

1901-02

The New York State School  
Of Clay-Working and Ceramics



Alfred, N. Y.

## BOARD OF MANAGERS

(Appointed annually by Trustees of Alfred University)

BOOTHIE C. DAVIS, *President.*

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## CALENDAR

### FIRST SEMESTER, 1901-1902

		1901	
Registration, Entrance Examinations,	Tuesday,	Sept.	17
Instruction begins,	Wednesday Morning,	Sept.	18
<b>Election Day.</b>	<b>Tuesday,</b>	<b>Nov.</b>	<b>5</b>
Thanksgiving recess begins,	Wednesday evening,	Nov.	27
THANKSGIVING RECESS.			
Instruction resumed,	Monday morning,	Dec.	2
Holiday Recess begins,	Thursday evening,	Dec.	19
HOLIDAY RECESS.			

		1902	
Instruction resumed,	Tuesday morning,	Jan.	7
Term examinations begin,	Monday,	Jan.	27
Examinations end, Semester ends,	Friday,	Jan.	31
MID-YEAR RECESS.			

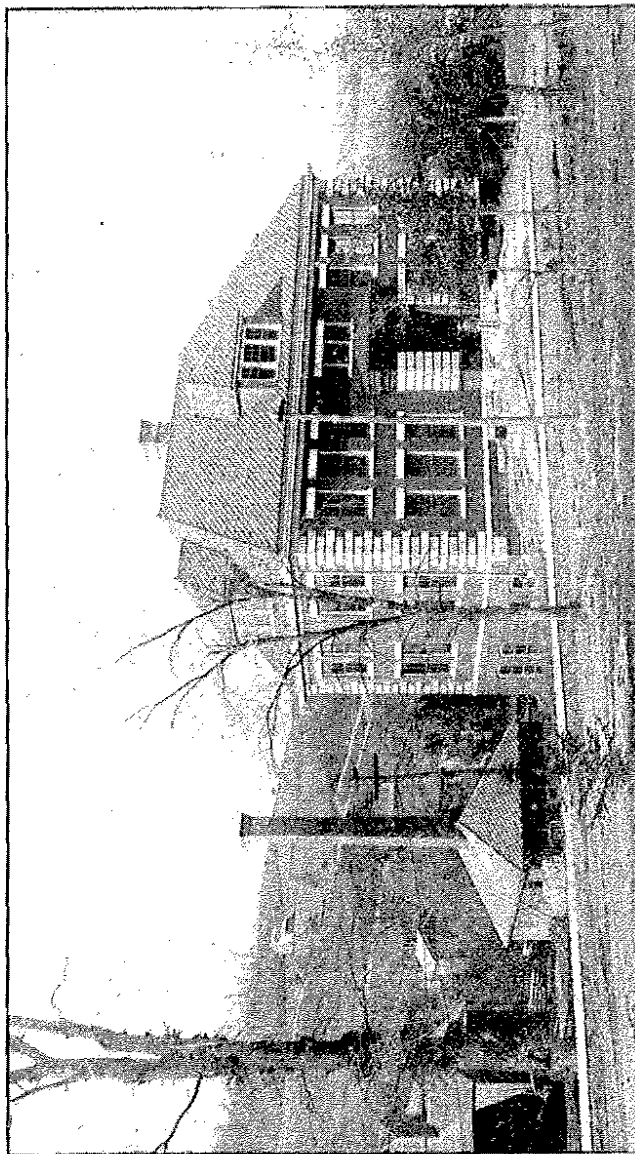
### SECOND SEMESTER

Instruction begins,	Wednesday morning,	Feb.	5
<b>Lincoln's Birthday.</b>	<b>Wednesday,</b>	<b>Feb.</b>	<b>12</b>
Spring Recess begins,	Wednesday evening,	April	9
SPRING RECESS.			
Instruction resumed,	Wednesday morning,	April	10
<b>Memorial Day.</b>	<b>Friday,</b>	<b>May</b>	<b>30</b>
Examinations begin,	Monday,	June	16
Examinations end,	Friday,	June	20
Degrees conferred at University Commencement	Thursday,	June	26
SUMMER VACATION.			

### FIRST SEMESTER, 1902-1903

Registration, Entrance Examinations,	Tuesday,	Sept.	16
Instruction begins,	Wednesday morning,	Sept.	17
<b>Election Day.</b>	<b>Tuesday,</b>	<b>Nov.</b>	<b>4</b>
Thanksgiving Recess begins,	Wednesday evening,	Nov.	26
THANKSGIVING RECESS.			
Instruction resumed,	Monday morning,	Dec.	1
Holiday Recess begins,	Thursday evening,	Dec.	18
HOLIDAY RECESS.			

		1903	
Instruction resumed,	Tuesday,	Jan.	6
Term Examinations begin,	Monday,	Jan.	26
Term Examinations end,	Friday,	Jan.	30



THE NEW YORK STATE SCHOOL OF CLAY-WORKING AND CERAMICS

## FACULTY

CHARLES F. BINNS, M. S. C., Director.

Professor of Ceramic Technology.

Superintendent Royal Porcelain Works, Worcester, England, 1897; Principal Technical School, Trenton, N. J., 1897-1900; Superintendent Ceramic Art Co., Trenton, N. J., 1898-1899; Vice President 1900, President 1901, American Ceramic Society.

ALPHEUS B. KENYON, M. S.,

Professor of Mathematics.

ALBERT R. CRANDALL, Ph. D.,

Professor of Geology and Microscopy.

OTTO P. FAIRFIELD, B. A.,

Professor of English.

EDWARD S. BABCOCK, M. S.,

Professor of Chemistry and Physics.

LILLIE W. TOURTELLOTTÉ,

Instructor in Graphics and Decorative Art.

CATHERINE F. CROCKER,

Instructor in Modern Languages.

GEORGE A. MAIN,

LINTON B. CRANDALL,

Assistants in Industrial Mechanics.

W. ALLEN BARBER,

JUNIUS F. KREHBIEL,

Assistants in Technical Laboratories.



