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# Maine Campus February 19 1907

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# THE MAINE CAMPUS

Vol. VIII

ORONO, MAINE, FEBRUARY 19, 1907

No. 17

## THE COURSE IN ELECTRICAL ENGINEERING.

(W. K. Ganong, Professor Electrical Engineering.)

The Electrical Engineering courses in the various technical institutions differ with the particular aims and conditions that surround them or upon which they are based; and the organization of the course for the best efficiency must be in accordance with the purpose of the school, the financial conditions, and the nature of the work which the Electrical Engineering graduate is called upon to do at present and in the future. There are particular conditions and circumstances at the University of Maine upon which the organization of the Electrical course is based to fit the needs of the future of the coming graduates; the details of the course are given on pages 66-69 and 128-129 of the university catalogue; but a general idea of what Electrical Engineering consists in college and out of college may enable the new students to better determine which engineering course is most appropriate to their character, ability, and liking.

The mere word Electrical has an interesting sound to some students and their parents; and to others the great activity and progress in the electrical field seems to indicate that this is the one line of work in which there is sure to be room for all in the future, and not likely on account of the great growth, to be overcrowded as the older engineering lines may be. Both of the above reasons are not what they seem; and they should have little weight in a decision to take an electrical engineering course. The one who is interested in the phenomena of electricity solely, rather than in the practical application of the same, should take up the study of electricity in an advanced course in Physics; the electrical engineer deals almost entirely with what is known, physical facts, and the practical

or useful application of the same to the construction of electrical machinery and apparatus, etc.; and the theories of the phenomena are left to the realm of Physics, except where the engineer takes the matter up further as a hobby, or if he is engaged in Experimental Engineering, for the pursuit of new facts for useful application and to solve certain problems, such as in the construction of electrical measuring instruments. For the one who takes an electrical course just because the future seems good, and irrespective of whether he is interested in the work or adapted to it, there is a great and uninteresting struggle ahead; and probably failure. There will always be room for the best men, but just as much so in the other lines of engineering work; and for the lower grade man the field is just as much crowded as in other lines of engineering; there is work for all, but the financial returns and enjoyment in the work are not exceptional in the electrical field.

For the average graduate in electrical engineering, the first two or three years after his college work, which might be called his freshman year in the outside world, are probably the most discouraging and the most severe years of his life; certainly so if he is not adapted to and interested in the work. These conditions that meet the new graduate are probably more severe in electrical than in either mechanical or civil engineering, and the financial returns for about the first two years are not much more than sufficient to cover living expenses; but the experience that the graduate is getting, and the opportunities at hand for self education, contain great value in laying the foundation for future success. The young man entering engineering work of any kind must remember that the fact of his being a college graduate and having a training in any line of engineering is not going to make life for him more comfortable or lessen the struggle of life; on the contrary it

is going to increase the struggle in the overcoming and conquering of difficulties as they appear and multiply with the active engineer; and it is for this that the technical training equips the young man so that he will get more out of the struggle and more out of life. It is this developing activity and the power to conquer difficulties that gives to the engineer the inspiration and the joy that is experienced by the football player who gets by difficulty after difficulty and is rushing with the ball behind the goal line. It is a strenuous life, and one must be physically and mentally strong to stand it; and he must have courage and grit to succeed.

The ideal training to fit a young man for such work consists of a four years' course in a general university education, followed by two years' work in engineering or technical training. This gives a general training and broadening of the mind as a basis for a thorough understanding of the engineering work of the last two years; and lays the foundation for a broader man and consequently a more valuable engineer. Higher engineering is a study of the development and operation of human machinery in addition to inanimate machinery; an engineer must know men, must know and appreciate the varied interests of men and communities, and must be a gentleman on equal footing with others in influence and in the general art of real living; rather than be an unfortunate freak of a man or a calculating machine. The opposite type of engineering education is what might be called the trade school method; where the broadening influence and the awakening of latent interests and abilities of the student are sacrificed to make room for purely technical subjects; this training better fits a man for his work for a few years, but limits his future in general; it has the flavor of a "get rich quick scheme"; and has no place in engineering education, but serves its purpose in other circumstances and conditions. A technical education or training is a matter of economy of time, in that it gives the average young man in four years what he cannot get himself in the outside world in several years, if at all; and as a general principle in organizing the work for an

engineering course in college, that which can be obtained in the outside world and better than can be given in college, should be left out and replaced by what can better be given in college; and cannot be obtained outside through lack of inspiration and opportunities; such work arranged for a systematic training and development gives the college graduate a foundation for becoming an engineer.

Students taking the electrical engineering course at the University of Maine cannot afford to spend six years at college to get the broadest foundation advisable, so that it is desired to make the four years' course as broad as possible in general culture studies, as broad and as good a foundation as possible in mechanical and civil engineering, and a firm foundation and efficient training in electrical engineering. After the four years spent at college there are opportunities open for the graduate to enter one of the testing courses of the large electric manufacturing companies; these testing departments are really large electrical laboratories on a practical basis, and as the graduate usually spends from one to two years in the same, it is equivalent to a two years practical post-graduate course if the student takes full advantages of the opportunities; in this way the four years at college can be given to a broader training at the expense of the expert technical work if necessary, when the student has the opportunity to get the practical work where it can best be given or obtained, and be paid for such education in addition, sufficient to cover his living expenses and in some cases, a little more. These testing courses are to the electrical engineering graduate what the hospitals are to the medical graduate; opportunities for active experience.

Records of the past show that all electrical engineering graduates do not go into purely electrical work; and all are not adapted to such. With the increase in the demand and manufacture of electrical machinery and apparatus, other types of technically trained men are wanted for engineering salesmen, for managers of departments and companies, and similar positions requiring organization ability and other characteristics which are not so essential for purely

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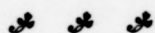
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expert work, but which makes the successful technical business man ; and in which the financial future of the young man is good. In a state institution, there is another reason for having the electrical course as broad as possible, in order to train the young men of the state for the type of work for which they are best fitted ; and a broad training in engineering can as well serve the technical expert as the technical business man. It does not necessarily mean that a student who may have a little difficulty with his mathematics is not suited to an electrical course ; he may make a good sales engineer, where the mathematician would be a failure ; while the mathematician could handle the purely expert work better ; and it is planned to arrange the electrical engineering course at Maine to allow the student to take that phase of the work for which he is naturally suited and which is most appropriate for his development.



#### TRIUMPH OF BRAIN IN FOOTBALL.

The football season of 1906 showed American play at its best ; and, in exhibiting the resourcefulness, the adaptability, and the alertness with which the native mind grasps the needs of a new condition, it threw also an illuminating side light on American character. 'Twas the most satisfactory year I have known in football, and the first in which I saw no unclean play. This is not to say there was none, we are not yet at the Pearly Gates, but there was astonishingly little of it. It was a year full of interesting development.

First of all, it proved beyond the necessity of further proof the wisdom of the new rule makers ; indeed, I do not think many realized until this last season's play how wisely the Football Rules Committee had legislated. They eliminated brutality, provided for the penalizing of foul play, and by the forward pass and on-side kick opened up strategic possibilities which Yale appears to have been the only team of the season to fully comprehend. And even Yale made only a beginning. The future is bright with prospects of brilliant development

along these lines. This season has emphasized the ascendancy of brain over brawn in no unmistakable manner, and it is a welcomed evolution. The results of the big games are an emphatic indorsement of the committee, and a sufficient reply to those who prophesied that the new code would result in confusion and scoreless effort. Teams and coaches and the public have all learned a lot during 1906 about football and its potentiality under rules that give brain an even chance against beef.

It would be expecting too much of cantankerous human nature to look for indorsement of the new play on all sides, and already we are hearing suggestions to lengthen the halves from thirty to thirty-five minutes ; to decrease the number of points for field goal, and to reduce the required ten-yard gain to five yards inside the twenty-five yard line. None of these changes would be an improvement, and the last would be distinct retrogression.

