

BIENNIAL REPORT  
OF THE  
BOARD OF TRUSTEES  
OF THE  
CALIFORNIA POLYTECHNIC SCHOOL

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1906

SECOND BIENNIAL REPORT

OF THE

BOARD OF TRUSTEES

OF THE

CALIFORNIA POLYTECHNIC SCHOOL

COMPRISING THE

Reports of the Director and Secretary of the Board

1904-1906

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SAN LUIS OBISPO, CALIFORNIA  
NOVEMBER, 1906

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SAN LUIS OBISPO, November 19, 1906.

*To His Excellency, GEORGE C. PARDEE, Governor,  
Sacramento, Cal.*

DEAR SIR: I beg to hand you herewith the report of Mr. Leroy Anderson, Director of the California Polytechnic School, which is submitted as the second biennial report of the Board of Trustees of that school.

The Director has treated of the work and policies of the school so thoroughly that the Board cheerfully transmits his report as its own.

There also accompanies this the report of the Secretary of this Board, showing the principal actions in appointments and permanent improvements and a statement of receipts and disbursements.

By order of the Board of Trustees.

R. M. SHACKELFORD,  
President.

## REPORT OF THE DIRECTOR.

*To the Board of Trustees:*

The Director of the Polytechnic School has the honor to submit to the Board of Trustees the following report for the years 1904-5 and 1905-6. The report covers the period from July 1, 1904, to June 30, 1906, and in some instances to November 1, 1906.

### FACULTY.

Appointments of instructors have been made as follows:

Miss Harriet Howell was elected instructor in Domestic Art, July 9, 1904. Miss Howell was graduated from the Decatur, Illinois, High School and was a student in Pratt Institute in 1893-4. She was Superintendent of Domestic Art in Mechanics' Institute, Rochester, N. Y., 1894-6; Superintendent of Domestic Art in Kansas Agricultural College 1897-1902; and Superintendent of Domestic Art in Throop Institute 1902-4.

Miss May Secrest, B.S., was elected instructor in Domestic Science and Manager of the Dormitory, April 29, 1905. Miss Secrest is a graduate of the Kansas State College with the class of 1892. She afterwards pursued graduate work in the same college and also taught domestic art two years as an assistant to Miss Howell. In 1902 Miss Secrest was graduated from the course in domestic science at Teachers' College, New York. The following year she organized the department of domestic science and taught the course at Stephen's Point Normal School, Wisconsin. Since 1903 she has been Associate Professor of Domestic Art in the Ohio State University.

Mr. LeRoy Burns Smith, A.B., was elected instructor in English and History, April 29, 1905. Mr. Smith finished his preparation for college at the Ithaca, New York, High School 1897, and previous to that time had taught in the country schools with marked success. He was graduated from Cornell University in 1901 with the degree of A.B., having taken as his major subjects English, history, and political science. During his senior year he taught English ten hours per week to university classes. From 1901 to 1903 he was General Secretary of the Young Men's Christian Association of the University of Wisconsin, and at the same time was a graduate student in the department of education in the university. In August, 1903, Mr. Smith entered the University of California as a graduate student in the department of education. He

was immediately made a Reader in Education by Dr. Brown, head of the department. In January, 1904, Mr. Smith left the University to accept the directorship of educational work of the Young Men's Christian Association of San Francisco.

Mr. Herman Bierce Waters, M.E., was elected instructor in Physics and Electricity, April 29, 1905. Mr. Waters completed the electrical course, with the exception of a thesis, at the Montana State College of Agriculture and Mechanic Arts. The year 1902-3 he spent at Cornell University taking the regular electrical work and was graduated with the degree of M.E. While at the Montana State College he had practical work installing machinery in the shops and electrical laboratory and wiring generators, switchboards, and lights. Since leaving Cornell he has been continuously in the employ of the Missouri River Power Company at their Cañon Ferry station—a 10,000-horsepower hydraulic plant supplying the city of Butte and the copper mines with light and power.

Mr. Chester Wirt Rubel, B.S.A., was elected instructor in Animal and Dairy Husbandry, February 3, 1906. Mr. Rubel is a graduate of the Iowa State College of Agriculture, class of 1904. During 1904-5 he was a fellow in Animal Husbandry and did some teaching. During the summer of 1905 he had charge of the show herd of Holsteins of W. B. Barney, Hampton, Iowa.

Mr. William Ferdinand Ewing, A.B., was elected instructor in Mathematics, May 21, 1906. Mr. Ewing was graduated in 1906 from Stanford University, having taken his major subject in mathematics. He has been a student successively in the Indiana State Normal School, Indiana University, Los Angeles State Normal School, University of the Pacific, and in Stanford University. He has had an experience in teaching ranging over some ten years, beginning with the rural schools of Indiana and finally in the academy of the University of the Pacific and Palo Alto academy, the last two while a student.

Isaac Phillips Roberts, M. Agr., professor emeritus of Agriculture at Cornell University, gave special lectures on Animal Husbandry and Rural Economy topics during the month of May the last two years. His visits to us have been an inspiration to our students and faculty. He has recently become a recipient of the Carnegie Pension Fund, and will not be able to devote any more time to teaching.

Mr. Oscar Leslie Heald tendered his resignation as instructor in Drawing, Forging, and Sloyd, May 21, 1906, in the following letter:

SAN LUIS OBISPO, May 10, 1906.

*To the Board of Trustees of the California Polytechnic School:*

Having for some time been working and planning with a view to pursuing college work at Stanford University, and having completed plans whereby I will be able to enter the coming semester, I hereby tender you my resignation, to take effect at the close of the present school year.

It has been a pleasure indeed to me during the past three years to be numbered among the faculty of the California Polytechnic School, and in taking leave at this time to prepare myself for better service in the future I have only the kindest feelings and best wishes toward the school and its corps of teachers and advisers.

Very respectfully,

(Signed)

O. L. HEALD.

Mr. Leo Earl Pearson was elected instructor in Drawing, Forging and Sloyd, May 21, 1906. Mr. Pearson was graduated in 1906 from the normal course in drawing and sloyd of the Throop Polytechnic Institute. During his last year he taught mechanical drawing at Occidental College.

Miss Helena Amanda Smith was elected manager of the dormitory, May 21, 1906. Miss Smith is a native of New York, where she was educated in the Ithaca High School, Elmira College, and Mechanics' Institute. She was graduated from the latter institution in 1905, in the normal course in domestic art and science.

#### STUDENTS.

The number of students has rapidly increased from the beginning. The enrollment according to years is as follows:

1903-4 .....	20	1905-6 .....	100
1904-5 .....	60	1906-7 .....	117

The enrollment for the first three years is the total for each year. The figures for 1906-7 are to November 1, 1906. Judging from the experience of former years it is safe to say that the enrollment will reach 130 before the close of the year.