DESIGNING

## THE NEW YORK STATE SCHOOL OF CLAY-WORKING AND CERAMICS

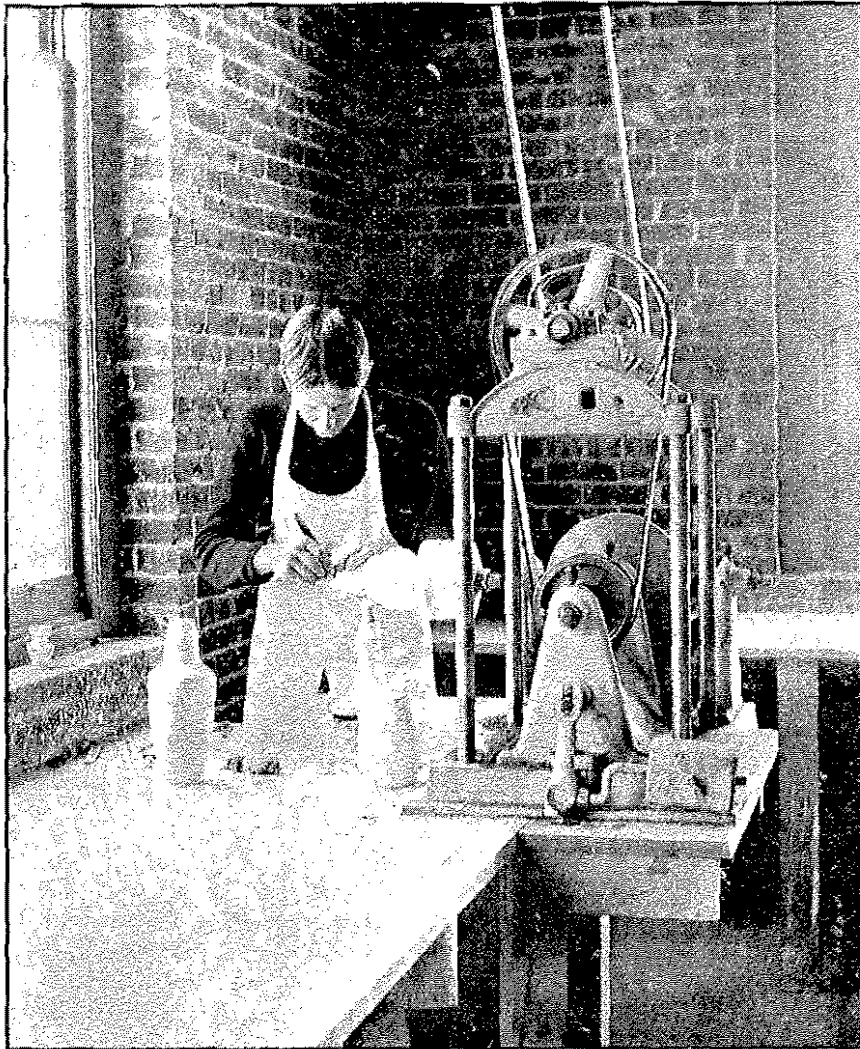
This school was established by chapter 383, Laws of New York State, 1900, which provides for the construction and equipment of a suitable building and for the maintenance of the school.

The demand for the school arose from the fact that the great utilitarian field occupied by clay wares is attracting public notice on every side. Clay in one form or another constitutes the great mass of modern fire-proof building material, and the larger part of general constructive material is derived from the same source.

The wisdom of locating the school at an established seat of learning and in close proximity to clay-working industries must be apparent to all.

No branch of study can stand alone. The student of clay-working should be educated in collateral departments of science and art. For this work Alfred University offers splendid advantages. Laboratories of chemistry and physics, libraries, museums of geology and natural history, workshops for manual training, and all the departments of liberal culture are available, so that the many and varied requirements of a complete education are fully met.

It is the purpose of the school to give a practical training in the technology of clay-working, neglecting neither the science nor the art. Attention will be given to the improvement of methods of manufacture and the reduction of cost to the end that the resources of the State may be fully developed, and that within its borders may be manufactured the clay-wares both coarse and fine now brought from other states or countries at an enormous annual cost.



TURNING THE FORMS

## BUILDING AND EQUIPMENT

The building of the New York State School of Clay-Working and Ceramics has been especially designed and is located on land purchased for the purpose and deeded to the People of the State of New York. It is built of red brick and terra-cotta with grey trimmings and roofed with brown tile. It has a floor space of about thirteen thousand square feet, and a frontage of seventy-five feet.

In the lower story are located the heavy machinery for the manufacture of brick, tile, hollow blocks and roofing tile, the slip-making plant, cylinders for glaze preparation, and a workshop fitted with modern appliances for pottery and porcelain manufacture. There are also rooms for mold making and drying, and a damp cellar.

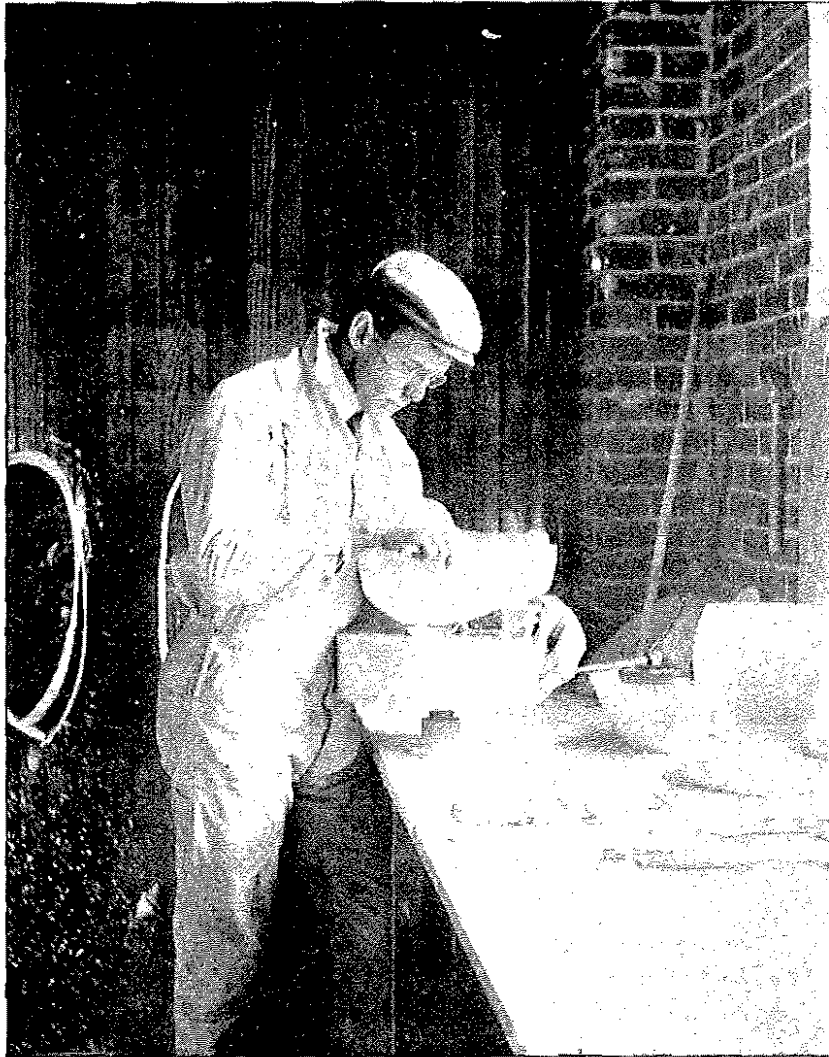
The motive power is a 36 h. p. Otto gas engine, natural gas being available.

On the principal floor are located the executive offices, rooms for the Director, laboratories, and a class room. Here the experimental work is done.

The Technical laboratory is provided with small blungers and mills for working clay samples, small gas furnaces for fretting and fusing, and all the necessary apparatus for the physical testing of clay.