If the committee shows as much good sense now as it did a year ago, it will leave the rules just where they are. What the present game requires is at least another season's play along the same lines of 1906. It may be that another year will develop features requiring legislation, but if so the committee is competent to deal with them when the occasion arises. The only official action that seems pertinent now is one declaring that the rule calling for two umpires must not be tampered with.—Casper Whitney, in "The View-Point," in Outing Magazine.



#### INSPECTION OF FERTILIZERS.

The Maine Agricultural Experiment Station is now sending out the second of the bulletins on the Inspection of Fertilizers for 1906. The bulletin issued in March contained the analyses of the samples received from the manufacturers. The present bulletin contains the analyses of the samples collected in the open market by the inspector.

This bulletin (134) will be sent free to all residents of Maine who apply to the Agricultural Experiment Station.



## THE MAINE CAMPUS

Published on Tuesday of each week during the college year by the students of the University of Maine.

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BANGOR CO-OPERATIVE PRINTING COMPANY

## EDITORIALS

Congratulations, Dr. Fellows, on your masterly and thoughtful speech, given before the legislature. Whether or not we get the appropriation asked for, the student body appreciates the fact that you have done all in your power for our dearly beloved Alma Mater, and the CAMPUS extends its best wishes that your efforts will be rewarded.

At the last meeting of the Executive Committee of the Athletic Association, it was defin-

ately decided to hold an Ice Carnival on the river, on the evenings of March 1 and 2. There is no reason why this new feature should not prove a grand success, and we hope every student will consider this a just obligation due the Athletic Association, and so assist in every possible way to make the Carnival a success, both from a social and financial standpoint.

There has been a strong feeling existing at the University for the past year or so that there has been no body responsible for the advancement of the University from a student standpoint, and that at times the true University of Maine spirit was dying out.

For that reason, several members of the Senior Class met in the early part of the year, and after considering the situation decided to form a society composed of members of the Senior Class, fraternity or non-fraternity men, the members to be selected on a basis of popularity and college honors. That such a decision was wise is shown by the general approval of the 1907 class and also by Dr. Fellows and other members of the faculty.

The society adopted the name of "Senior Skulls" and is organized mainly for the purpose:—

1. To advance the interests of the University of Maine in every way possible.
2. To preserve and continue all old customs sacred to the graduates, and adopt any new customs which seem to be for the best interests of the University.
3. To assist the Student Council in their work by means of a student sentiment in harmony with their rulings.
4. To entertain visitors whenever an opportunity presents itself.

5. To maintain a strong college spirit, and to keep alive the best interests of the college activities.

6. To interest "prep" school students in the work of the University, and to invite such students to visit the University on special occasions.

Members of the Senior Skulls, the CAMPUS welcomes your society among the student organizations, and sincerely hopes that your purposes may receive the good-will of the entire University.

### COLLEGE OF LAW.

One of the most interesting sessions of the Assembly at the University of Maine School of Law for the present year was held on Friday evening, when the question as to whether or not the State Capital should be removed from Augusta to Portland was thoroughly aired. Owing to the absence of several who were to take part in the program substitutes were many. This, however, did not detract from the interesting features of the debate, and the arguments were highly commended by those who had the pleasure of attending.

After a reading by J. F. Kierman and current events by W. P. Holman, Pres. Farnsworth appointed the following speakers on the main question: Affirmative, E. R. Monroe, Dr. A. J. W. Peters; negative, J. P. Finnigan, W. H. Holman.

The speakers for the affirmative most forcefully presented the commercial advantages, beauty of its natural attractions, social prestige, and the liberal offer of their favored city, while the negative speakers were as equally strong in their arguments for the retention of the state building at its present location, owing to convenience of the people of eastern Maine in reaching the capital city, the large addition to the state tax in the several counties, the sentimental associations that surround the present building and these gentlemen made a strong plea that if the capital should be changed Bangor should be its home.

The judges, Mr. Kiernan of Wareham, Mass., O. H. Emery of Bar Harbor and H. M. Brackett of Berwick, the two latter representing eastern and western Maine interests, rendered their decision unanimously in favor of the negative. After the debate, W. P. Hamilton, a critic, gave an interesting talk.

The Law School basketball team easily defeated the Association team of the Bangor Y. M. C. A. on last Monday evening by a score of 28-8. The Association team was outplayed at all points of the game.

Bridgham, Riggs and Landers excelled for the Law School.

#### LAW SCHOOL

Riggs, r f..... r f, Snow  
Anderson, l g..... l f, Ambrose  
Bridgham l f..... c, Finnegan  
Landers, c..... l g, Cornet  
Emery, Cartier, r g..... r g, Connors

Summary: Referee and Umpire—Keegan. Timers—Abbott and Jones. Scorer—John Buckley. Fifteen minute halves.

The St. Mary's basketball team defeated the Law School team in St. Mary's hall Tuesday night by a score of 38-12.

The work of the St. Mary's was superior to that of the lawyers.

A feature of the game was the goal which Anderson of the Law School threw from the lower end of the hall. He was in a difficult position when he threw the goal and when the audience realized what had been accomplished they cheered the player very loudly.

Scribner and Abbott did good work for St. Mary's and Anderson and Riggs excelled for the Law School.

#### ST. MARY'S (38)

Rogan, r f..... l b, Anderson, l  
Abbott, l b, 7..... r f, Bridgham  
McClay, c, l..... c, Saunders, l (2)  
Scribner, l f, 6 (8)..... r b, Emery  
Hardy, r b, 2..... l f, Riggs, 3

Summary: Referee and Umpire—Field and Keegan, alternately. Timers—Hogan and Cartier. Scorer—Grady. Fifteen minute halves.

The following officers have been elected by their respective classes for the present year:



1907

President—J. J. Keegan.  
 Vice President—C. G. Lewis.  
 Secretary and Treasurer—R. W. DeWolfe.

1908

President—M. H. Rideout.  
 Vice President—F. B. Burgess.  
 Secretary and Treasurer—T. Leary.  
 Executive Committee—E. R. Godfrey, E. D. Huntley, H. Gardner.

1909

President—J. F. Kiernan.  
 Vice President—C. G. Lewis.  
 Secretary and Treasurer—R. Fitz Randolph.



#### AN ACKNOWLEDGEMENT.

The Department of Education is indebted to Fred L. Savage, architect, Bar Harbor, Maine, for a complete set of plans for the new high school building, which Mr. Savage has made for Bar Harbor. Prof. Charles Davidson, professor of education, was so pleased with the description of these plans as reported in the newspapers that he asked Mr. Savage for a duplicate set, which Mr. Savage has kindly sent. We trust that these will prove the beginning of a valuable file of plans for school house architecture which will be serviceable to school committees as well as to the students who hope to do administrative work as principals and superintendents.



#### BIG CASH OFFER !!!

The 1908 *Prism* Board wishes to again call the attention of the student body to the request for grinds which was issued recently, and to supplement that request by the following announcement:

A series of three prizes of one dollar (\$1.00) each is offered for the three best grinds to occupy not less than one-half page; three prizes of fifty cents each for the three best short grinds to

occupy less than one-half page; a first prize of one dollar for the first best drawing, cartoon or caricature, and two prizes of fifty cents each for the next two best drawings or cartoons; all grinds to be handed in on or before March 10, and these prizes to be awarded by a majority vote of the 1908 *Prism* Board.

This offer is open to every member of the University, whether freshman, senior, or member of the faculty. By "grinds" is meant *anything* which is reducible to black and white, and which presents a humorous or sarcastic aspect of some event, character, or condition, of life at Maine during the past year. For example: a newspaper clipping, a souvenir postal card, drawing or caricature, snapshot, limerick or verse, a newspaper advertisement, a collection of scare headlines, letters or telegrams, etc. Grinds which show originality, which are developed, ready to send to printer or engraver, which are not mere statements of fact or two line quotations of instructor and student, are preferable. Be original, get up a cartoon illustrating some aspect of college politics or something which has never been noticed before.