The following gives the classification of students as to years and courses of study:

#### 1905-6.

	1st Year.	2d Year.	3d Year.	Special
Agriculture .....	17	14	2	1
Mechanics .....	26	7	2	--
Domestic Science .....	14	8	4	5
Totals .....	57	29	8	6

#### 1906-7.

	1st Year.	2d Year.	3d Year.	Special
Agriculture .....	9	13	9	2
Mechanics .....	29	11	5	--
Domestic Science .....	21	11	7	--
Totals .....	59	35	21	2

The following gives the classification of students as to home address—the counties of California or the states from which they register:

	1905-6.		1906-7.
Alameda	5	Alameda	1
El Dorado	1	Amador	1
Japan	2	Colusa	2
Kern	2	El Dorado	1
Los Angeles	5	Fresno	1
Monterey	2	Japan	2
Orange	5	Kern	5
Riverside	1	Los Angeles	8
Sacramento	2	Mendocino	1
Santa Barbara	9	Merced	2
San Bernardino	1	Minnesota	1
Santa Clara	3	Monterey	1
Santa Cruz	2	Orange	2
San Francisco	2	Riverside	2
San Luis Obispo	49	Sacramento	3
San Joaquin	1	Santa Barbara	12
Solano	1	Santa Cruz	2
Sonoma	2	San Francisco	2
Tulare	4	San Luis Obispo	56
Ventura	1	Solano	1
Total	100	Stanislaus	2
		Texas	1
		Tulare	4
		Ventura	3
		Total	117

#### BUILDINGS.

Since the original establishment of the school, each Legislature has made an appropriation to be expended for the construction and equipment of shops, barns, and outbuildings. These appropriations have enabled us to construct the smaller and cheaper buildings which were essential to our needs, such as shops, barns, poultry houses, and the like. The first permanent building to be constructed under this fund was the forge shop, which was begun in the spring of 1904. All of the framing was done by the regular students in carpentry, they working at it three afternoons per week. The school year closed before any more could be done by the students. Accordingly the foundation and the erection of the building was done by contract. The cost of construction was \$1,340, and the cost of equipment \$1,100. The building now stands 40 by 56 feet, and should be increased for another year to 40 by 100 feet and the present equipment duplicated. We could then accommodate 32 students, whereas now only 16 can be accommodated.

Our architect, Mr. W. H. Weeks, drew an elevation plan for a large and commodious barn, consisting of a central portion 50 by 100 feet, with a wing at either end 40 by 80 feet. January 1, 1905, the class in carpentry began the construction of the north wing, which is used for

the dairy herd. By the close of the school year, they had nearly completed the carpentry work. This was finished during the summer by employing two students who had done specially good work. The same two students also erected the silo upon a five-foot foundation, which was built by contract. The total cost of the dairy barn was \$2,500; that of the silo, \$240.

The carpenter shop is the first of our shops to be completed upon the original plan as adopted by your Board. This is 40 by 100 feet, one story in height. It was built by contract during the summer of 1905 at a cost of \$2,985; the equipment consisting of ten double carpenter benches and a full complement of hand tools for students, amounting to \$720.

The poultry plant has grown very much during the past two years. A number of necessary small houses now dot the yards. A new and complete brooder house, 20 by 40 feet, was constructed during the winter of 1905-6. This was done partly by student labor under the guidance of a carpenter working regularly thereon. The original poultry house, which was constructed by students in the winter of 1904, has been remodeled and is used as an incubator and feeding room.

The work in plant propagation and decoration of our grounds will be very much enhanced by the completion of the greenhouse, which is now well on the way. The appropriation of \$1,000 will be entirely needed for its completion. The house is 36 by 40 feet and is divided into two sections each 18 by 40 feet.

The domestic science building, for which contracts amounting to \$24,200 were let in February, 1906, has been progressing slowly. It will probably not be ready for occupancy before January 1, 1907. The plans were carefully drawn by our architect upon suggestions of members of the faculty who were interested and who had made a special study of the departments and equipment which they severally need. I believe that the building will prove itself to have been carefully planned and also prove of great efficiency in carrying on our work in household arts.

#### GROUNDS.

When we look back two years it is very evident that a great deal has been done toward the improvement and beautifying of our grounds with the inadequate means at our disposal. During this time all of the roads which we now enjoy were constructed. This means about three fourths of a mile of rock road 10 feet wide, in addition to the wider drives about the buildings. All of this rock was taken from our own quarry. During the summer of 1906 we purchased some 300 yards of crushed rock from the city of San Luis Obispo and found that this could be laid down cheaper than from our own quarry, owing to the large amount of labor necessary to quarry our rock and crush it by hand. The total expense for roads and culverts to July, 1906, is \$1,300.

We have found considerable difficulty in growing some varieties of desirable trees and shrubs. It was our original desire to plant only California natives upon the grounds in front of the main buildings. Our first venture with these was so unsatisfactory that we have given it up, excepting for a few varieties which have proven successful, such as the Christmas berry. It may be that we will need to resort to the eucalyptus for some of our ornamental planting, because of its ability to thrive in shallow soil. Some of the eucalypti are very beautiful and are not out of place in any ornamental grounds.

We have been fortunate in securing the services of Mr. A. D. Sinclair, as gardener, a man who had had several years' experience in Santa Barbara under Mr. W. H. Morse. He came to us February 1, 1906, and has outlined a policy which will show itself in the decoration of our grounds in the near future.

#### FARM.

The crops produced on the farm have been increased by the growth of corn for the silo. This has been grown chiefly on the bottom soil, except during the present year, when ten or twelve acres of the high land was planted. The yield does not exceed ten tons per acre in any case, and is probably not more than five tons upon the high land. We are barely able to produce sufficient hay for our present stock, the upland yield being only one ton per acre of either barley or oat hay. All of this land should be fertilized, when it would give much larger returns. Thus far we have felt obliged to put most of the stable manure and what could be hauled from town upon the grounds for the lawns and ornamental planting. The immediate needs there are about filled and henceforth we plan to give the farm proper more fertilization.

We have been able to plan a definite system of experimentation upon the plat system to determine carefully the needs of our soil as to fertilization and cultivation and also the most advantageous crops. We have laid out a system of plats upon the bottom land and also upon the high land. Each plat will be one twentieth of an acre in size, with the soil of the plats as nearly uniform as possible.

The need of more good land is very apparent. We can not grow an annual crop of corn even on the bottom land and the upper land is certainly not rich enough. We should have at least thirty or forty acres additional of bottom land, to be used largely for the growth of forage crops, such as corn and alfalfa. This is a need which I trust will be very speedily met.

Another reason for more land is that the buildings are encroaching upon the productive area. The buildings now constructed and others outlined in the fulfillment of the building scheme take up fully forty acres of the best land, with the exception of the black bottom. Very

little of this acreage can be depended upon for crop production, and with the annual addition of buildings the productive area will continue to decrease.

It is not a pleasure to note, in the financial statement, a deficit in the farm account for the year ending June 30, 1906. As indicated elsewhere the farm barely produces enough hay and rough forage for the support of the stock now owned. Therefore, there is practically no revenue from the sale of farm products. The live-stock interest has been one of purchase and building up instead of sales. Thus a possible means of revenue through the sale of stock has not been realized to any extent, and the chief source of revenue for the farm proper is to charge against the dairy, the swine, and the poultry, which are naturally productive lines, the farm products which they consume. There still remains the produce consumed by the horses, for which there is no money return. It happens, however, that nearly one third the work of the teams which is credited to the farm and also to the teamsters is used in grading, road-building, hauling or other general work for the improvement of the buildings and site. This being true, experience has shown me that not enough money has been appropriated from the support fund for the use of the farm.