Ample provision has been made for the chemical testing of materials.

The art department of the school is located on the second floor. A fine studio is arranged, provided with the facilities necessary for the practice of mechanical drawing and free-hand drawing and applied design. Adjoining this is the modeling room where, in addition to ornamental work in clay, the production of pure form will

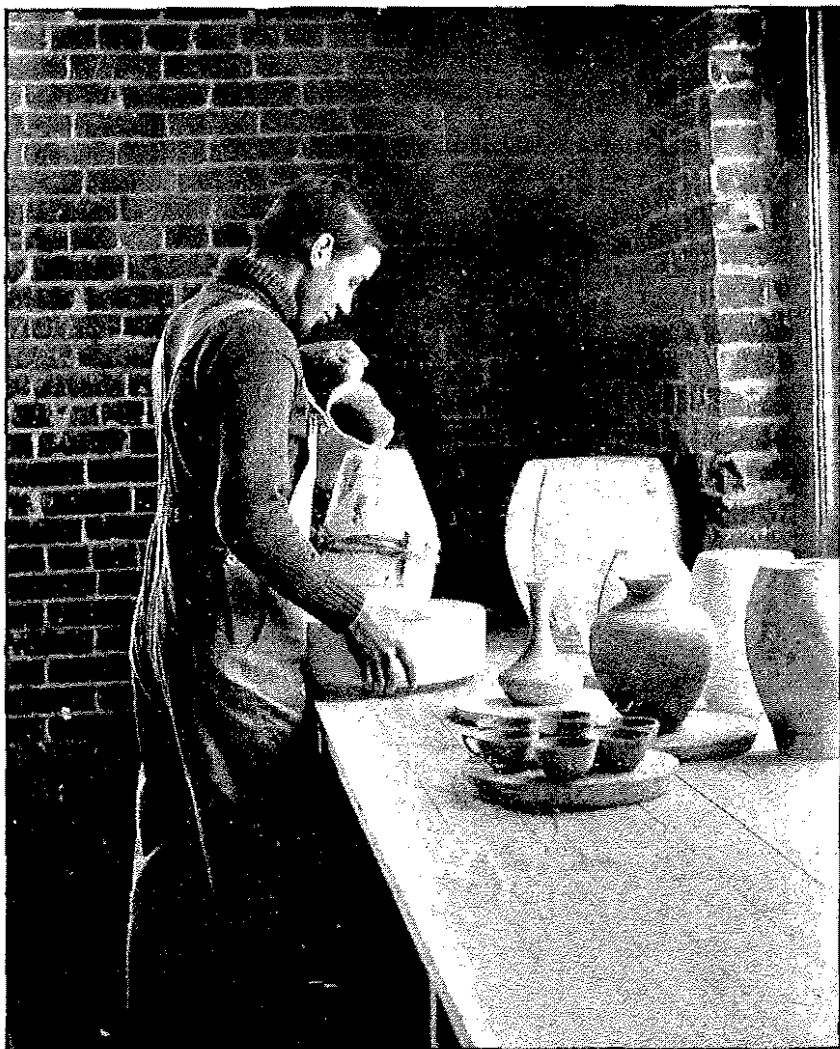


MOLD MAKING

be studied. To facilitate this work horizontal and vertical lathes are provided so that the student may be enabled to realize the ideas laid down upon paper. A large space is provided for a ceramic museum in which examples of clay work of every type may be studied.

Adjacent to the main building is the Kiln House, within which are two kilns; one for firing common wares at a low temperature, the other for firing fine wares at a high temperature.

In addition to this splendid equipment it is worthy of note that within a short distance of the school are located two plants in which are manufactured bricks by both the wet and dry processes, several styles of roofing tile, and quarries for floors and roofs. Here may be seen the actual working of manufacturing plants, and the use of at least three kinds of kilns, including a continuous kiln.



CASTING

## TUITION

Students who are residents of New York State are exempt from payment of tuition by the provisions of the act establishing the school.

To students from other states, an annual tuition fee of \$50 for the technical courses and \$40 for the Ceramic Art course will be charged.

Small laboratory fees to cover cost of materials and breakage are also required.

## COURSES OFFERED

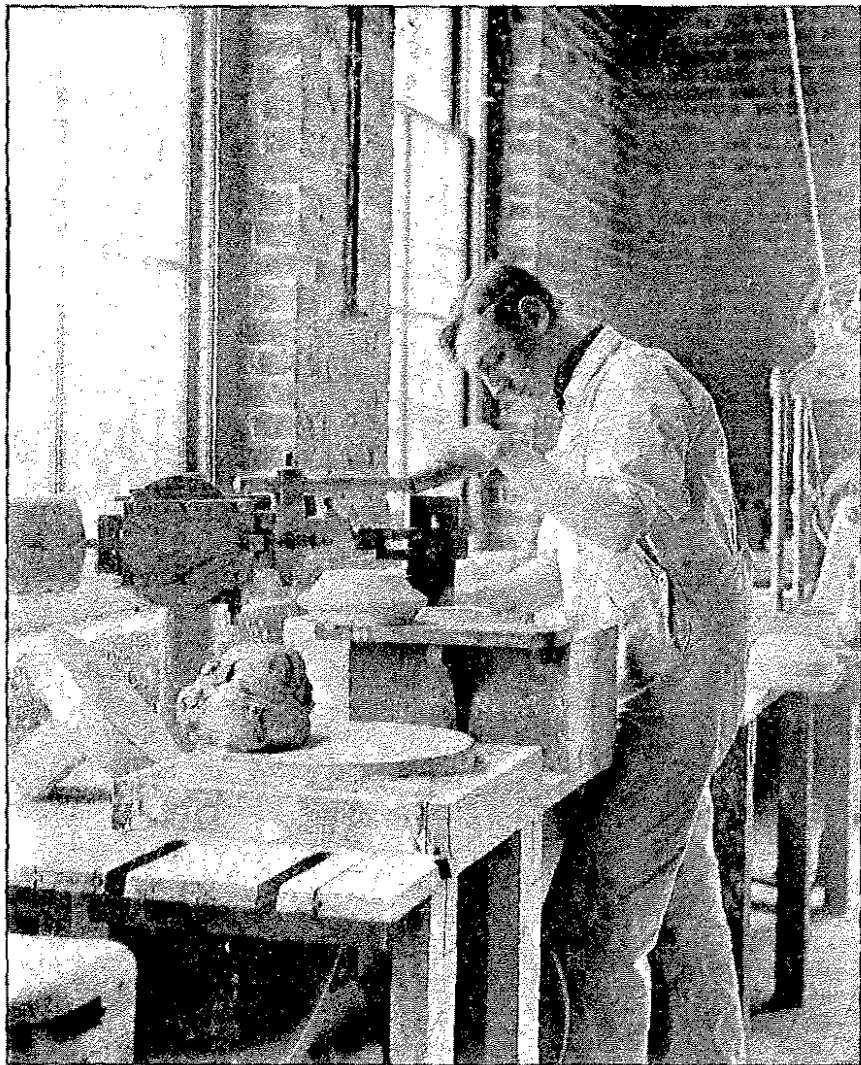
The course of study which leads to a degree extends over a period of four years, and embraces, together with the technology of clay-working, such subjects as are equivalent to the usual college course.