#### ROUND TABLE RECEPTION.

The ladies of the Round Table held their most successful monthly reception of the year in the club room of the Library, last Tuesday afternoon, from 4.30 to 6.00 o'clock. That the receptions are becoming more popular was shown by the increased number of faculty and students who attended this reception.

The date of the March reception will be announced in a later issue of the *CAMPUS*.

The committee in charge of this reception consisted of Mrs. R. K. Jones, Mrs. W. D. Hurd, Mrs. G. D. Chase, Mrs. G. E. Tower, Mrs. W. J. Morse and Mrs. J. W. Carr. They were assisted by Messrs. J. H. Burleigh '07, A. C. Cayting '07, C. E. Davis '07, J. A. Gannett '08, G. P. Goodwin '07, H. G. Philbrook '07, A. P. Rounds '07, W. F. Schoppe '07, G. L. Smith '08, A. W. Totman '07 and Miss Helen F. Steward, '08.

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## LECTURE BEFORE THE MECHANICAL AND ELECTRICAL ENGINEERING SOCIETY.

On Friday, Feb. 8, the Mechanical and Electrical Engineering Society secured Mr. Bennett of the Fairbanks Scales Co., of Bangor, to lecture on the methods and practice of drawing room work with large structural companies. Mr. Bennett proved a most interesting talker and included in his remarks many points in drawing room economy of time and labor which will be of value to any of his audience who go into that line of work. He also spoke of the qualifications which make a good draftsman, chief among which is the ability to simplify the work and do in small space work which another would take several drawings to do. The practise of the big drawing rooms is to keep a man continually doing the part that he can do best and while this leads to great efficiency it does not work for the benefit of the man who is not prepared to take a higher position knowing only one special kind of work.



## COLLEGE ASSEMBLY.

The first in a series of two formal college assemblies, was held in the gymnasium, Friday evening, Feb. 8, and judging from previous affairs of this kind, was highly successful.

The committee in charge showed rare ability in their effective decorative scheme, and every detail had been carefully attended to, so that nothing came up to mar the good time. Pullen's Orchestra rendered an excellent program of dance music.

The committee in charge were: Geo. P. Goodwin, F. Hosmer, P. Swift, A. Totman, W. Black, H. H. Keirstead, S. Bird, E. Harlow, J. Matthieu, A. Rounds, E. Druery, and R. Gellerson.

The reception committee consisted of Prof. and Mrs. Hurd, Mrs. Ballentine, Prof. Boardman and Geo. P. Goodwin, '07.

## PHI KAPPA PHI HONORS.

According to the custom, the five seniors having the highest average for the first three and a half years of their course have been elected to Phi Kappa Phi, the honorary society. The following five were announced Thursday: Marion Balentine, Orono; Francis M. A. Chaffin, Upton, Mass.; Elmer G. Hooper, West Lynn, Mass.; Arthur R. Lord, Ipswich, Mass., and Howard C. Stetson, Auburn. Miss Balentine had an average rank of 96.1 for the first 3½ years of her course, the highest ever taken by any student in the University of Maine.



## MUSICAL CLUBS.

During last week the musical clubs made a very successful trip in Washington county, giving concerts in Ellsworth, Cherryfield, Machias, Eastport and Calais. The clubs have made a good reputation everywhere they have been this year, and are a great credit to the institution. The following men were taken on the trip: Mgr. Fellows '08, Bird '07, Hodgkins '07, Pennell '07, Talbot '07, Barrows '07, Tremaine '07, Barker '10, Hilliard '08, Sturtevant '08, Cram '09, Harvey '07, Kimball '09, Morrison '09, Nash '09, Knight '09, Coleman '08, Roberts '09, Richardson, '09, Eaton '10, Fassett '10, Isrealson '10, Parker '10, Phinney '10, and Boyle '08.



## HOCKEY.

On Washington's Birthday Maine meets Bowdoin in the first intercollegiate hockey game ever played at Maine. The bleachers on the athletic field are to be placed on the ice surrounding the rink to accommodate the spectators. As this is something entirely new in the line of athletics in the state, a good attendance is expected. At least every man in college should see the game. Any game with Bowdoin is sure to arouse a good deal of interest among the student body and all who attend will not go home disappointed. The game will be called at three o'clock.



## LECTURE BY MR. BREED.

On Monday afternoon the civil engineering students in the junior and senior classes were excused from college work to attend a lecture by Mr. C. B. Breed of the Massachusetts Institute of Technology. Mr. Breed is one of the authors of the text book in Plane Surveying which is used in the civil course and has had a wide experience both in teaching and in practical work. His subject was the track elevation of the railroads running into Chicago on which work he was a consulting engineer for a number of years. The lecture was illustrated with stereopticon views, and was most admirably delivered being easily one of the best lectures of the winter courses.

The subject was one of great interest to the civil engineering students, many of whom will probably engage in similar work in the near future. The conditions in Chicago are essentially different from those in the east. There the elevation of the tracks and a specific manner of accomplishing it, are required by a city ordinance and the expense is borne entirely by the railroads. The slides were well chosen to show all the various stages of the difficult engineering feats involved and the lecturer outlined many methods of practical value to young engineers.

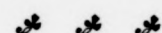
The grade crossings of Chicago have been famous for the accidents which have occurred on them, about 3000 people being killed annually. Even with over one-half of the crossings already abolished, the number has decreased very little and the work is being rushed. In general effect and in many of its engineering features the work lacks the beauty and consideration of public comfort found in similar work in New England.



It was announced at Columbia university recently that President Roosevelt had received a letter from the French ambassador at Washington, J. J. Jusse-land stating that the decoration of the Legion of Honor had been conferred upon Prof. Brander Matthews of Columbia university, in recognition of his services to literature in connection with the study of the French drama.

## EXECUTIVE COMMITTEE MEETING.

The regular monthly meeting of the executive committee of the Athletic Association was held on Monday evening, Feb. 11. The hockey team was authorized to play under the name of the University in the two games with Bowdoin. The sub-committee on baseball was authorized to close contract with Mr. Fitzmorris as coach for the coming season. Mr. Jewett, '09, handed in his resignation as manager of the tennis team. A plan was introduced for an ice-carnival to be held some time this winter, probably during the very first of March. Prof. Gilbert was appointed chairman of a committee to have the matter in charge. It is hoped that it will prove a financial success for the association.



## Y. M. C. A.

The mid-week meeting, of the Y. M. C. A., was led by Bernard P. Chandler, '09. The subject, "Finding Good in Nature," was very ably discussed and many helpful suggestions were given. After the prayer meeting a short business meeting was held, at which several names were added to the roll.

A canvass of the student body, such as was spoken of in the college meeting held in chapel a short time ago, has been started, and it is hoped that a large increase in membership will result, and also before the end of the year, that the Maine Y. M. C. A. will hold a place here, that the Y. M. C. A. holds in other large universities.



The Harvard University catalog recently issued shows a total enrollment this year of 6,245, an increase of 265 over last year's figures. The registration in the graduate school of arts and sciences, the law school and the dental school shows a slight decrease. The registration of the Lawrence scientific school shows a large decrease, and that of Harvard college a large increase, but this is due to the new rule which allows students to register in Harvard college for the degree of bachelor of science.

The debate Library subject that has Society as follow

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Affirm A. B. F. W. A. M.

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### TRIALS FOR COLBY DEBATE.

The first of the trials for the Maine-Colby debate were held in the Lecture room of the Library building on Thursday evening. The subject which was debated upon was the same that has been submitted to the Colby Debating Society for the coming collegiate debate, and is as follows:

RESOLVED: That the government of the United States should restrict foreign immigration.

The debate was a very enthusiastic one, all of the speakers showing a broad knowledge of the question. The debate was particularly interesting because of the fact that all of the speakers were freshmen. It is gratifying to know that there is such good debating material in the freshman class, and it is very evident that they will give the upper-classmen a hustle for positions on the 'varsity team. The sides of the question were taken as follows:

Affirmative.