#### HOMES FOR EMPLOYÉS.

A very serious obstacle to the efficient administration of the growing amount of labor required by the school is the lack of homes for men regularly employed. A higher class of men with a corresponding greater efficiency of effort could be secured if the school provided homes for them upon its own grounds. A man with a family in a comfortable home near his daily work is a more dependable quantity than a single man who must live from one to two miles distant. We have been fortunate that the farm foreman, Mr. Griffith, has been willing to board one or two men who are employed as teamsters. Mr. Griffith occupies the small cottage which was upon the farm at the time of its purchase and which is one half mile distant from the building site.

The men who most need homes upon the grounds are the farm foreman when the new barn is completed, the gardener, the poultryman, the dairyman, and the teamsters. We should have as soon as possible at least four cottages, which at the present cost of building would require \$2,500 each. I trust that the Board of Trustees may take this matter under serious consideration both as to the need of the cottages and their location.

#### WATER SYSTEM.

The present system consists of the supply raised from the creek bed by a pumping plant and that which flows from two small springs on the hillside. The latter is piped to a 40,000-gallon concrete reservoir,

which is located 3,000 feet from the buildings and at an elevation of 200 feet above them. This is kept in reserve for safety in fire and when for any reason the other system needs repairs. We aim to keep this reservoir full at all times. The present pumping plant was installed in the fall of 1905. A well 28 feet deep was dug near the creek and is 9 feet inside the curb. Here was installed a No. 3 centrifugal pump, operated by a 16-horsepower engine, which raises the water to an altitude of 100 feet to a 20,000-gallon redwood tank, 80 feet above the main building site. This system affords ample supply for the use of the buildings and grounds, but is not sufficient for irrigation purposes on an economic scale. Our plans for immediate extension of irrigation include the diversion of the water from the creek to the flat land lying near its border, where alfalfa will be planted this coming season. The survey for this system has been made by the students in surveying, and the plan can be carried out at a very reasonable expense.

#### COMMENCEMENT.

The first commencement exercises were held on June 15 in the Pavilion. The graduating class was eight in number, and a large and representative audience was in attendance. A special musical program was rendered by a double quartet of students. Addresses were given by H. Floyd Tout for the class, and by Director Anderson and Professor I. P. Roberts. The diplomas were presented by Mr. R. M. Shackelford, President of the Board of Trustees, to the following class:

H. FLOYD TOUT and HENRY WADE, in Agriculture.

HERBERT COX and GUSTAVUS WADE, in Mechanics.

LILIAN FOX, IRENE RIGHETTI, LAURA RIGHETTI, and KATHERINE TWOMBLY, in Household Arts.

The commencement exerted a most salutary influence upon the entire school body. Graduation is now looked forward to as an actual thing—a real event in the student's life and one worthy of all effort for achieving.

#### COURSE OF STUDY.

The three courses in Agriculture, Mechanics, and Domestic Science continue to be the backbone of the institution. Each course has been altered and modified with our enlarged experience and otherwise improved by securing a larger corps of teachers. It is a source of gratification that at least ninety per cent of the students enter for and pursue one of the regular courses. A special course in Agriculture is announced for the year 1906-7 and two candidates have presented themselves. All others desiring Agriculture registered for the regular three-year course. When the Domestic Science building is completed

it is hoped that special courses in sewing or cooking will be given. And if more shops are provided we may be able to offer special or short trade courses in Mechanics. A minimum age limit of at least eighteen years should be required for all special students, for a student younger than that ought to have more of general training.

Inasmuch as my last report gave the course of study then outlined, it seems wise to detail the present courses.

## COURSES OF STUDY FOR THE YEAR 1906-1907.

## AGRICULTURE.

	First Year.	*PERIODS PER WEEK.		
		1st Term.	2d Term.	3d Term.
English		5	5	5
Arithmetic and Algebra		5	5	5
Botany		4	6	6
Gardening		4	4	4
Soils and Fertilizers		4	5	5
Poultry Culture		--	3	3
Freehand Drawing		5	--	--
Carpentry		8	8	--
Forging		--	--	8
		35	36	36

## Second Year.

English		5	5	5
Geometry		5	5	5
Chemistry		8	8	8
Horticulture		5	5	5
Dairying		3	6	6
Animal Husbandry		6	6	6
Forging		8	--	--
Mechanical Drawing		--	4	4
		40	39	39

## Third Year.

History and Civics		5	5	5
Trigonometry		5	5	--
Irrigation, Hydraulics		--	--	5
Surveying and Irrigation		4	4	4
Animal Physiology and Agricultural Chemistry		9	9	9
Animal Husbandry		4	4	4
Physics		7	7	7
		34	34	34

## MECHANICS.

	First Year.			
English		5	5	5
Arithmetic		2	2	--
Algebra		5	5	5
Science, Elementary Physics		--	--	6
Freehand Drawing		5	5	--
Mechanical Drawing		5	5	8
Carpentry		12	12	12
		34	34	34

\*Each school day is divided into eight 45-minute periods.

## REPORT OF BOARD OF TRUSTEES OF THE

	<i>Second Year.</i>	<i>PERIODS PER WEEK.</i>		
		<i>1st Term.</i>	<i>2d Term.</i>	<i>3d Term.</i>
Geometry		5	5	5
English		5	5	5
Electricity		4	4	4
Mechanical Drawing		8	8	8
Chemistry		8	8	8
Shop Work		8	8	8
		<u>38</u>	<u>38</u>	<u>38</u>
<i>Third Year.</i>				
History and Civics		5	5	5
Trigonometry		5	5	--
Irrigation, Hydraulics		--	--	5
Surveying and Irrigation		4	4	4
Physics		6	6	6
Drawing and Design		8	8	8
Engines and Boilers and Electrical Machinery		7	7	7
		<u>35</u>	<u>35</u>	<u>35</u>
<b>HOUSEHOLD ARTS.</b>				
<i>First Year.</i>				
Arithmetic and Algebra		5	5	5
English		5	5	5
Elementary Chemistry		5	5	--
Physiology		--	--	5
Sewing		11	11	11
Drawing		6	6	6
		<u>32</u>	<u>32</u>	<u>32</u>
<i>Second Year.</i>				
English		5	5	5
Dairying		5	5	--
Gardening		--	--	5
Domestic Science I		3	3	3
Cooking Laboratory		8	8	8
Bookkeeping		4	4	4
Chemistry		8	8	8
		<u>33</u>	<u>33</u>	<u>33</u>
<i>Third Year.</i>				
History		5	5	5
Botany		6	6	6
Domestic Science II		3	3	3
Cooking Laboratory		8	8	8
Sloyd		--	5	5
Home Sanitation		5	--	--
Emergency and Home Nursing		--	5	--
Home Economics		--	--	5
Laundry		5	--	--
		<u>32</u>	<u>32</u>	<u>32</u>

The faculty is unanimous in its recommendations that each course be increased to four years, and I trust that it may seem wise to your Board to approve the recommendation, to take effect at the beginning of the year 1907-8.