A short course of two years is also offered, which is specially designed to assist those having some practical experience in clay-working and who desire to supplement their knowledge with scientific method and research.

In the department of Ceramic Art a course is offered which is intended to qualify students as designers or artistic clay workers. For details see page 15.

Courses in special work may also be taken according to the time available.





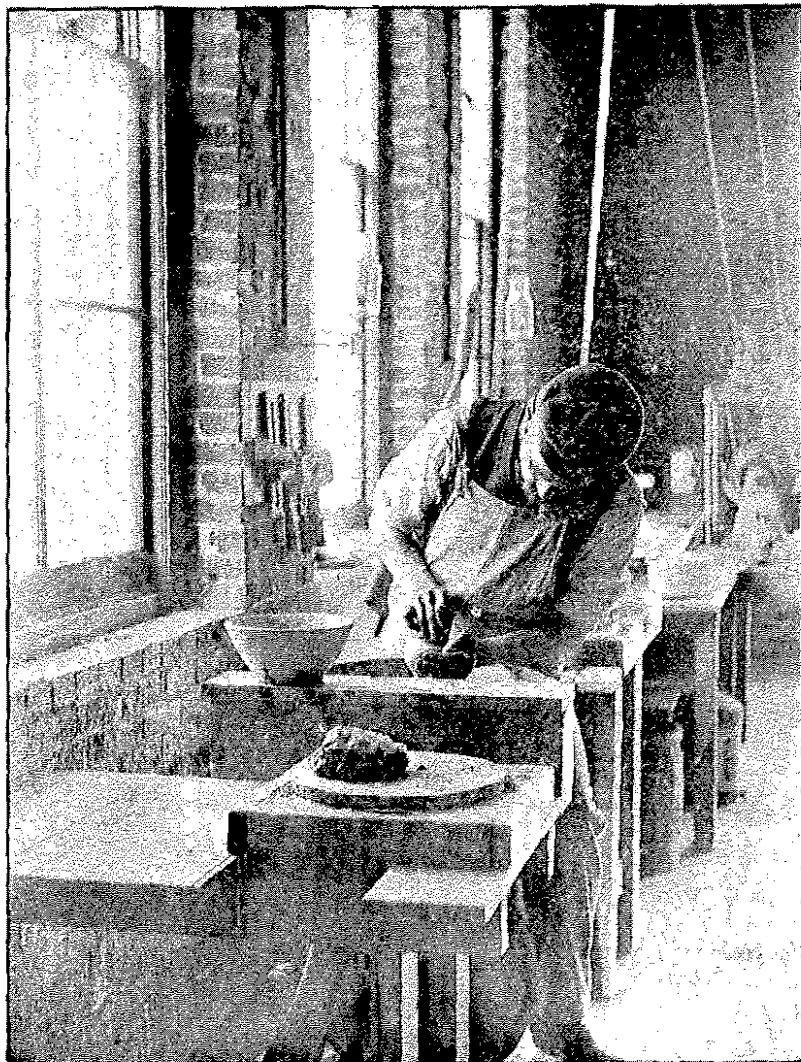
JIGGING

### BENEFITS TO BE DERIVED

The student who successfully pursues the course of instruction provided in this school will be able to take up the practical work of manufacturing clay wares. He will be able to lay out his plans, place his machinery, design his goods, shape his wares, and carry the whole matter to a successful conclusion.

It is difficult to conceive of any more attractive work than the solution of the problems in chemistry, physics, and art presented to the clay-worker. Furthermore, the field for skilled and educated men in this line is practically vacant. There is no calling in industrial work offering greater opportunities than are now presented to the educated ceramist.





THE POTTER'S WHEEL.

## ENTRANCE REQUIREMENTS

### [Shorter Courses]

Candidates for admission to the two years' course must be at least 16 years of age and of good moral character. They must possess the ability to read and write good English and be proficient in arithmetic. Some knowledge of algebra, plane geometry and elementary physics is essential.

Candidates for special courses may be admitted at the discretion of the faculty upon giving evidence of earnest purpose and of ability to assimilate the instruction.

### [Four Years' Course]

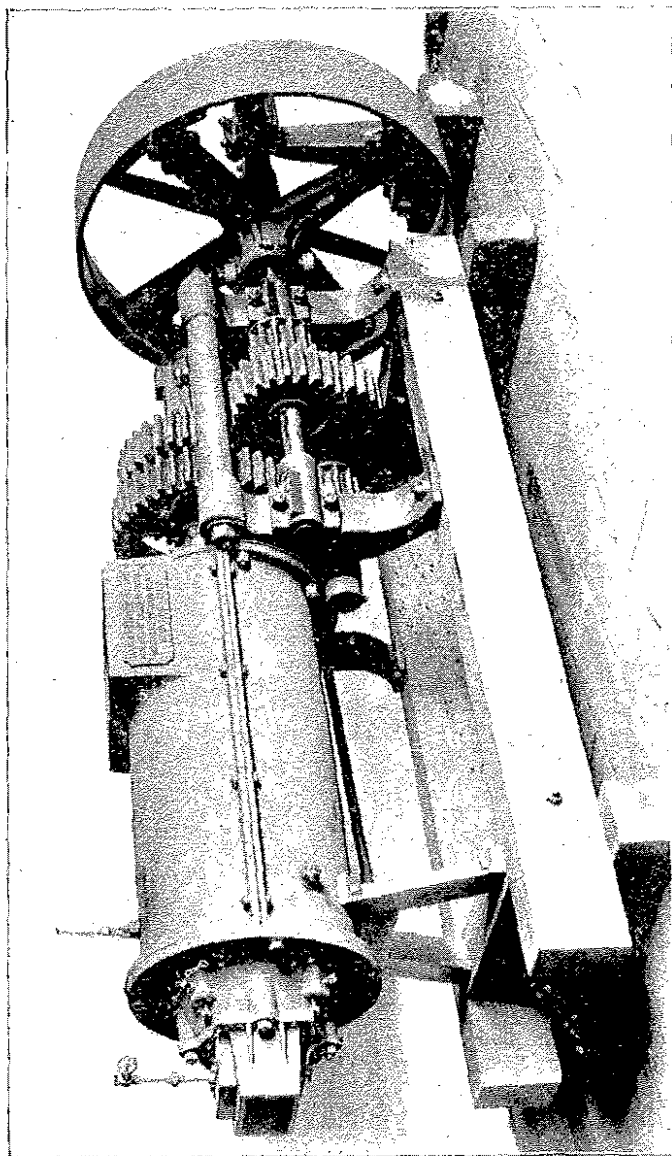
Candidates for admission to the four years' course must be at least fifteen years of age and of good moral character.