R. W. Redman, '10.

J. J. Rose, '10.

Negative.

R. W. Tobey, '10.

C. C. Johnson, '10.

On next Thursday evening the Bates question will be debated by four Sophomores. The speakers who have been chosen are:

Affirmative.

A. B. Patterson, '09

W. A. Fogler, '09.

Negative.

B. A. Chandler, '09

G. F. Barron, '09.



### NEW RULES FOR TIME WORK.

The following rules have been adopted by the faculty:—

Time work in arrears shall be made up under an approved tutor, the expense being borne by the students and the amount may be placed on the term bill; or time work may be made up during the term in which the work is in progress without expense to the students, if the facilities are such that it is possible, and provided that such an arrangement does not require the instructor to be present an extra amount of time. If the arrearage should not be made up by the time the course is next offered,

no credit will be allowed for the work already done and the course must be repeated in the regular class. Students absent from time work by permission of the Faculty, granted at the request of an instructor, must, in order to receive credit, show that they have completed the work of the course in a manner satisfactory to the instructor, but they are not required to make up actual time lost during the period that they are excused by the Faculty.

In the granting of permission to be absent from college exercises to members of the student organizations the following rules have been adopted:

In the Fall Term permission may not be granted to candidates for the football team to be absent from college exercises before four o'clock from the beginning of the term until November 1, and before 3.30 o'clock after that date.

In the Spring Term permission may not be granted to candidates for the baseball teams to be absent from college exercises before 4 o'clock.

In cases where students have time work in any department until 5.30 o'clock one day a week only, they shall remain for the full time. In cases where such time work occurs on two afternoons a week, students are required to remain for the full time on one of these days, and may be permitted to be absent for athletic training at the time designated above on the other afternoon. For all such absences as above full time shall be made up in accordance with the rules given above.



### LOCALS.

Mr. Grover, H. C. Stetson, '07, and W. A. Cobb, '08, recently made a preliminary survey at Lincoln. It is contemplated putting in a water system at that place.

F. F. Smith, ex-'08, has returned to college, coming direct from Glendive, Montana, where he has been employed in the U. S. R. S.

Metcalf, ex-'10, is at present in the employ of the Milford Power Co., at Oldtown.

Another state club has been formed by the students here at the University from New Hampshire, and the following officers elected: President—E. W. Philbrook, '07; Vice Pres.—L. Pike, '09; Sec. and Treas.—L. J. Reed, '07. A constitution will be submitted at the next meeting, and the club will no doubt gain a high place among the sectional clubs.



## CALENDAR.

TUESDAY, FEB. 19, 1907.

- 12.45 P. M. Glee Club rehearsal, Alumni Hall.  
 3.45 P. M. Hockey practice, University Rink.  
 4.30 P. M. Basketball Team practice, Gymnasium.  
 Mandolin Club rehearsal, Alumni Hall.  
 7.30 P. M. Band rehearsal, Chapel.

WEDNESDAY, FEB. 20.

- 3.45 P. M. Hockey practice, University Rink.  
 4.30 P. M. Basketball Team practice, Gymnasium.  
 Chemical Club meeting.  
 (Lecture by Prof. Aubert), Fernald Hall.  
 Band rehearsal, Chapel.  
 6.45 P. M. Y. M. C. A., Library Building.  
 7.00 P. M. Glee Club rehearsal, Alumni Hall.  
 7.30 P. M. Agricultural Club Meeting, Holmes Hall.

THURSDAY, FEB. 21.

- 12.45 P. M. Glee Club rehearsal, Alumni Hall.  
 3.45 P. M. Hockey practice, University Rink.  
 4.30 P. M. Basketball practice, Gymnasium.  
 Mandolin Club rehearsal, Alumni Hall.  
 Band rehearsal, Chapel.  
 7.30 P. M. Debating Club Meeting, Library Building.

FRIDAY, FEB. 22, 1907.

- 10.00 A. M. Hockey practice, University Rink.  
 7.30 P. M. University Band Concert, Town Hall.  
 Orono.

SATURDAY, FEB. 23.

- 11.00 A. M. Press Club meeting, Library Building.  
 1.30 P. M. Dramatic Club rehearsal, Coburn Hall.  
 3.30 P. M. Hockey game, Maine vs. Bowdoin, University Rink.

SUNDAY, FEB. 24.

- 3.30 P. M. Y. M. C. A., Library Building.

MONDAY, FEB. 25.

- 10.00 A. M. Track Team practice, Gymnasium.  
 2.30 P. M. Track Team practice, Gymnasium.  
 4.30 P. M. Basketball practice, Gymnasium.

## ALUMNI.

'97

Mr. H. E. Stevens has been appointed Bridge Engineer for the Northern Pacific Railway Company, with headquarters at St. Paul, Minnesota.

'03

R. F. Chandler has just left the employ of the Berlin Mills Co. of Berlin N. H. to accept a position with the Jeffery Mfg. Co., Columbus, Ohio, as detailer.

'05

At an "At Home" given to the ladies of the faculty of Kent's Hill Seminary in Blethen Hall recently by Mrs. Berry, the engagement of Miss Lillian Eunice, second daughter of President and Mrs. Berry, to Mr. Carl D. Smith of St. Louis, Mo., was announced. Mr. Smith went from Skowhegan to Maine, graduating in the class of 1905. He is with the U. S. Coal Testing Works at St. Louis, the only institution of the kind in the United States.

'06.

L. C. Nichols, who has been staying at the S. A. E. house recovering from an injury he received in the works of the Stanley Electric Co., in Pittsfield, Mass., where he is employed expects to be out soon.

Gerry L. Brooks, of Upton, U. of M. Law, '06, has opened a law office in Portland.

## LOST!

In the Gymnasium, on registration day. Will the student to whom Professor Davidson loaned his Waterman Fountain Pen kindly return it at once, or leave it at the office for him? For personal reasons, the pen is especially valued.