## ADVERTISING.

The chief method which has been used to place the school before the public is by means of an annual circular or catalog, which is issued in the spring. The issue for 1906 was an edition of ten thousand copies of a twenty-page circular. About seven thousand were sent to graduates from the grammar schools, whose names were secured through the kindness of the county superintendents. Thirty counties were covered in this manner. At intervals during the school year we issue short news letters, which are sent to the papers of the State. These letters contain items of interest regarding the school, its activities and development. How widely the letters are published we are not able to say, because it has not seemed best to go to the expense of a membership in a clipping bureau in order to secure a copy of all papers which publish the letter.

The exhibitions of the school have been of much advantage in calling attention to the school at distant points. At the Lewis and Clark Exhibition we displayed an exhibit of carpentry, iron and domestic art work, for which we received a bronze medal. At the 1906 State Fair at Sacramento we showed the Portland exhibition in connection with a larger collection of exercises in wood and iron and a large collection of photographs of the school, together with some of San Luis Obispo and vicinity, which were presented by the Chamber of Commerce. Probably the most attractive portion of our display at this Fair was the exhibit of nine head of Ayrshire cattle and four head of Percheron horses. On these we were awarded premiums amounting to \$263.

During the month of August Mr. LeRoy Burns Smith, our instructor in English and history, visited various sections in Ventura, Los Angeles, Riverside, and Orange counties in a personal presentation of the school to residents of those localities. He carried a collection of photographs of the school and its work and a quantity of our literature. Mr. Smith was cordially received by all whom he visited and his work was successful in bringing to us a number of students. His expenses for twenty-five days were less than \$50. The results of his work will be shown not only during the coming school year, but also in succeeding years, because of the interest which he aroused in the minds of many parents who have children to educate. I believe that this kind of advertising is the best that we have yet undertaken, and I recommend that two or three instructors be sent on a similar mission as early as possible before the next school year.

I trust that the next school year may find it possible for us to issue a regular publication for the purpose of calling attention more closely to the work of the school. The postage upon our annual circular is a large item. By issuing a regular publication quarterly, we would be

enabled to secure a much reduced rate of postage, which would largely offset the increased cost of printing. Three of these bulletins would probably not be more than eight pages in size and would contain reports of our work, such as any experimental work that is being conducted and items of general interest. The fourth number would be our regular catalog.

#### THE SCHOOL LIFE.

The dormitory has proven itself a very popular feature of the school life. It is still reserved for the male students only and accommodates twenty, in addition to three members of the faculty, the matron and three employés. The popularity of the dormitory is due to three reasons: (1) For students who are employed about the buildings and grounds and who find it necessary to live close to their work. (2) By parents who desire their sons to be under the immediate supervision of the faculty and separated from the city and its temptations. (3) For students who desire a home close to the school and for its more perfect school life. The dormitory provides accommodations for less than twenty per cent of the present student body. The remainder find homes in private families in the city. More than a sufficient number of families desire to take students than there are students to be accommodated. Therefore, as far as finding homes is concerned there is no difficulty. There is difficulty, however, in finding accommodations which are demanded by a growing constituency of the school. Along with applications for admission to the school come requests from parents to have their sons and daughters reside at the school. To fulfill this demand it will be necessary for the State to provide more dormitory accommodations. The school has proven its usefulness to young people and thus to the State, and I believe there is ample justification for the expenditure of the State's funds in this manner. The new dormitories should not be very large; that is, not accommodate more than forty or fifty students in each. It may be possible for them to be constructed more cheaply than the present dormitory, which represents an expenditure of \$750 for each person accommodated. Another possible means of supplying homes near the school would be for private parties to construct large houses near the school grounds and operate them under private management, but have the discipline under faculty supervision. This would afford faculty control of the students equally as well as in the present dormitory and relieve the institution of the business management. Private enterprise will find a safe investment in homes for students if the State should build more dormitories, for by the time dormitory accommodations for one hundred more students are secured the school will have an enrollment of three times that number.

The social life of this school has been most helpful and enjoyable. Frequent receptions are given to the students. At the opening of the year the old students always give a welcome reception to the new students. Whenever there are any visitors in town from the neighboring schools, either representatives of athletic teams or otherwise, a reception is usually given them. The receptions to the graduating class of 1906 by the lower classes were very happily conducted. All these receptions center at the school, and the free use of the assembly room and such adjoining rooms as are needed is accorded the students. Members of the faculty are always present.

A large number of students find it necessary to earn part or all of their living expenses. The school has been able to furnish employment to a number, with a remuneration ranging from \$5 to \$22.50 per month. Only two students are employed at the latter price, and these operate the power plant which furnishes heat and light to the main building and dormitory. All of the janitor work has been done by students, and other work offered is such as carrying the mail and doing errands, caring for the school horse, operating the pumping plant, etc. It is an encouraging sign that many of the students find homes in town, where they earn part or all of their board. The best homes have been opened for students in this way, and the service rendered has been uniformly satisfactory and therefore mutually helpful. At the present time there is a demand for more students than there are available for good service.

It is a custom in some institutions for the governing board to lease land to members of the faculty upon which to build residences. The residence remains the property of the instructor during his incumbency and at his retirement he may sell to another instructor or to the institution upon an appraised valuation. I believe it would greatly enhance the unity and completeness of the school life if a majority of the married members of the faculty could reside upon the grounds and feel that they were building a home near their chosen work. Under the present ruling of the Attorney-General the Board of Trustees has no right to issue a lease of land. I would recommend, therefore, that the next Legislature be petitioned to grant the Board of Trustees such power, and also power to lease private property if necessary for school uses.

#### STUDENT ACTIVITIES.

Debating began under very promising conditions and was inaugurated by two annual debates with the San Luis Obispo High School. The Alumni of that school offered a silver trophy cup as a prize to be contested for by the Polytechnic School and the High School, and to be won by the school winning at least two out of three successive debates. The Polytechnic won the first two debates, and thus the third was not held. There is at present some prospect for a debate with the

## REPORTS OF INSTRUCTORS.

### REPORT OF THE INSTRUCTOR IN DOMESTIC ART.

The following is a report of the Sewing Department for the biennial period ending June 30, 1906:

All first-year girls are assigned to work in the department for sixteen periods a week. The second-year girls spend time not otherwise employed in the sewing department.

The course of work consists of thorough drill in fine handwork. The student makes a set of small models, which are placed in a book, together with a written description of the work. After the handwork has been completed the use and care of a machine is taught. Patterns for undergarments are drafted, and the garments are cut and made. The use of a tailor system is taught and each student is required to draft patterns, cut, fit, and make a woolen dress skirt, fitted lining and shirt waist for herself.

In the third term several weeks are devoted to work in millinery. Students are taught to renovate old hats and materials, wire, braid, face and line hats, also to make and cover both wire and buckram frames.

It is not the purpose of the department to train professional dress-makers and milliners, but to give the training that will be useful to any woman no matter what her future may be. At the beginning of the biennial period the equipment in the department consisted of one sewing-machine. We now have five machines, seven large work tables, a cheval glass, dress forms, and sufficient funds to thoroughly equip the department in the new building.

Respectfully submitted.

HARRIET HOWELL.

### REPORT OF THE INSTRUCTOR IN DOMESTIC SCIENCE.

I have the honor to submit the following report of the Domestic Science department of the California Polytechnic School:

Work was begun in this department, in temporary quarters, on September 15, 1905, with a class of thirteen young women. The equipment of the kitchen laboratory consists of a No. 8 Majestic range, six work tables, each containing two drawers, one dozen 24-inch stools, utensils for twelve students, and a case for storing these utensils.