The New York State Regents' Academic Diploma is adopted as a general basis for estimating a preparatory course. It is assumed to embrace a training equivalent to a four years' course in the average Preparatory or High School.

The unit of measure adopted in preparatory work is the Regents' "count;" twelve of these represent a year's study in three subjects, and forty-eight are required for the Academic Diploma. One subject pursued a year is equivalent to four counts. The required counts are as follows:

English	-	-	-	-	-	8 counts.
Mathematics	-	-	-	-	-	8 "
Foreign Languages	-	-	-	-	-	12 "
Science	-	-	-	-	-	8 "
Drawing	-	-	-	-	-	2 "
Elective	-	-	-	-	-	10 "
Total	-	-	-	-	-	48

Admission is gained either on certificate or on examination, as follows:



CENTENNIAL BRICK MACHINE—American Clay Working Machinery Co.

## ADMISSION ON CERTIFICATE

**REGENTS' CREDENTIALS.** The credentials of the University of the State of New York are accepted instead of an examination in the subjects required for admission, so far as they cover these requirements. [For subjects see *Admission on Examination.*]

**PRINCIPAL'S CERTIFICATE.** Certificates are also received from Principals of Preparatory or High Schools, outside of New York State, provided such schools are known to the Faculty for thoroughness of instruction. Such certificate must specify, in connection with each subject, the extent to which it has been pursued, by giving the text-book used, the method of instruction, the amount of time given to it, the date of the final examination, the degree of the applicant's proficiency, and must clearly show that the student has met the requirements in every detail. The State School furnishes blank forms for such certificates upon application of principals of approved Schools.

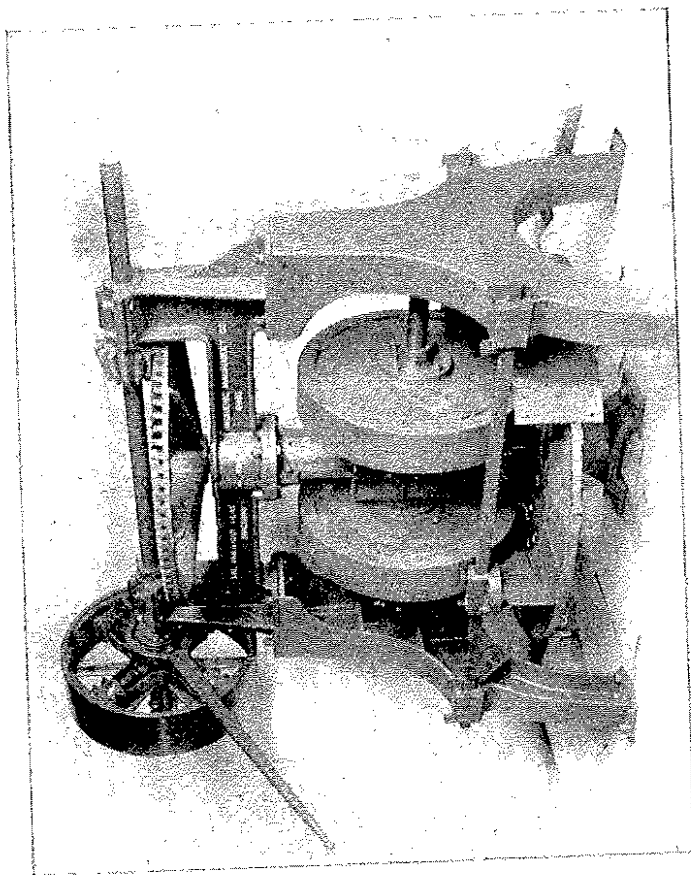
Principals of Preparatory Schools who desire to have their students admitted on certificate are invited to correspond with the Director.

## ADMISSION ON EXAMINATION

Candidates who fail to present satisfactory certificates must pass a written examination in the required subjects. Examinations in all subjects required for admission are held at Alfred at the beginning of each year. Candidates must report at the Director's office and obtain permits for examination. The results of the examination may be obtained from the Director.

The subjects are as follows:

**ENGLISH COMPOSITION AND RHETORIC.** 4 counts. The candidate must be familiar with Elementary Rhetoric, both as a science and as an art. The study can be best pursued in connection with the study of Literature, from which may be obtained material for analysis and subjects for essays.



DRY PAK.—American Clay Working Machinery Co.

At the examination the candidate will be expected to correct and rewrite specimens of bad English, and to write an original essay of two hundred and fifty or three hundred words, on one of several subjects announced at the time of the examination. The subjects for 1902 will be taken from the following books: Hawthorne's *Twice Told Tales*; Addison's *Sir Roger de Coverly Papers*.

ENGLISH READING. 4 counts.

I. The candidate will be required to write a paragraph or two on each of several topics chosen by him from a considerable number set on the examination paper. The topics will be drawn from the following works:

1901 and 1902: Pope's *Homer's Iliad*; Addison's *The De Coverley Papers*; Coleridge's *The Ancient Mariner*; Goldsmith's *The Vicar of Wakefield*; George Eliot's *Silas Marner*; Tompkinson's *The Princess*; Shakespeare's *The Merchant of Venice*; Scott's *Ivanhoe*.

The candidate is expected to read intelligently all the books prescribed. He should read them as he reads other books. He is not expected to know them minutely, but to have freshly in mind their most important parts. In every case the Examiner will regard knowledge of the book as less important than ability to write English.

II. A certain number of books will be prescribed for careful study. This part of the examination will be upon subject-matter, literary form, and logical structure, and will also test the candidate's ability to express his knowledge with clearness and accuracy. The books prescribed for this part of the examination are as follows:

1901 and 1902: Shakespeare's *Macbeth*; Burke's *Conciliation with American Colonies*; Macaulay's *Essays on Milton and Addison*; Milton's *Minor Poems*.

MATHEMATICS. 8 counts. Wentworth's *New School Algebra*, or its equivalent, including Fundamental Operations, Factoring, Divisors, Multiples, Fractions, Problems, Involution, Evolution, Theory of Exponents, Radicals, Quadratics, Ratio and Proportion.

Wentworth's Revised Plane Geometry, five books or their equivalent, including the Straight Line, Angle, Circle, Proportion, Similarity, and Areas.

FOREIGN LANGUAGES. 16 counts. Any two or more languages may be offered.

When German or French is offered, the candidate will be expected to have a practical knowledge of pronunciation, as well as a thorough mastery of grammatical forms and syntax, and to possess a familiarity with the literature in proportion to the amount of work offered.

SCIENCE. 8 counts. Physiology - Martin's Human Body, Briefer Course or its equivalent.

Physical Geography - Houston's work or equivalent.

Physics - Avery's work or its equivalent.

Chemistry, Botany, and other Sciences may be offered.

DRAWING. 2 counts. The elements of free hand drawing equivalent to a twenty weeks' course.

ELECTIVES. 10 counts. In addition to the above subjects the candidate must elect and offer other Preparatory or High School studies equivalent to 10 counts.