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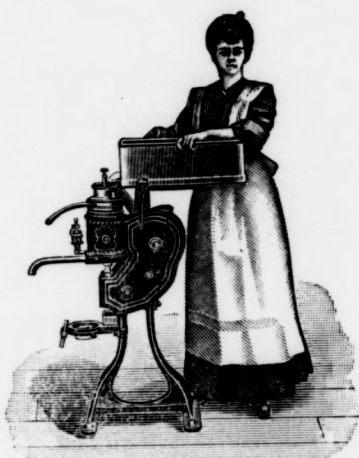
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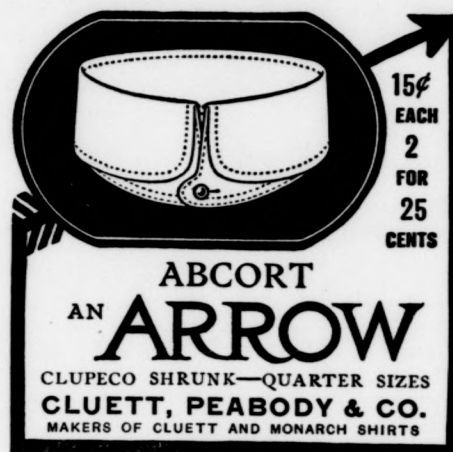
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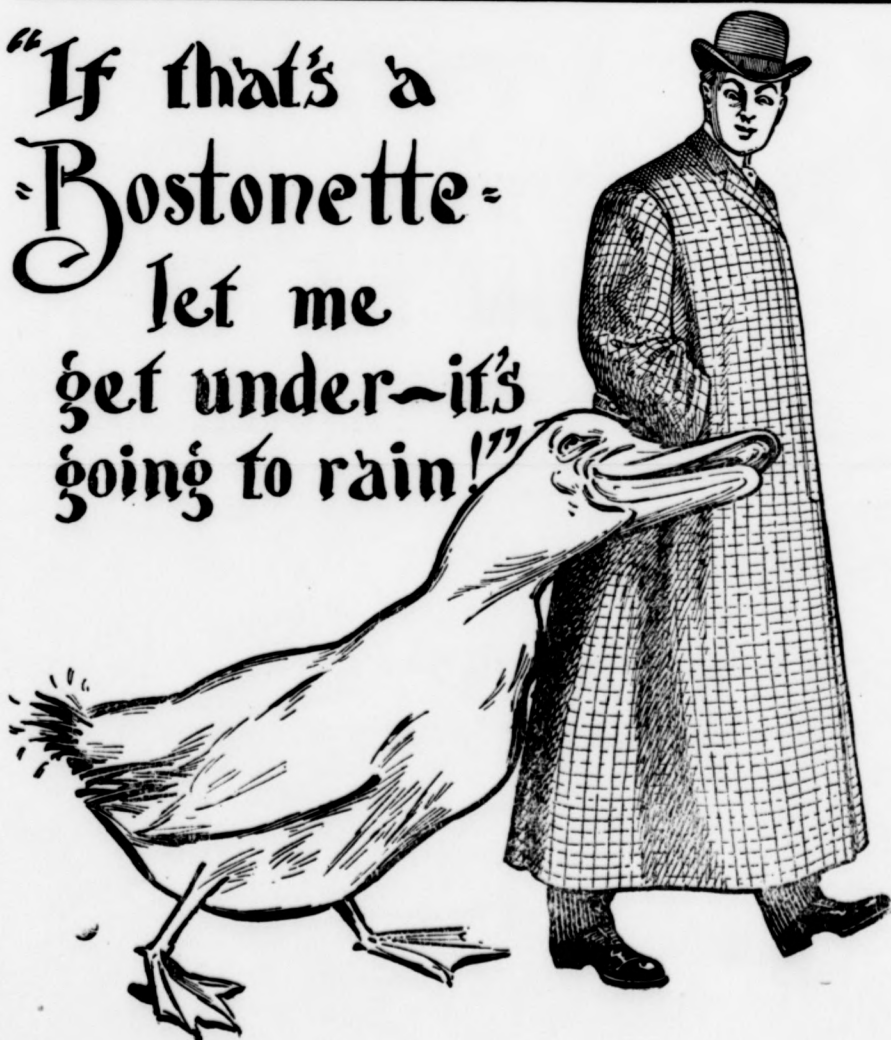
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# SPEECH

OF

Pres. George E. Fellows

of the

University of Maine

BEFORE THE

Committee on Education

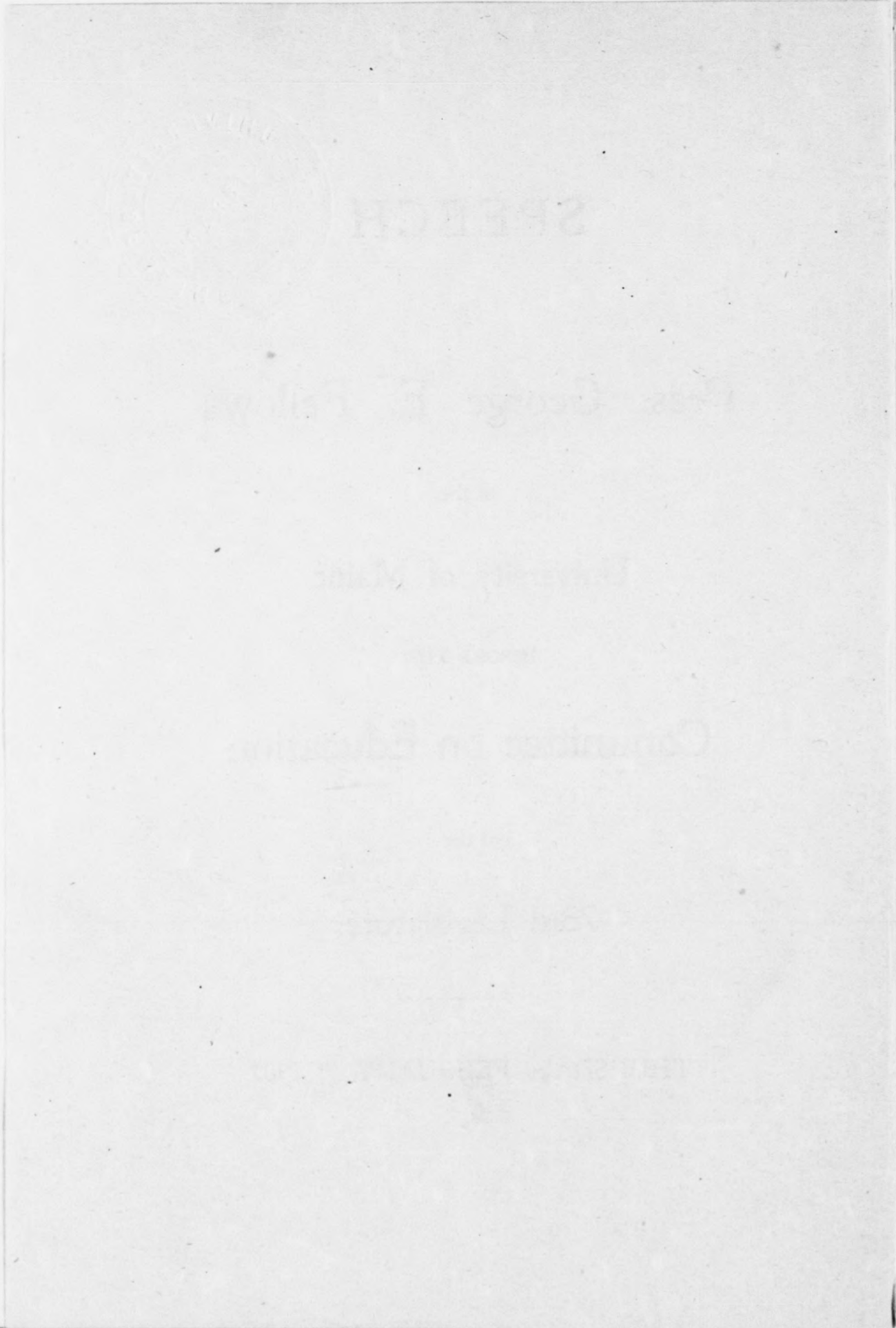
of the

73rd Legislature

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THURSDAY, FEBRUARY 7, 1907





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Gentlemen of the Committee on Education:

I appear before you to urge a favorable consideration of a bill which is to provide an adequate support by the state for its University. This is a broad question of progress and civilization and involves much more than merely a question of an appropriation of money. The action of the Legislature on this matter will mark an epoch in the history of Maine. It is a matter which distinctly involves the honor of the State and which will ultimately express to the whole world the policy of the state of Maine toward that most important of topics, public education.

**IMPORTANCE  
OF THE  
QUESTION**

In the evolution of the democratic idea of government, education early found a place. Very early in the history of this country, public primary schools were established. New England took the lead in favoring higher education of a certain type, chiefly under the patronage of religious denominations. The next general development, in the nineteenth century, was characterized by the establishment of secondary schools, both of private and public nature. In recent times the academies of private or semi-private character have even in New England largely given way to publicly supported high schools, and in the remainder of the United States secondary education is almost entirely supported by the public.

**PRIMARY  
SCHOOLS**

**SECONDARY**

Prior to the Civil War most of the educational institutions of higher grade were either privately endowed or of the denominational type. It is true that a few states had established, at least in name, State Universities, but no one of them was large enough to attract any considerable attention, even in its own state, until after 1860. Although thirteen of the present

**STATE  
UNIVERSITIES**

State Universities were established before the Civil War, the general movement for higher education,—and this is said advisedly,—the general movement has all been since the passage of the first Morrill Act of 1862. This called into existence a public institution supported by Nation and State, in every state and territory of the Union. In a few instances the new institutions were attached to those already in existence. In a large number of instances the new institution was attached either to the already existing State University, or has since grown through natural causes to be itself the State University. Some states are now supporting one institution and some are supporting several. However, the best educational authorities agree that those states are most fortunate where the whole of the higher educational interests are concentrated in one institution. Maine at present is among those fortunate ones.