Following the outline of the course of study the students take up cookery in the second year, after completing a course in chemistry. The work this year consisted of class and practical work. The class work consisted of lectures, reference reading, and a study of the Government bulletins bearing on the composition, production, manufacture, and preparation of food materials. In the kitchen laboratory the pupils prepared dishes covering a course in plain cookery. The four young women in the graduating class were given special work in cooking and serving, dietetics, and house construction. They prepared and served a meal to the students living in the dormitory.

The plan for the coming year when the department is housed in its new building is to continue the second-year work as it was given the past year. In the third year of the course the young women will study various methods of preserving fruits and vegetables, the making of pastry, cake, fancy desserts, etc. With this work they will study dietetics. They will learn to plan meals containing the required amount of nutrients at a minimum and also at a maximum cost. They will then purchase the materials for these meals, prepare, and serve them to invited guests in the dining-room of the Domestic Science building. Each girl will also be required to give a representative lesson, with the remainder of the class as spectators and critics.

The third-year students will also study house construction and home sanitation, laundering and home nursing.

It has been the hope in planning this course of study that the girl completing it will be able to make a happier, more healthful and more beautiful home than she otherwise would have done.

Respectfully submitted.

MAY SECREST.

#### REPORT OF THE INSTRUCTOR IN AGRICULTURE AND CHEMISTRY.

During the past two years my department has given instruction in agriculture, chemistry, animal physiology, and diseases of animals. I have also had charge of the instruction in poultry husbandry.

During the fall term I met first-year students in agriculture and domestic science for consideration of elementary topics in chemistry as preparation for work of the two following terms. This course consisted of daily lectures, demonstrations, and recitations. In the winter and spring terms I met first-year students in agriculture three times a week in elementary agriculture. In connection with this course an afternoon each week was devoted to laboratory work. This time was spent in the study of soils and fertilizers. Two periods a week were given to discussion of topics relating to the poultry industry. At these periods topics were assigned as laboratory work.

Some of the problems investigated in this connection and that yielded interesting and valuable data were the following: Relative value of wheat and barley as food for laying hens; Close confinement versus free range in relation to egg production; Amount of fertilizing material produced annually by hens; Study of incubators and incubator methods of brooding and feeding young chicks, etc.

Second-year students in Agriculture and Domestic Science received instruction in chemistry throughout the year, consisting of lectures and demonstrations four times a week, supplemented by two afternoons per week in the laboratory.

I have given instruction to third-year students in Agriculture in agricultural chemistry, animal physiology, and diseases of domestic animals.

Needs of the department are more storeroom for chemicals and apparatus, and in the poultry department more ample quarters for breeding and laying stock, an incubator house, and quarters for the attendant.

Respectfully submitted.

S. S. TWOMBLY.

#### REPORT OF THE INSTRUCTOR IN PLANT INDUSTRY AND IRRIGATION.

##### BOTANY.

The object of the botany course is to give the first-year students in Agriculture a general survey of the plant kingdom and also a thorough knowledge of those plants which have horticultural and economic value; the botany of the farm, the garden, the orchard and the forest. This subject includes a study of the use of fruits and seeds to the plant and the method of seed distribution. Weeds, their control and eradication, are considered. The plant life is traced from the awakening of the seed to maturity, noting the functions of root, stem and leaf. The winter term, when the plants are dormant, is given to bacteria,—their province in the plant world and their importance on the farm and in the home. Field excursions are made from time to time to see the plants under natural conditions. The principles of forestry, economic value, planting, and care and diseases of forest trees are treated in this course.

##### GARDENING.

All entering students of Agriculture take the course in gardening. The purpose is to raise vegetables for the table the year round. Each student has a plot on which is grown radishes, carrots, onions, beets, lettuce, salsify, celery, and many other vegetables. The more difficult plants are grown on community plats. One afternoon of a week is given to this subject.

## PROPAGATION.

During the past year the propagation practice has been out of doors and in hot beds and cold frames. Carnations, roses, and chrysanthemums were grown. In the future the greenhouse will be used. Here the various operations of propagation will be shown, seed testing for purity and viability, germination, the growth, habits, and identification of seedlings, propagation from leaf, stem, and bud, hard and soft wood cuttage, and the creation of new plants. The construction and management of a greenhouse is a part of the course.

## HORTICULTURE.

The principles of propagation and handling of fruits under the various conditions of California soil and climate are studied in the second year of the agricultural course. Two morning periods are given to classroom exercises and one afternoon is spent in field and nursery practice. Here the student is taught to prune, bud, graft and spray. The school owns a small orchard. It is proposed to plant a variety orchard for demonstration purposes. In the nursery trees are being grown which will serve to plant the orchard.

## SURVEYING AND MAPPING.

In surveying and mapping the object sought is to give Agriculture and Mechanics students training in the use of compass, level and transit, to so fit them that they will be prepared to lay out foundations, roads and property lines, and land for irrigation. The mapping course familiarizes the students with the symbols used on maps. The contour and topographic surveys made in the field are committed to paper in the mapping room. Surveys are made of the school grounds, new roads and lines are run, and the heights of surrounding mountains and hills are measured.

## IRRIGATION.

In the senior year the students of both courses take up irrigation, where they learn to measure water in pipes and in open channels, to construct canals, ditches and small reservoirs, and to prepare land for irrigation. The various methods of irrigation—furrow, basin, and contour—are studied and compared as to their adaptation and application. Attention is given to the possible injurious effect of irrigation by the formation of irrigation hardpan, the water-logging of the soil, or the "rise of alkali." A brief study is made of the irrigation laws of this and other Western states. The school water system is used to illustrate pumping for domestic supply and for irrigation.

Respectfully submitted.

J. E. ROADHOUSE.

## REPORT OF THE INSTRUCTOR IN ENGLISH AND HISTORY.

The enrollment in the Department of English and History for the school year 1905-6 was as follows:

English, first year.....	49
English, second year.....	22
History .....	10
Total enrollment .....	81

Five periods a week throughout the year are assigned for each subject, individual conferences with English students being held as special needs have demanded. English and history being required work for all students in regular standing, between eighty and eighty-five per cent of the total enrollment in the institution will each year be found in these classes.

The amount of time devoted to English, two years, is but one half that allotted to the same subject in the usual high school course. The essentials of a practical course are, therefore, kept uppermost in mind. Oral composition—story-telling, description, and debate—has had a prominent place along with written composition. The fundamental aims of the instruction in English are:

- 1st. To enable the student to speak and write with clearness and directness;
- 2d. To acquaint him at first hand with some of the best books of English and American authors;
- 3d. To build up a correct and increasing vocabulary;
- 4th. To teach the use of a library.

Books for reading and study are chosen from the list required for college entrance, and include simple narrative poetry, Irving's Sketch-Book, The Alhambra, Ivanhoe, Classic Myths, etc., for first-year students; the Merchant of Venice or Julius Cæsar, Silas Marner, Sir Roger de Coverley, and others for second-year students.

Third-year "history" is American history only. Civil government and the simple elements of political economy are included in the year's work. The instruction in American history aims to show how the present grew out of the past, attempting to give the student a basis on which he may do further intelligent reading and study of the subject. The study of industrial development holds an important place with political development. The instruction in civil government covers the organization of the Federal Government with special attention to California state and local governments.