\*NOTE - Candidates for admission may, in exceptional cases, offer equivalent as substitutes for the required studies, subject to the approval of the Director.

## SENIOR THESIS

There is required of each candidate for a degree a thesis, for which credit is given, two hours in the first semester and three in the second semester of the Senior year. The title of the thesis must be chosen in the field of Ceramics not later than November 1, and must be approved by the Director. The thesis shall embody the results of actual independent research, and must be submitted for approval not later than June 1. A type-written copy must be deposited with the Director.

## DEGREES

BACHELOR'S DEGREE. Alfred University will confer upon students who satisfactorily complete the full course the degree of Bachelor of Science in Ceramics.

## COURSES OF STUDY

### REQUIRED STUDIES IN FOUR YEARS' COURSE.

Arabic numerals indicate the number of exercises per week. Roman numerals indicate the semester in which the courses will be given. All courses extend through the year except where marked I or II.

#### FRESHMAN YEAR.

Rhetoric, 2  
Geometry, 2  
Chemistry, 3  
German, 3  
Mechanics, 2  
Graphics, 2  
Ethics, 1

#### SOPHOMORE YEAR.

English Literature, 2  
I Mathematics, 3  
Chemistry, 2  
German, 2  
Physics, 3  
Graphics, 2  
II Ceramics, 3 [theory]  
Ceramics, 2 [laboratory]

#### JUNIOR YEAR.

Mathematics, 3  
Graphics, 2  
Mechanics, 2  
Geology, 3  
I Microscopy, 2  
II Ceramics, 2 [theory]  
Ceramics, 3 [laboratory]

#### SENIOR YEAR.

Graphics, 2  
Geology, 2 [economic]  
Ceramics, 10  
Thesis, 3

### REQUIRED STUDIES IN TWO YEARS' COURSE.

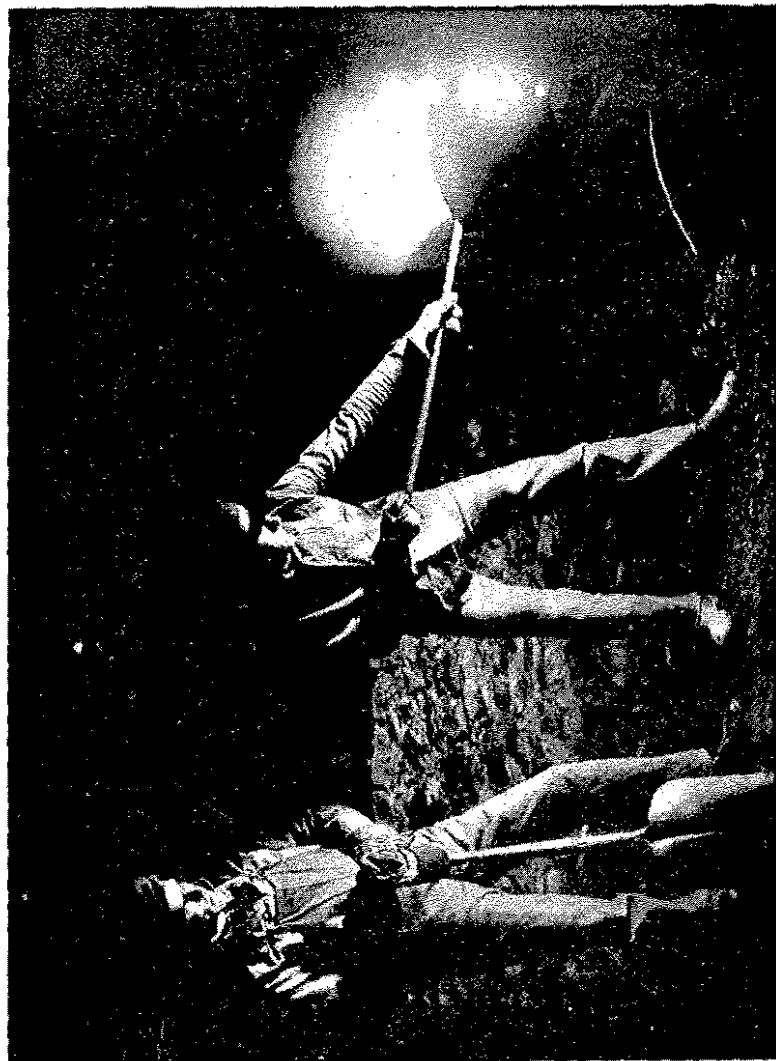
#### FIRST YEAR.

Geometry, 2  
Mechanics, 2  
Graphics, 2  
Chemistry, 3  
Ceramics, 4  
Ethics, 1

#### SECOND YEAR.

Graphics, 2  
Geology, 2  
Chemistry, 2  
Ceramics, 10

For detailed description of the courses required in English, Mathematics, Chemistry, Physics, Mechanics, Geology, German, Ethics, and Microscopy, reference may be had to the Annual Catalogue of Alfred University, which will be sent on application.

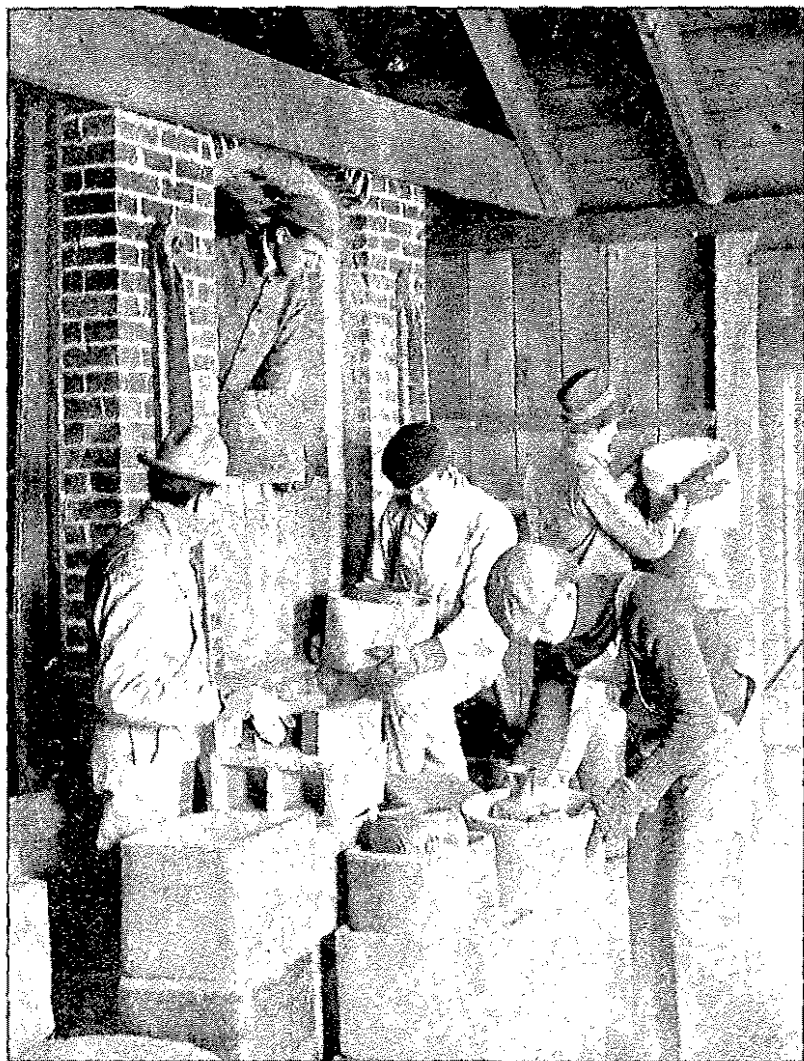


FIRING A KILN

## DEPARTMENT OF TECHNOLOGY

PROFESSOR BINNS.