**MAINE  
IN BEST  
CLASS**

In form and organization of its State University, Maine should be congratulated because she belongs in a class with Nebraska, Illinois, Ohio, Minnesota, California, and others where the Land Grant College established under the Act of 1862 has grown up into the State University and centered in itself the higher educational interests belonging to a University, and including all the features provided for in the Morrill Act.



We are all proud of the State of Maine. Her peculiarly rich and varied physical conditions, consisting of forests, water powers and agricultural territory, are more like the northern states of the middle and far west, such as Michigan, Minnesota, Wisconsin and Washington, whose pioneers were large-

**MAINE'S  
DEVELOPMENT**

ly men from Maine, than like the other states of New England. Neither does the similarity end here, for the energy of the pioneer has developed Maine, and has developed it in the past few years with the rapidity of a western state.

Railroads are pushing up through our forests; pulp and paper mills are being erected; our wonderful water powers are being forced into public service with a rapidity heretofore unknown in a New England state. Maine, then, for many reasons should look to the most rapidly developed and most prosperous of the western states for comparison, rather than to the other states of New England whose conditions are now, and always have been, vastly different

**LIKE  
WESTERN  
STATES**

from those of Maine. It then follows in logical sequence that educationally Maine should be compared with these rapidly moving western states. The Land Grant Colleges in Connecticut, Rhode Island, Vermont, and New Hampshire, were originally attached to already existing institutions. Maine and Massachusetts each established a separate institution. The fact that the great Harvard University existed in Massachusetts has been, up to the present, and probably will be for the future, sufficient reason why the Land Grant College in Massachusetts should not develop into a University. But even while recognizing this probability, to minds trained in watching for significant omens, the fact that the Massachusetts Agricultural College has within a few days taken active steps towards the establishment of a normal department and has already established a chair of humanities, is pregnant with promise for the future development of that institution along the very lines which Maine has already so successfully moved. Gentlemen, progress is in the air. It may be retarded, but it cannot be prevented. To repeat again, we must call attention to the fact that the conditions in Maine are more like those in the west. There was need, and there is still need, of a University which should offer to the public all the subjects contemplated in the Act of 1862. Your predecessors perceived this, and honored themselves when they broadened the scope of your State College.

I am compelled to digress from the only real question at issue, viz., an adequate provision for the University, and must reluctantly speak for a few moments on a question which has no business to be discussed in this connection, and which has never been raised until four years ago when the same instrumentality which now seeks to divert attention from the real question, introduced a rider to an appropriation bill, providing that Greek and Latin should be dropped. Some of you gentlemen will recall that this was buried

**PROPOSITION  
TO CRIPPLE  
THE UNIVERSITY**

by a vote of 80 to 16. This proposition, which strangely enough seems to have been taken seriously by a few, when reduced to its simplest terms is to make liberal appropriation for the technical and agricultural functions of the institution in exchange for the abolition of the liberal arts courses and the B. A. degree, thus placing Maine's University in an absurd light before the educational world. Fortunately the large majority of facts and figures lie upon the side of Maine as she now is, and it may interest you if I rehearse a few of these regarding other state institutions and the B. A. degree.

B. A.  
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Forty-one states maintain State Universities or Colleges which confer the B. A. degree, leaving only five states which fail to maintain such institutions. These five lonely states are Connecticut, Maryland, Massachusetts, New Hampshire and Rhode Island. Connecticut College has been separated from Yale only since 1881; and Rhode Island College from Brown since 1888; and New Hampshire College from Dartmouth since 1893; in each instance a period of years so brief that it is yet too soon to be safe in affirming what the ultimate policy is to be.

The state institutions of Arkansas, Illinois, Florida, Kentucky, Louisiana, Maine, Ohio, Pennsylvania and Washington, did not originally confer the B. A. degree, but each of these has conformed to the general practice and now grants it.

No state institution which has ever conferred the B. A. degree has discontinued it. If it were abolished in Maine this would be the only State which has ever taken this backward step. Does Maine wish to go over to the insignificant minority, or remain with the majority which stands for progress?

Of the state institutions which confer the B. A. degree, there were seventeen in existence at the time of the passage of the Land Grant Act, while twenty-four have been established since that time, so that the State of Maine has done only what twenty-three other states have also done in the same period.

Many State Universities have gone through a period of active hostility, on the part of private institutions, to liberal support by the state, but it is a significant fact that so far no private institution has ever failed to prosper on account of the increased importance of the state institutions. This is illustrated in Maine by the forty per cent. gain of its three other colleges in the past ten years, as well as by such typical cases as Colorado College (a private institution) and Denver University in Colorado; Northwestern and Knox in Illinois; De Pauw and Wabash in Indiana; Cornell in Iowa; Columbia in New York; Western Reserve, Ohio Wesleyan, and Oberlin in Ohio; the University of Pennsylvania—a private institution—and Lafayette in Pennsylvania; and Beloit and Lawrence in Wisconsin. This list can be extended indefinitely by expert investigation, and the results will bear out my statement. Nor, on the other hand, has the establishment of successful private institutions been prevented by the prior existence of state institutions, as is shown by Stanford in California; Chicago in Illinois; Iowa College—a private institution—in Iowa; Washington University in Missouri; Syracuse in New York; Lehigh in Pennsylvania; and Vanderbilt in Tennessee. In our State, increased prosperity of the State University has been accompanied by a much larger attendance at the three private colleges of the State, and the benefactions to at least two of them have been larger in recent years than ever before in the same length of time. If there is any inequality in their growth, it is much more likely to be from competition between themselves, or some defect in administration, than the effect of the development of the State University.

I have made a careful study of this matter and now refer to it at some length, because it has been urged by a few interested parties that the University of Maine should confine itself to agricultural and other technical work. I must emphatically call your attention to the fact that the instances are very



rare where agriculture and the engineering departments have been built up successfully without the symmetrical growth of the whole University. This is one of the most obvious reasons why forty-one out of the forty-six states maintain institutions granting the B. A. degree. In our own University the

#### **GROWTH OF AGRICULTURE**

agricultural department has grown immeasurably faster since the broader development of the University than it ever did before. The same is true to a far greater degree in such Universities as Wisconsin, Minnesota, Nebraska, Ohio, Missouri, and others where the development in agriculture has invariably followed the development in the liberal arts departments. The most conspicuous example being that of Illinois, which first imposed upon her Land Grant College the name "Illinois Industrial University." As no prosperity followed the founding of this institution, the trustees and the legislature, seeing that the failure was largely due to the absurd and meaningless title, changed it to the University of Illinois, and at the same time added all of the departments necessary to make it a University, since which the growth of the agricultural and engineering departments has been colossal.

Maine has committed herself to the educational policy of a State University. If she alters that policy she will be retrograding. On several occasions the Legislature of Maine has, distinctly and positively, gone on record against reducing the institution in any manner. As is well known, in 1880, an attempt was made to cut from the curriculum certain subjects and make the institution an agricultural and mechanical school rather than a college. This was voted

#### **MAINE COMMITTED TO POLICY**

down overwhelmingly. In 1897, after a report distinctly hostile to the idea of having a State University, the Legislature changed the College into a State University and made a ten-year appropriation. No other money was appropriated until 1903, when \$35,000 was given for building a mechanical laboratory and shops. In 1905, to enable the University to exist until the expiration of the ten-year appropriation, an additional appropriation of \$12,000 a year was made for two years, without a dissenting voice. The only time when it would have been practicable to consider the policy of maintaining the Land Grant College in a form less advanced than that of a State University, would have been in 1897. That time has now passed. Conditions have vastly changed. The number of students has more than doubled and almost trebled since then. We now have our B. A. alumni to consider as well as those students who have recently entered for the courses in Liberal Arts. We can scarcely afford to break faith with these people. Moreover we have in our faculty men who cast their lot with us as a State University. Many of these would never have engaged in a technical school

#### **GOOD FAITH**

or an agricultural college. They came to us in good faith believing us to be what has been publicly stated for ten years, a State University. You can easily see, gentlemen, that the situation is complex, combining as it does duties to our alumni, to our student body, and to our faculty. Our business integrity is in the balance. Furthermore, the State is firmly attached to the idea of a State University. The suggestion of reducing the University of Maine by cutting off its B. A. courses, if carried out at this late date, would make Maine so conspicuous in the whole galaxy of states, and in such an undesirable manner, that I doubt if any one of its citizens, after sober thought, could tolerate it.

