based upon records made in the class room and training school. If the graduate has had experience, an experience record is obtained. Copies of these confidential reports are sent to school officials whenever the bureau nominates for a position.

FIELD OF OPERATION

Colorado Teachers College intensively serves Colorado. During the past few years, however, students from all parts of the United States have knocked at our gates for admission. They have been admitted and thus became loyal boosters of Teachers College. Upon returning to their home states, they have continued to boost until now we receive calls for teachers from every state in the Union. During the placement season of 1927 over five hundred graduates were placed in desirable positions. These positions were in 23 states of the Union. Three of our graduates secured positions outside the United States.

POSITIONS FOR WHICH WE NOMINATE

Rural	Secretaries	Music
Tests and Measurement	Normal Training	Writing
Physical Training	Critic Teachers	Printing
Home Economics	Agriculture	Librarian
Sub-Normal	Grades	High School
Principalships	Drawing	Athletics
Superintendencies	Kindergarten	Colleges
Commercial	Normal Schools	

Teachers College recognizes teaching as a fine art. Our students are asked to select a field and work with a definite end in mind. However, there are some things which all teachers and school administrators must know to effectively take their place in the profession. Our graduates are well grounded in modern psychology and current educational thought. The spirit of cooperation and scientific investigation is instilled from the beginning courses until graduation. School officials seeking teachers need have no fear concerning the educational training of our graduates.

Teachers College believes the work of the Placement Bureau is the culmination of the state's effort to train teachers. The bureau is planned to secure the best possible teacher for every boy and girl.

GUIDING PRINCIPLES IN MAKING NOMINATIONS

1. The rights of the child are paramount.
2. Testimonials are to be truthful and discriminating.
3. As far as is humanly possible, the bureau will endeavor to place the right individual in the right position.
4. In nearly all cases only one candidate will be nominated for any particular vacancy. This does not mean, however, that we are not pushing the nominee for other positions at the same time.
5. When, however, superintendents and boards of education come to Colorado State Teachers College in quest of teachers, they will be permitted to examine the records of any or all available individuals and interview any person in whom they may be interested to the intent that questions of scholarship, teaching power, and character may be decided first hand by those who are responsible to the public for the hiring of teachers.
6. In order to be of maximum service, the bureau will evaluate in advance the graduates of the College, members of the Alumni Association and such other educators as the spirit of justice and fair-play make it necessary to consider in the placement of teachers.
7. The bureau will not confine itself to graduates of Teachers College, but in cases where two candidates seem equally strong, as measured in terms of scholarship, experience and character, preference will be given to graduates of Colorado State Teachers College.
8. When a nomination has been made to a particular superintendent or board of education and the said school authorities become interested in some other candidate through their own initiative or the initiative of the said candidate the bureau will then make, upon request of said school officials, a statement relative to the individual in whom the school authorities have become interested.
9. The Placement Bureau will set itself the task of studying diligently the needs of the schools of Colorado and the Rocky Mountain West to the intent that nominations may the more perfectly meet local school needs.
10. The bureau pledges, itself to act with no selfish, mercenary, or personal motives, and to do in each case as best it can the thing which will prove most helpful to the schools and most just to the teachers.

CONFIDENTIAL INFORMATION ACCOMPANYING NOMINATIONS

1. A digest of Qualifications

This is the Bureau's estimate based upon scholarship, personality, experience, and general college activities.

without undue hardship and loss, but to organize a Placement Bureau by means of which those teachers who have fulfilled the professional requirements shall be assisted to find the type of position which will enable them to be most helpful in the organization and development of community life.

Both responsibilities are being met in a spirit of utmost devotion and consecration. By means of the widespread organization of group extension courses and the development of individual extension courses that meet the needs of every teacher, no matter how far he may be removed from the centers of learning, it is possible for every teacher in the state (who held at the time the new Certification Law was enacted a first or second grade certificate) to meet the requirements of the law without giving up his work as a teacher for a single year and without going to summer school more than one year in three.

To meet the second responsibility, the College has organized a Placement Bureau which is to serve the graduates of the College and the members of the Alumni Association in securing the kind of teaching positions for which they have made special preparation.

TEACHERS PLACEMENT BUREAU

For several years Colorado State Teachers College has endeavored to place her graduates. Beginning in January, 1924, an organized effort was begun to serve to a greater degree both school officials seeking teachers and graduates seeking positions.

Superintendents coming to Greeley in search of teachers will be given every consideration in helping them to get in touch with teachers fitting their exact needs. The personnel of the Placement Bureau will never be too busy to give all school officials every assistance in filling their vacancies.

No one at Colorado State Teachers College is better acquainted with the school conditions in Colorado than the personnel of the Extension Department. In organizing and promoting College extension service, the director of the department has traveled the entire state again and again. He has visited a large majority of the schools. School officials in the entire Rocky Mountain region know of the extension service of Colorado State Teachers College. Because of this wide acquaintance and thorough knowledge of the state, the Placement Bureau logically becomes an integral part of the extension service.