The closing five weeks of the last school year were given to the simple elements of economics. The meaning of the terms wealth, capital, value, wages, etc., was discussed. The functions of money and credit were studied, also the significance of the terms free trade, protec-

tion, etc., the aim being to bring out the meaning and significance of some of the more common features of national housekeeping.

The proposed extension of our Polytechnic courses from three to four years is heartily indorsed by this department. In addition to greater thoroughness in all of the technical departments, the change will allow a full year for the study of American government and economics, two of the most essential branches of knowledge in the development of intelligent American citizenship.

Respectfully submitted.

LEROY B. SMITH.

#### REPORT OF THE INSTRUCTOR IN PHYSICS AND ELECTRICITY.

The work in physics in many ways is like the ordinary high school course. Special stress is laid on the principles of mechanics, heat, and electricity. A large number of laboratory experiments are required, which bring out the practical features of the work. We find it advantageous to take up the study of physics earlier than is done in high school courses, as the work in mechanics and electricity is needed as preparation for the courses in engines, boilers, and electrical machinery that are taken up in the second and third years. This work treats of the construction and operation of machinery.

The electrical work is laid out with a view to fitting our men for operating all the common types of electrical apparatus.

Our electrical laboratory equipment includes the more important types of apparatus. The students study the construction of machines and operate and test them. As the special features of a certain type of machine are brought out in the text-book, the laboratory work is planned to illustrate the same points. Throughout this course the aim has been to make a thorough study of only such things as are of the most practical nature.

The work in this department is very much handicapped by having no machine shops, and it will be impossible to do the work justice until they are provided. In the meantime we plan to give the strongest work possible in the theory and operation of the ordinary types of machinery, so that a man finishing this course will be competent to operate any mill, shop, or electric plant.

The students have shown a gratifying interest and industry in these subjects during the past year, and their work in all respects has been excellent. Many of them have expressed a desire to go farther along these lines than we can take them in three years with our present limited equipment. A four-year course with moderate additional equipment would enable us to turn out a strong class of men from our Mechanics course.

Respectfully submitted.

H. B. WATERS.

**REPORT OF THE INSTRUCTOR IN DRAWING, FORGING, AND SLOYD.****FREEHAND DRAWING.**

Work involving the principles of perspective, with proportionate lines, angles, etc., and relative value of light and shade, has been attempted. Sketching has been entirely from still life, from actual objects and groups of objects placed in suitable position before the individual student. Proportionate accuracy and neatness have been insisted upon. In the matter of shading, the student has been required to do just enough to make the parts of his object, or group, stand out clearly and form a picture as near like the original as possible with light coming from either the left or the right side. A very little original work has been done.

*Recommendation:* An increased equipment in the line of group studies, models, casts, and several good art magazines would greatly facilitate improvement in the work of this department.

**MECHANICAL DRAWING.**

For first-year Mechanics students the work has involved care and correct use of instruments, lettering, line work, geometrical drawing, projections, and development of surfaces. Emphasis has been placed upon neatness, uniformity, and accuracy.

**SLOYD.**

No work has been given in sloyd during the past year, excepting a very small amount of cardboard work. During 1904-5 a class of freshmen girls did very creditable work in wood sloyd.

**FORGING.**

The work attempted has been for the most part exercises involving principles of heating, hammering, sledging, curring, welding, swagging, fullering, sharpening and hardening picks, drills, etc.; grinding, drilling, riveting, and many other processes of use in ordinary shop practice. Considerable outside work has been done for the farm and for the several branches of the mechanical department, among the most recent jobs being the iron work for a large hay rack constructed by Agriculture students in the carpenter shop; also an apparatus for gauging the outflow from the septic tank at the dairy barn for irrigating purposes.

*Recommendation:* That the shop be enlarged as soon as possible, to accommodate more students to a class. Eight forges are not enough, even when two work at the same forge, considering the fact that our ranks are increasing each year in numbers. A student can do more and better work if he can have his own individual forge to work at and care for.

Respectfully submitted.

OSCAR LESLIE HEALD.

## REPORT OF THE INSTRUCTOR IN CARPENTRY.

The general lines of instruction as given in the carpenter shop have been toward the construction of buildings and their interior fittings. The preparatory work consists of thirty-one exercises, ranging from the shaping of a rectangular block to the construction of an ornamental newel post. The models, as well as all other work done in the shop, are made from scale drawings which have been designed with two objects in view: first, to teach the proper use and care of tools; and, second, to give the methods of construction of the various joints as met with in practice. The preparatory work includes a course of lectures on the steel square and its practical application to roof framing; in conjunction with these lectures each student is required to frame and brace a hipped roof of such dimensions as to require a practical knowledge of the square. All students registering in the Mechanics and Agriculture courses are required to take a certain amount of wood work; the Mechanics students devote twelve hours per week, out of a possible forty, for the first year and four hours per week for the second year; the Agriculture students have eight hours per week for one school year. The preparatory exercises for the two courses are practically the same and cover the first twelve weeks of instruction; at the completion of the exercises the student is given practical work along the lines that best suit his course. The Agriculture students have constructed a greater part of the poultry plant equipment, including trap nests, brooders, and portable poultry houses. A 40 by 80 foot dairy barn was framed and erected by student labor during the last school year, together with a certain amount of the joinery for the smaller buildings.

A greater part of the school cabinet has been constructed by Mechanics students; a portion of the equipment for the Domestic Science building is now being constructed by first- and second-year students.

On account of an increase in attendance and a call for instruction along more advanced lines, a combination circular saw and four additional sets of tools are now being added to the equipment. In order to successfully pursue the lines of instruction that are being followed it is necessary that several machines be installed; a planer, a buzz-planer, band saw, and lathe would greatly facilitate the work and make it possible to undertake and complete in a reasonable time a large part of the school's work that is now being done by contract. The handling of this work by the school would raise the standard of instruction and make it possible to erect the smaller buildings more cheaply and fit them with a better class of joinery.

Respectfully submitted.

E. W. YOUNT.

**REPORT OF THE INSTRUCTOR IN ANIMAL AND DAIRY HUSBANDRY.**

The Department of Animal Husbandry stands for those lines of work which pertain to the judging, selecting, breeding, feeding, care and development of the various breeds and classes of live stock, and it is the aim to make equipment for instruction along these lines as complete as possible.

A good library of this nature is being selected, including the herd books of the various breeds of live stock. Already the herd books of all the standard breeds of both beef and dairy cattle have been collected, and those of other classes of animals are to be added in the near future.

The live stock on the farm is being improved and added to constantly. The herd of cattle now numbers twenty, and contains good representatives of the Ayrshire, Shorthorn, and Jersey breeds. Good Percheron horses and Poland-China and Berkshire swine are also maintained on the farm. It is the desire to purchase more good stock this year.

Instruction in judging is given two afternoons per week throughout the second year. Both market and breed types of all the classes of farm animals are studied, and market classification and requirements considered. When possible, outside material is also procured. The horsemen of San Luis Obispo have been very kind to us in this regard.