A committee was appointed by the last Legislature to inquire into the "just obligations of the State to the University of Maine." These reports are now before you.

The substance of the majority report is contained in two paragraphs.

**MAJORITY  
REPORT**

"The 'just obligations of the State toward the University of Maine,' are to care properly for the students who are in attendance, to secure competent faculty, adequate equipment of apparatus and buildings, with a reasonable view to the present and the future.

"As this is a State institution it is the opinion of your committee that it should be placed upon such a financial basis that it will not be obliged to go to the legislature each session asking for maintenance, but should receive such an income at your hands as to place it on a financial standing equivalent to institutions of a similar character in other states, in proportion to their valuation and population."

This majority report covers the whole subject in two and one-fourth pages. *The minority uses twenty closely printed pages to strongly commend the University, and at the same time recommend that it be abolished.* In other words they wish to eliminate the features which make it a University; they wish to take away the B. A. degree and courses leading to it; and their whole argument is based on the unwarranted assumption that these courses are "inferior."

Page 21 of the Minority Report, beginning with line 5, says: "The courses terminating in the degree of Bachelor of Arts are at present necessarily inferior to those of the other three colleges. The President of the University, with natural loyalty to his institution, denies that this is so, but it must be so, etc."

**MINORITY  
REPORT**

Gentlemen, if I were to answer this in detail I should be compelled to produce facts which would be derogatory to the colleges. But I have no animosity toward them; I entertain the warmest feeling of friendship for them, and would refrain from any criticism whatever. But I do here publicly protest against a bald untruth put forth in a public document, and, in addition to this, being told that what I say is untrue; that it "must be" untrue merely because certain persons wish it to be untrue. The only reason given to support their assertion has been that they "must be inferior" because at one college the classical courses have been taught for one hundred years, and at another almost one hundred years, and at yet another nearly fifty years.

In all seriousness I wish to ask you a few questions. Does the mere length of time which anything has been done necessarily make it superior? Is not much of this time spent in evolving new methods and more modern appliances which even a young teacher can master and use immediately, or a young institution adopt? Is not the superior college the one best able to engage the services of the best trained men, the one in whose laboratories are to be found the most advanced methods and the latest appliances; the one whose libraries have the widest range of the best old and the best new? The quality of a college course, gentlemen, depends upon the education, experience and ability of its teachers and the necessary apparatus and other material equipment, and in all of these respects the University invites investigation

**NOT  
MERE AGE**

and comparison down to the minutest detail.

The above line of argument would obliterate such courses as electrical and chemical engineering anywhere, for these courses were unknown a few years ago. It would eliminate nearly all scientific knowledge of agriculture itself.

The same argument, if it deserve the name of argument, would also distinctly say that the courses "must be inferior" at Cornell, at Johns Hopkins,



at Clark, at Wellesley, at Smith College, at the University of Chicago, at Syracuse University, at Leland Stanford, at the University of Michigan, and a dozen other of the foremost universities of this whole United States which are as young as the University of Maine.

**DUTY OF  
STATE  
UNIVERSITIES**

The business of the State University is distinctly different from that of other universities or other colleges, inasmuch as in addition to the usual curriculum its purpose is to give its students scientific education along all practical lines as well as disseminate so far as possible the same knowledge to all of the people in the State. Most of you are familiar with the relation of our Department of Agriculture to the farmers of the State. We furnish them bulletins and information in other forms on matters pertaining to practical questions of farming. We should sustain exactly the same relation to every occupation in the State, and so far as our facilities permit us we are ready to furnish information, or to send on occasion special advisers from the University to study local problems. We should, for example, have in Maine what has been established in several other states, an engineering experiment station, where problems relating to sewerage, reinforced concrete, Portland cement, hydraulics, peat, and various mineral interests, could be considered.

**ENGINEERING  
EXPERIMENT  
STATION**

A few days ago I was talking with a warm friend of the University, and took occasion to tell him how much more other states gave for their State Universities, in proportion to the wealth of the State, than did Maine. He was interested, but made the following reply: "Of course that is much more than Maine does, but in those states the State University is the only institution, is it not?" I must confess that I was greatly astonished at such a question, but upon more careful thought I decided that probably there might be many friends unacquainted with the following facts.

It may surprise you to learn that there are but two states in the entire Union which have a State University and no other college. These two states, gentlemen, are Idaho and Wyoming. Except these there is no other state in the Union having a State University which does not have as many as or more colleges of good standing, in addition to the State University, than does Maine. There are only two which have as few: viz., North Dakota and Utah.

**NUMBER  
OF  
COLLEGES**

In addition to the State University, Iowa has some 24 colleges; Illinois, 28, two of them being the University of Chicago and Northwestern University, each enrolling about 4,000 students. Ohio has, in addition to the State University, over 30 institutions giving college degrees; Michigan has 10; Louisiana has 6; Kansas has 19; Indiana has 15; Georgia has 11; Florida, 4; Arkansas, 6; Colorado, 5; North Dakota, 3; Nebraska has 9 other institutions with 3,000 students, as well as the State University. This State should be especially noted, as the valuation is just about the same as that of Maine, and the University is provided with a whole mill tax. The nine other institutions have an average of more than 300 students each. Wisconsin has 8 other institutions, with 2,000 students; the state of Washington has 6, with upwards of 1,200 students; Utah has 3, with 1,000 students; South Dakota has 6, with over 1,000 students; North Carolina has 14, with over 3,200 students; Oregon has 8, with 1,300 students; Missouri has 20; Minnesota has 8.

The impression then that there are more colleges for the population in Maine than in other states, is contrary to fact.

Let us assume for a moment that you agree that the University merits a liberal appropriation. What is the best method of making it? There are

**THREE  
METHODS OF  
APPROPRIATION**

but three possible methods: i. e., biennial appropriation, annual appropriation for a term of years, and an appropriation based on the valuation of property. It is the unanimous opinion of the Boards of Trustees and the administration of at least twenty-one of the State Universities and colleges, that the appropriation based on the valuation of property, commonly called the mill tax, is the best method for the support of such institutions.

After President Eliot, no University president in the United States is and has been so conspicuous as President James B. Angell of the University of Michigan. He is regarded as an authority on educational questions, to say nothing of his great interests in other fields of activity. Michigan, some years ago, adopted the principle of supporting the State University by a mill tax. I have a letter from President Angell, under date of January 30, 1906, in which he says regarding the mill tax:

"A University needs to know what is to be its policy for some years to come if it is to organize its work wisely, and it cannot do that without knowing what its income is to be, that is, approximately. The mill tax furnishes that assurance.

President Merrifield of North Dakota, in a letter of the 29th of January, 1906, says:

"Our two-fifths mill bill was passed in 1897. It worked so well that after four years' trial the legislature of its own accord placed all the State educational institutions on the same basis, appropriating a mill each year for the support of them all. The University still retains its provisional share of two-fifths of a mill. No consideration

**MILL  
TAX  
METHOD**

would induce the University to go back to its old time scramble for existence. We now have occasion to go to the legislature for appropriations for buildings only. There is no disposition on the part of any one in this State to go back to the old time biennial scramble for appropriations for maintenance. The governor and legislators acquiesce quite as fully in the idea of a fixed appropriation as do the institutions."

Twenty-one State Universities or Colleges enjoy the benefit of this method of support. Wisconsin having had it once went back to the direct appropriation method for two or three years, but last winter by universal demand returned to the mill tax method. Two-sevenths of a mill gives them \$607,000 this year. The measure passed the Senate unanimously, and the House with only two dissenting votes.