Teachers College is vitally interested in the promotion and adjustment of her alumni. To this end the Placement Bureau will endeavor to keep in close relationship with the entire alumni. The work of each graduate will be followed. An honest endeavor will be made to keep our graduates in positions where both service to the community and growth of the teacher are possible. To this end the bureau invites communication from alumni. The service we can render them will depend to a large degree upon the cooperation of all concerned.

With proper emphasis upon professional training, the educational situation changes from one in which many poorly prepared individuals are competing for each school vacancy and by their very eagerness to secure a position and to work for whatever they can get, bearing down the average rate of compensation, to one in which boards of education must make their selections from a limited number of thoroughly trained and highly efficient teachers, and because they are not so numerous and because they cannot be had without just compensation are compelled to offer a salary that makes it possible for teachers to be happy and efficient as leaders in community life.

THE COLORADO CERTIFICATION LAW

The Colorado Certification Law has been looked upon by some educators as an act unfriendly to teachers, but its sequence will prove to be their greatest boon and blessing.

When the faulty examination method of selecting teachers has been forever abandoned in the good state of Colorado, then, a large number of folk who are only eighth grade graduates, or possess at most a year or two of high school training, will be eliminated from the field and individuals who have devoted a number of years in preparation for the all-important work of teaching will come into a vocation of vastly augmented dignity and honor.

When men who have tried all sorts of occupations without success can not, after a few weeks of cramming, drift into the business of teaching, then the company of those who teach will be composed of men and women who definitely and with conscientious purpose have prepared themselves for the finest of all arts—the art of moulding human life into forms of beauty and truth and righteousness.

When teaching is no longer a lowly stepping stone to all of the other professions and men cease to teach in order to earn money to become lawyers, physicians, and engineers, then it will come into its own as a calling so important and a business so exalted that the safety of democracy, the well-being of humanity, and the progress of civilization itself will depend upon the way in which it is done and the character of the men and women engaged in it.

The new law means that training, thorough and specific, is to be the criterion for selecting teachers. It means that teaching is to attain to the dignity, power, and honor of a noble profession. It means that teachers are to receive compensation commensurate with the importance of the work which they do and that teachers are to live in comfort and to be happy and well and efficient because of their improved social status. And it means, above all, that the child, the neglected country child, the foreign-born child, yes, every child, is to have a trained teacher, that is, a man or woman with reach of intellect, breadth of sympathy, and power of will, characteristics that come only through training.

Teachers College is not only responsible under the new order of things for making it possible for every teacher to meet the new conditions

more non-resident students than resident. There has been a corresponding advance in the quality of those taking extension work and the excellence of the courses offered.

THE SIGNIFICANCE OF PREPAREDNESS

Success is always measured in terms of preparation. There are always ready places for ready men. The individual who would make the most of his native gifts is not under the necessity of creating opportunities, but merely the obligation of being tremendously prepared for opportunities when they come.

Every great life bears conclusive and irrevocable evidence of this truth. Preparation, therefore, becomes the best of all investments and the surest guarantee of a useful and happy career.

The lawyer who knows the law does not lack clients. The physician who has mastered the science of medicine is not without patients, and the teacher who can direct life into sane and healthful channels, develop in her students thought power, and lay the foundations of character, is needed to the ends of the earth.

Many of the largest and most progressive school systems in America, now, make compensation depend upon preparation. This, in fact, is the tendency everywhere manifest and indicates that the time is not far distant when all school authorities will refuse to employ those who have not made special and thorough preparation for that calling which has been characterized as the "chief business of a republic."

THE PROFESSIONALIZATION OF TEACHING

Shall teaching become a profession? Some who would answer this question in the affirmative seek to bring about the added increment of dignity and power through the instrumentality of minimum wage laws.

The motive of those who advocate such laws is right, but the method is wrong.

In the presence of a vast number of unemployed men, there is no economic law that will keep wages up, and when laborers are scarce there is no way in which wages can be kept down.

As long as eighth grade graduates or individuals with only a year or two of high school training can, by means of brief periods of intensive study, become teachers, teaching can never become a profession. Under these conditions wages will inevitably be low, educational standards inadequate, and the living conditions of those who teach not such as to encourage self-respect and professional efficiency, or to inspire confidence in the leadership of those upon whom society places the responsibility for the physical, mental, and ethical training of its youth.

Professional training is the indispensable requirement, without which no type of work can ever attain to the dignity and honor of a true profession. With it, every form of labor becomes permeated with the spirit and potency of scientific effort. Without it, all forms of work, devoid of the light and inspiration of applied principle and basic law, become drudgery and are characterized by mediocrity.