1. A course of lectures, with recitations, on the nature and properties of clay; their origin and composition. The bearing of chemistry on the ceramic industries. Impurities of clays. The nature and requirements of glazes. History of Ceramics. Sophomore year, three hours.
  2. A course of lectures, with recitations, on the requirements of clays and other substances for the production of fictile wares. Methods of manufacture of brick, tile and sewer pipe. Glazes and glazing. History of Ceramics. Junior year, two hours.
  3. A course of lectures, with recitations, on the higher products of the potter's art. White wares and faience. Earthenware, Sanitary ware, Once fired ware. Fire-proof and Refractory ware. Hard and Soft Porcelain. Ceramic colors. History of Ceramics. Senior year, two hours.
  4. A course of laboratory demonstration and practice. The testing of clays, effect of impurities. Elementary kiln work. Sophomore year, two hours.
  5. A course of laboratory demonstration and practice. The blending of clays. Effect of admixtures. Manufacture of brick, tile, sewer pipe, hollow ware and terra-cotta. Preparation and firing of glazes. Junior year, three hours.
  6. Laboratory and workshop practice in continuation of course 5. The manufacture, glazing and decoration of finer wares. Kiln construction and pyrometry. Students will be encouraged to specialize. Senior year, ten hours.
- Students who elect to enter the short course will omit courses 3 and 6 unless their work is to embrace white wares in which case they will omit courses 2 and 5.



DRAWING A KILN

## DEPARTMENT OF CLAY TESTING

PROFESSOR BINNS.

PROFESSOR BABCOCK.

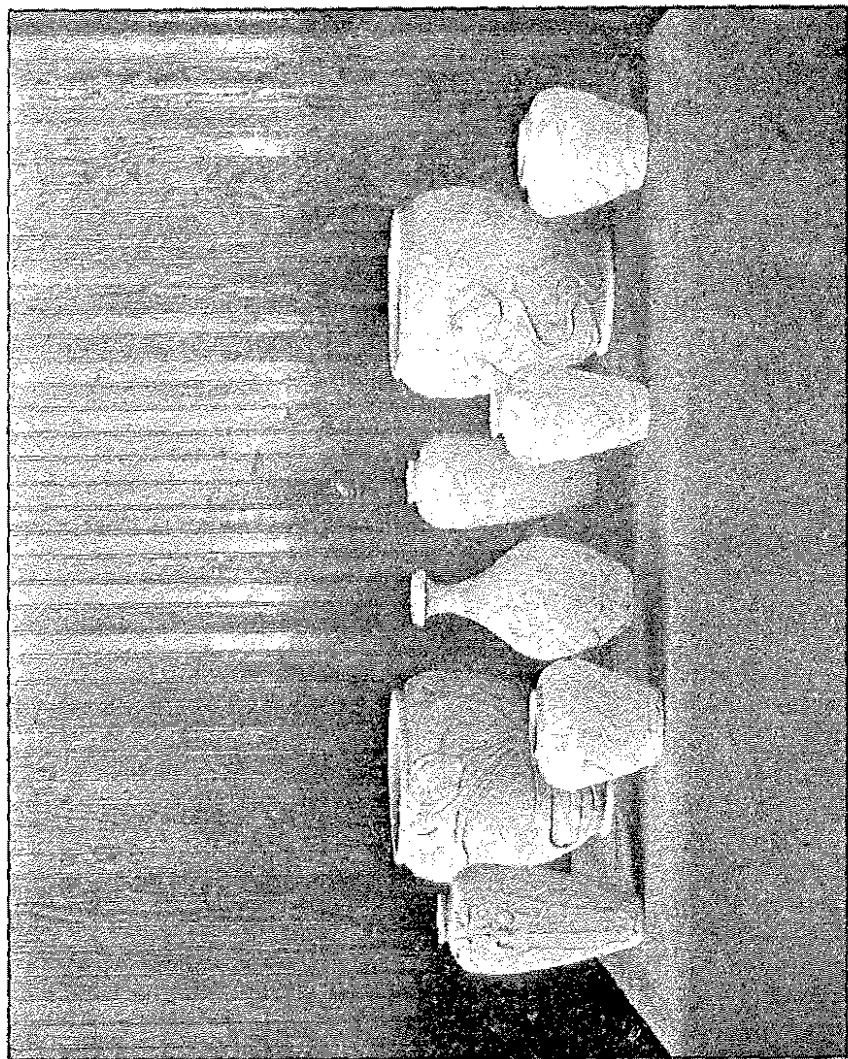
The State School of Ceramics is specially fitted and the experts in charge are exceptionally well qualified for the professional examination and testing of clays for economic purposes. Such clays may be classified under the following heads:

- (a) Kaolin, white burning residual clay.
- (b) Kaolin, white burning, washed for market, used in the manufacture of pottery, porcelain and paper.
- (c) Ball clay, white or cream burning, sedimentary clay of high plasticity, used in pottery manufacture.
- (d) Stone ware clay, gray or cream burning, more or less sandy in character, used in stoneware manufacture.
- (e) Fire clay, buff or white burning, refractory, used for manufacture of fire brick.
- (f) Brick clay, including colored clays and shales, used for the manufacture of brick and tile of various qualities and descriptions.

For each of the above classes special tests are necessary, and the charges made are proportionate to the work required.

A report upon each sample will be furnished and must be understood to refer only to the sample submitted unless the experts are instructed to examine the deposit and prepare their own samples, in which case special charges will be made. The report includes chemical and physical tests, rational analysis where necessary, fire and shrinkage tests,





VASES MADE FROM LOCAL SHALE

advice as to washing or other preparation of the clay, and an opinion as to the industry to which the material may be applied.

#### CHARGES.

Clays and shales indigenous to the State of New York will be tested without charge beyond the actual cost involved in the examination. Estimates can be obtained upon application.