The students are kept interested in practical work at the barns. Careful records are kept of the performance of animals in the herd, and occasionally tests are instituted. During the past year one of the cows in the herd made the excellent record of 14.99 lbs.—the equivalent of 17.5 lbs. butter—in seven days. Experiments are to be inaugurated the coming year, to be conducted by students, to determine the comparative values of different feeds for milk production and the comparative efficiency of different breeds of cattle and different animals in the same breed.

The most urgent need of the department is more buildings. The present dairy barn was designed to be the wing of a larger structure, and the larger building is now needed in order that we may have a horse barn, and a place where the work in Animal Husbandry can be carried on in coöperation with the work in general agriculture. A building is also needed as a storehouse for grain and to be used as headquarters for the swine-breeding establishment.

In the line of equipment a great many things are needed. It is the hope to put in all the apparatus, such as stock scales, machinery, etc., necessary for experimenting and to do everything possible to keep the students interested in their work and show them results.

## DAIRY HUSBANDRY.

The dairy department, in addition to the equipment mentioned in connection with Animal Husbandry, has a creamery in the basement of the Administration building, which is equipped with modern apparatus for milk testing and butter and cheese making. The creamery is 20' by 45 feet, besides a small storeroom and cheese-curing room. It contains a 24-bottle Babcock steam turbine testing machine and all glassware necessary for milk testing, two up-to-date cream separators (a De Laval of 1,200 pounds per hour capacity and a Sharples tubular machine of 900 pounds capacity), a 50-gallon milk vat, cream ripener, Disbrow combined churn and butter-worker, butter mold, ice chest, etc. Apparatus for the manufacture of cheddar cheese has recently been added. Power is supplied by a small electric motor run by a storage battery. Steam is piped from the power house.

The students in dairying study the secretion and composition of milk, separation of cream, the Babcock test for the determination of fat, preparation of starters, cream ripening, and churning and finishing of butter. Practical work in testing milk and in butter and cheese making accompanies this study.

The milk from our own dairy is used for these purposes, and the past season milk and cream were purchased from a neighboring dairyman and the products marketed at the dormitory and in town.

This department needs a building especially designed as a creamery. The present arrangement with the creamery in the basement of the main building is decidedly undesirable for all concerned. A creamery is needed containing a room fitted up for the handling of market milk, testing room, rooms for butter and cheese making, and with an independent heat and power system.

Respectfully submitted.

C. W. RUBEL.

## REPORT OF THE INSTRUCTOR IN BOOKKEEPING.

The object of the bookkeeping course is to give the student a general knowledge of accounts and the use and value of commercial papers in order that he may understand the methods of the business world, whether of the shop, the farm, or the home. The budget system is used and the student moves in a little business world of his own while doing this work. The course as given requires four periods per week for one year.

During the year 1905-6 bookkeeping was included in the regular work of the first-year mechanical course, the second-year mechanical and agricultural courses, and the second-year domestic science course. The use of the journal, ledger, cash book, and check book, how to write and issue business papers—in general, all of the principles involved in commercial pursuits were given.

It has been found that our second-year students are better prepared to carry this subject, and it is recommended that it be given a place in the regular work of all second-year students. It is also deemed advisable that six periods per week be devoted to this subject, in order that more supplementary work may be given to strengthen the work given in the budget.

Respectfully submitted.

NAOMI M. LAKE.

## REPORT OF THE LIBRARIAN.

The library contains 763 volumes, classified as follows:

Agriculture	27
Animal Husbandry	216
Including 15 vols. American Aberdeen-Angus, 15 vols. Ayrshire, 14 vols. American Galloway, 16 vols. Guernsey, 60 vols. American Jersey, 28 vols. American Hereford, and 24 vols. American Short-horn herd books.	
Bacteriology	13
Chemistry	45
Domestic Art and Science	26
Engineering	10
English	88
Entomology	4
History and Civics	39
Mathematics	9
Mechanics	43
Physics and Electricity	30
Physical Science	13
Plant Industry	70
Poultry Culture	13
Reference, general	41
Miscellaneous	6
Magazines, bound	27
Department of Agriculture	43
Total number to June 30, 1906	763

Fourteen weekly, 10 monthly, and one semi-monthly magazines are being received regularly.

U. S. Department of Agriculture bulletins and reports and Experiment Station bulletins and reports are being received.

Respectfully submitted.

NAOMI M. LAKE.

## REPORT OF SECRETARY OF THE BOARD OF TRUSTEES.

To the Board of Trustees:

The Secretary of your Board has the honor to present the following report, covering the period from July 1, 1904, to June 30, 1906:

## BOARD OF TRUSTEES.

**EX OFFICIO.**

HIS EXCELLENCY, GEORGE C. PARDEE ..... Sacramento  
Governor of California.  
HON. THOMAS J. KIRK ..... Sacramento  
Superintendent of Public Instruction.

APPOINTED TRUSTEES.

HON. WARREN M. JOHN..... San Luis Obispo  
Term expires 1908.

F. A. HINN, Esq. ..... Santa Cruz  
Term expires 1909.

PROF. E. J. WICKSON, A.M. ..... Berkeley  
Term expires 1910.

R. M. SHACKELFORD, Esq. .... Paso Robles  
Term expires 1907.

GEORGE S. EDWARDS, A.B.----- Santa Barbara  
Term expires 1907.

OFFICERS OF THE BOARD OF TRUSTEES.

R. M. SHACKELFORD - President  
WARREN M. JOHN - Vice-President  
LEROY ANDERSON - Secretary  
COMMERCIAL BANK OF SAN LUIS OBISPO - Treasurer

STANDING COMMITTEES OF THE BOARD OF TRUSTEES.

Trustees SHACKELFORD, JOHN, EDWARDS - - - - - Finance  
Trustees JOHN, HIHN, EDWARDS - - - - - Site

Vacancies in the Board were filled, as follows:

F. A. Hihn, term expired January, 1905, and reappointed by Governor Pardee for a term of four years:

Professor E. J. Wickson, term expired January, 1906, and reappointed for a term of four years;

Hon. S. C. Smith resigned July, 1905. George S. Edwards appointed 1905; vice Hon. S. C. Smith resigned.

## FACULTY.

The following instructors have been appointed:

1904—July 9—Miss Harriet Howell, Instructor in Domestic Art, from September 1, 1904, to June 30, 1905.

Nov. 18—H. Floyd Tout, Student Assistant in Arithmetic, from November 1, 1904, to June 30, 1905.

1905—April 29—The following reappointments were made, beginning July 1, 1905:

Sydney S. Twombly, Instructor in Agriculture and Chemistry.

Oscar Leslie Heald, Instructor in Drawing, Sloyd, and Forging.

Harriet Howell, Instructor in Domestic Art.

Edwin Walter Yount, Instructor in Carpentry and Architectural Drawing.

James Edwyn Roadhouse, Instructor in Plant Industry and Irrigation.

Naomi M. Lake, Clerk and Librarian.

New appointments were made on the same date for the ensuing year:

May Secrest, Instructor in Domestic Science and Matron of Dormitory.

LeRoy Burns Smith, Instructor in History, English, and Economics.

Herman Bierce Waters, Instructor in Physics and Electricity.

On the same date Jeanne Tout was appointed Assistant in English for two months, beginning April 15, 1905.

1906—Feb. 3—Chester Wirt Rubel was appointed Instructor in Animal and Dairy Industry, from December 1, 1905, to June 30, 1906.