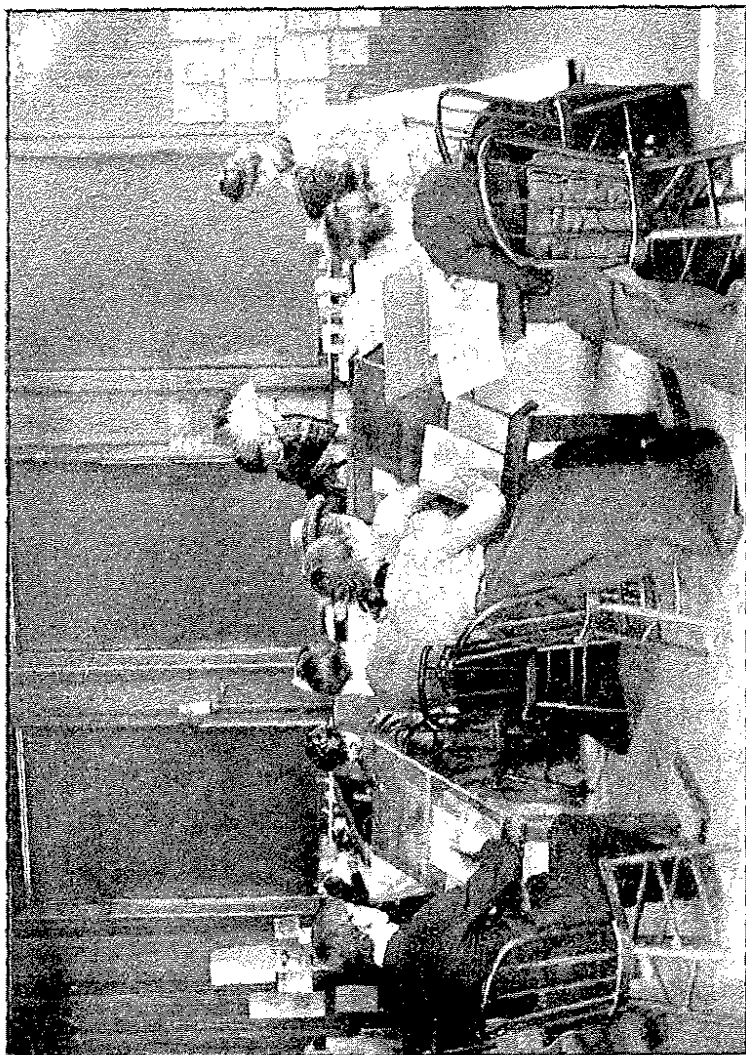
For tests of samples from other states charges will be as follows.

For classes a, d, and e, per sample	\$50 00.
For classes b, c, and f, per sample	\$25 00.
All charges are payable in advance.	

The sample submitted should not be less than five pounds in weight and must be forwarded express prepaid.

If the manipulation of bulk samples be desired the State School is prepared to undertake the experimental production of clay wares at reasonable rates.





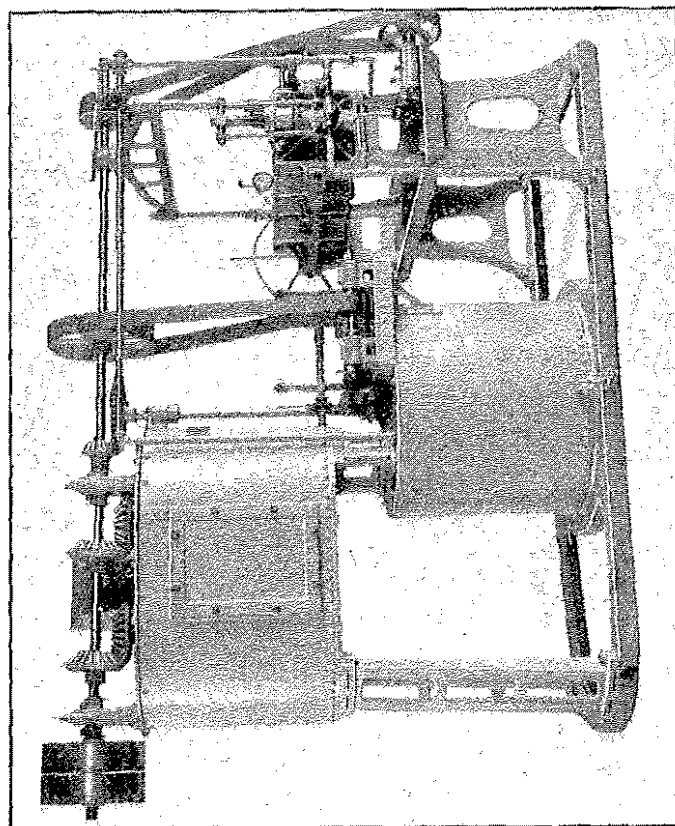
A CLASS IN DRAWING

## DEPARTMENT OF GRAPHICS AND DECORATIVE ART

PROFESSOR BINNS.

MISS TOURTELLOTTE.

1. A course of lectures on the history and development of decorative art. The elements of beauty in form and decoration. The possibilities and limitations of clay in ornamental work. Application of clay to architectural adornment.
  2. A course of instruction in mechanical drawing and drafting. General principles. Descriptive geometry and linear perspective. Intersection and development of geometrical surfaces, making of plans, elevations and details. Lettering.
  3. A course of instruction in free-hand drawing. Outline drawing from models, charcoal drawing from plaster casts, pen drawing, water color, study from nature.
  4. A course of instruction in decorative design. Elements of geometric ornament, applied design, original design.
  5. A course of instruction in clay modeling and casting in plaster, creation and production of form, development of handles and embossments. Architectural modeling.
- Attention will be given to the natural ability of each student, and specialization will be encouraged.



SLIP-MAKING PLANT.—Crossley Mfg. Co.

## REGISTER OF STUDENTS

1901-1902

### FOUR YEARS' COURSE

#### Juniors

Babcock, Daniel Clarke,

Ashaway, R. L.

#### Sophomores

Barber, Willard Allen,  
Krehbiel, Junius Frederick,

Alfred, N. Y.  
Delevan, N. Y.

#### Freshmen

Bailey, J. Roy,  
Binns, William Hugh Ferrar,  
Perry, Orlo H.,  
Walrath, Fred S.,

Woodhull, N. Y.  
Alfred, N. Y.  
Stacy Basin, N. Y.  
Jasper, N. Y.

### TWO YEARS' COURSE

#### Second Year

Davis, Lynn Harrison,

Alfred, N. Y.

#### First Year

Hoel, George A.,  
Schmidt, George L.,

Hornellsville, N. Y.  
Buffalo, N. Y.

### CERAMIC ART COURSE

Austin, Luella,  
Cooper, Anna,  
Dewey, Fanny N.,  
Saunders, Miriam,  
Sherman, Olive,

Whitesville, N. Y.  
Buffalo, N. Y.  
Turin, N. Y.  
Rochester, N. Y.  
Cowanesque, Pa.

### SPECIAL AND PREPARATORY COURSES

Bell, Rollo Robin,  
Burgess, William,  
Spring, Basil M.,

Ceres, N. Y.  
Trenton, N. J.  
Allegany, N. Y.