May 21—The following reappointments were made, beginning July 1, 1906, to June 30, 1907:

Sydney S. Twombly, Instructor in Agriculture and Chemistry.

LeRoy Burns Smith, Instructor in English, History, and Economics.

Herman Bierce Waters, Instructor in Physics and Electricity.

Edwin Walter Yount, Instructor in Carpentry and Architectural Drawing.

Harriet Howell, Instructor in Domestic Art.

May Secrest, Instructor in Domestic Science.

Chester Wirt Rubel, Instructor in Animal and Dairy Husbandry.

James Edwyn Roadhouse, Instructor in Plant Industry and Irrigation.

Naomi M. Lake, Clerk and Librarian.

The following new appointments were made on the same date:

William Ferdinand Ewing, Instructor in Mathematics, from September 1, 1906, to June 3, 1907.

Leo Earl Pearson, Instructor in Forging, Sloyd, and Freehand Drawing, from July 1, 1906, to June 30, 1907.

Helena A. Smith, Manager of Dormitory, from July 1, 1906, to June 30, 1907.

## RESIGNATIONS.

Oscar Leslie Heald, as Instructor in Forging, Sloyd, and Freehand Drawing, to take effect July 1, 1906. [Accepted May 21, 1906.]

## CONSTRUCTION OF BUILDINGS.

*Forge Shop.*—The lumber was purchased by the school, and the major portion of the framing done by students in carpentry. Contracts were awarded for carpenter work erection to Stevens & Maino; painting to F. Tercis & Son, and plumbing to E. M. Payne, upon the report of the Committee on Site on its action on the following bids:

*Carpenter Work:*

Stevens & Maino.....	\$233 00
R. S. Aston.....	238 00

*Painting:*

E. N. Williams.....	\$133 00
F. Tercis & Son.....	112 00

<i>Plumbing:</i>		
Vetterline & Butcher		\$235 00
E. M. Payne		184 50

[Concurred in July 9, 1904.]

*Dairy Barn.*—The lumber for the dairy barn was purchased by the school, and the major portion of its erection done by students in carpentry. Contracts were awarded by the Committee on Site, as reported to the Board on April 29, 1905, to the Salinas Valley Lumber Company for mill work; F. C. Mitchell for concrete and mason work; E. M. Payne for plumbing; and E. N. Williams for painting, upon the following bids:

<i>Mill Work:</i>		
Salinas Valley Lumber Company		\$181 70
H. H. Waite		190 43

<i>Mason Work:</i>		
F. C. Mitchell		\$525 00
San Luis Contracting Company		752 80

<i>Plumbing:</i>		
E. M. Payne		\$311 00
Vetterline & Butcher		340 00

<i>Painting:</i>		
E. N. Williams		\$191 90
F. Tercis & Son		225 00

[Concurred in April 29, 1905.]

*Silo.*—The contract for excavation and concrete foundation for the silo was awarded to the San Luis Contracting Company, on the following bids, as reported by the Committee on Site:

San Luis Contracting Company		\$139 00
F. C. Mitchell		150 00

[Concurred in April 29, 1905.]

*Carpenter Shop.*—Bids for the construction of the carpenter shop were opened April 29, 1905, and found as follows:

<i>Mason Work:</i>		
San Luis Contracting Company		\$135 00
F. C. Mitchell		230 00

<i>Carpenter and Iron Work:</i>		
J. Maino & Son		\$2,200 00
John Darling		2,372 00

<i>Plumbing and Tinning:</i>		
Vetterline & Butcher		\$393 50
E. M. Payne		450 00

<i>Painting:</i>		
F. Tercis & Son		\$234 00
J. P. Lynch		238 00
E. N. Williams		296 60

Upon motion of Trustee Wickson, the contract for mason work was awarded to the San Luis Contracting Company for \$135; for carpenter

and iron work to J. Maino & Son, for \$2,200; for plumbing and tinning to Vetterline & Butcher, for \$393.50; for painting to F. Tercis & Son, for \$234.

*Power House.*—The Committee on Site reported having awarded contracts for the construction of the power house to J. Maino for carpenter work; to E. M. Payne for plumbing, and J. P. Lynch for painting, upon the basis of bids presented as follows:

*Carpenter Work:*

J. Maino .....	\$893 00
R. S. Aston .....	No bid
John Darling .....	No bid

*Plumbing:*

E. M. Payne .....	\$230 00
Vetterline & Butcher .....	240 00

*Painting:*

J. P. Lynch .....	\$100 00
E. N. Williams .....	125 45
F. Tercis & Son .....	118 00

[Concurred in September 25, 1905.]

*Domestic Science Building.*—Bids for the construction of the Domestic Science building were received and opened at a special meeting held February 3, 1906, and found as follows:

*Mason Work:*

San Luis Contracting Co. ....	\$4,597 58
Jos. Maino, San Luis Obispo .....	5,000 00
Wilbur E. Greene, Pacific Grove .....	3,627 00
Chas. M. Kuck, San Luis Obispo .....	3,315 16
F. C. Mitchell, San Luis Obispo .....	4,800 00
O. M. Magneson, Oakland .....	5,275 00

*Carpenter and Iron Work:*

Wilbur E. Greene, Pacific Grove .....	\$14,827 00
Jos. Maino, San Luis Obispo .....	18,340 00
Chas. M. Kuck, San Luis Obispo .....	14,665 00
O. M. Magneson, Oakland .....	21,450 00

*Plumbing:*

E. M. Payne, San Luis Obispo .....	\$1,900 00
Chas. M. Kuck, San Luis Obispo .....	2,090 00
Vetterline & Butcher, San Luis Obispo .....	1,616 00
O. M. Magneson, Oakland .....	3,050 00

*Tinning and Roofing:*

Panzer Hamilton Co., Los Angeles .....	\$1,875 00
E. M. Payne, San Luis Obispo .....	1,700 00
Chas. M. Kuck, San Luis Obispo .....	1,775 00
Vetterline & Butcher, San Luis Obispo .....	2,075 00
O. M. Magneson, Oakland .....	2,985 00

*Painting:*

Wilbur F. Greene, Pacific Grove .....	\$1,725 00
Extra oiling floor, \$185.00 .....	1,885 00
O. M. Magneson, Oakland .....	1,885 00
Chas. M. Kuck, San Luis Obispo .....	2,242 50
Extra oiling floor, \$315.00 .....	1,313 90
E. N. Williams, San Luis Obispo .....	1,313 90

*Heating and Ventilating:*

O. M. Magneson, Oakland—Fan system	-----	\$2,640 00
Direct steam	-----	3,150 00
E. D. Hough, Los Angeles—Fan system	-----	2,190 00
Direct steam	-----	1,350 00

Machinery and Electrical Co., Los Angeles—Fan system 1,590 00

Contracts were awarded to the lowest bidder in each case, viz:

Mason work: Chas. M. Kuck, \$3,315.16.

Carpenter and iron work: Chas. M. Kuck, \$14,665.

Plumbing: Vetterline & Butcher, \$1,616.

Tinning and roofing: E. M. Payne, \$1,700.

Painting: E. N. Williams, \$1,313.90.

Heating and ventilating (fan system): Machinery and Electrical Co., \$1,590.