I want to call special attention to two or three states because they are of equal or less valuation than Maine.

North Dakota, for institutions covering the same field as the University of Maine, devotes three-fifths of a mill annually; Colorado, four-fifths of a mill; Nebraska, one whole mill.

It is my duty to point out clearly the unwisdom of an appropriation of a fixed sum for a term of years. First, if the institution is a prosperous one, this sum must either be too large at the beginning of the term or too small at the end. Again, at the end of the period of years, or as the end approaches, the

**FIXED  
SUM**



necessity of providing for the future cannot fail to upset the whole institution from trustees to freshmen, all of whom are disturbed and anxious in view of the approaching crisis. In addition to this uneasiness, there is apt to be opposition as is shown in the present instance, which opposition began four years ago in the same quarter where it shows itself at present.

A fractional mill tax has the merit of being likely to gradually produce more money, and this may be assumed to correspond, at least in a considerable degree, with the increasing growth of the institution. Again, no consistent educational policy can be carried out without some degree of dependence upon a certain income. Any business man understands that if he is to undertake any considerable enterprise he must have some reasonable anticipation of the funds which he can command for use. This is particularly applicable to an educational institution.

Private institutions have an endowment and hence an assured income. It may not be as much as is desired, or as much as is needed for the expenses of the institution, but it is at least certain, and will continue indefinitely.

A State University can only have an adequate assured income by the method of the mill tax. It is but a few years since the first state adopted the principle of the mill tax, and now twenty-one state institutions already are enjoying the benefits of this method of support.

Everything that can be said against the method of an appropriation of a fixed sum for a term of years can be repeated with multiplied force against a biennial appropriation. Even if it were certain that a biennial appropriation would be made through the usual necessary effort, it is unwise for a University to be compelled to use the time of its most important officers, and the efforts of trustees and friends in a mere struggle for existence.

#### **BIENNIAL APPROPRIATION**

Further, it is not wise for a legislature at each session to be compelled to devote so much of its valuable time to the consideration and threshing over of the same topic. It is presumed that the trustees of a University select a president with view to his educational qualifications and abilities for leadership. If this be true, it would seem to be unwise to use the best energies of a president in the effort to obtain the means of existence for the institution. If this method of obtaining support be necessary, then rather a professional lobbyist than a scholar should be at its head. If the president has any educational ability or force as a moral leader, and he certainly should have both, he ought to devote considerable of his time to educational policies, to the development of the various departments of his institution, and to the moral welfare of the student body. These duties he cannot adequately perform if his best energies be sapped by what we may term intensive lobbying.

I have made a study of the statistics of all the states and territories, particularly with regard to the amount of support given to their State Universities. I have omitted from consideration here those states which are notably

#### **OTHER STATES**

much wealthier and more populous than Maine, and have particularly considered such states as are of about the same valuation and population, or those of less valuation and population. I first compared the state valuation with that of Maine and made a list of figures which Maine would appropriate to its State University if it appropriated in accordance with its valuation as other states and territories are doing, such as Arizona, Colorado, Idaho, Montana, New Mexico, North Dakota, Oklahoma, Utah, Washington, Wyoming, etc. Then another study was made as to the amounts given to the State University on the basis of population, and it was discovered that while these amounts

vary in some cases, the general trend of results shows that about the same would be received if made on the basis of population as on the basis of valuation. Without giving all of the figures, which would show essentially the same thing, I am prepared to state that if our University were supported as is the University of Montana, we should have \$92,000 annual income, but in Montana they also support an agricultural college and a school of mines separately, with similarly liberal appropriations. We should have \$90,000 a year in comparison with South Dakota, which has in addition an agricultural college and a school of mines; or \$131,000 a year in comparison with North Dakota, which also has an additional agricultural college supported to an extent of over \$150,000 annually.

**COMPARED  
WITH  
MAINE**

It is unnecessary to continue these figures further. The same results would be found, except that in many instances the amount would be larger. Utah, for example, in proportion to its valuation and population, appropriates more than twice the amount of any above named.

But certain members of the legislative committee of 1905, and certain individuals in the State who are opposed to maintaining a State University in Maine, do not desire us to make comparisons with State Universities, but choose rather for consideration the Land Grant Colleges which are independent of State Universities. To satisfy them, as well as to still further support our plea, I have made a careful study of the amounts appropriated in the various states to the Land Grant Colleges, where such an institution is supported in addition to a State University, and these amounts are in states which are of approximately the same valuation or population as Maine. The amounts of state appropriations in such institutions in a few instances, are as follows:

**LAND  
GRANT  
COLLEGES**

Colorado, two-fifths mill tax, producing \$150,820. Total number of college students about one-half the number in Maine.

Mississippi Land Grant College, \$105,000.

South Carolina, \$156,350.

Washington, \$80,000.

Eighteen states maintain such institutions and also a State University, and the financial showing runs about the same.

I would like to mention particularly Iowa Agricultural and Mechanical College, which has not quite twice as many students as the University of Maine, and has a state appropriation of \$280,000 annually, and one-fifth of a mill tax for buildings, which amounts to an additional \$234,000 annually.

I must repeat and emphasize the fact that all of these institutions are in addition to a State University maintained in these states, which is, in most, if not all cases, more liberally supported than the Land Grant College.

Mr. Potter does not wish us to compare with State Universities, but rather with Land Grant Colleges. Further, Mr. Potter does not wish us to branch out into the United States, but would rather we limit our ambitions to the Land Grant Colleges of New England. I continually maintain that this is not just to our institution. As a State University it is a concentrated one. It has the Land Grant College, including agriculture and technology, as well as the other departments of a University. But still to

**IN  
NEW  
ENGLAND**

indulge Mr. Potter, I made a study of this matter, too, and will state the amounts which we should receive in comparison with the other New England Land Grant Colleges.



According to the number of college students in the University of Maine, and those in the Land Grant Colleges of Rhode Island, Connecticut, Massachusetts and New Hampshire, Maine should have, on the basis of comparison with these states, for an annual income, \$180,000, \$90,208, \$125,000, \$91,000, respectively. New Hampshire, our closest neighbor, has had its Land Grant College running as an independent institution for thirteen years only, and it is worth while to observe how much New Hampshire has done for that institution in that short time. The legislature has appropriated \$296,605, about one-half as much as Maine in forty-two years. It is worth while noting and repeating that if Maine should provide for its University as New Hampshire does for its Land Grant College, in proportion to its present number of students, Maine would have \$91,000 a year, not including buildings. Now let us consider the population and valuation of New Hampshire. The valuation of New Hampshire is not quite two-thirds that of Maine, and its population is 411,558. Certainly Maine should not be less liberal than her smaller and less wealthy neighbor.

The bill under consideration does not call for as much in proportion as other states are appropriating to their State Universities. Furthermore, it does not call for as much in proportion as other states are appropriating to their Land Grant Colleges where they support a State University in addition. And still further, we are not asking for quite the amount which the least liberal of the New England states are appropriating to their Land Grant Colleges in proportion to the number of students in attendance. Surely this is not too much to expect.

It is no secret, gentlemen, that a portion of this proposed income must go for increased salaries. Our younger tutors and instructors, receiving from

**HOW  
USE THE  
MONEY**

\$250 to \$800, we can rarely hold for more than one year, and it is next to impossible to obtain competent new ones at these figures. The maximum salary of the heads of the departments is the same now as it was thirty-five years ago, and is \$400 less than Bowdoin pays to men in similar

positions. Our strongest professors constantly receive flattering offers from other institutions, as well as from large business concerns. This is especially true of the men in our technical and agricultural departments, owing to the tremendous demand for men trained in these particular branches. For illustration, our professor of Civil Engineering has had three separate offers within six months, and our professor of Agriculture has been earnestly besought to accept the presidency of a new agricultural institution at a salary nearly double the one he receives here. These are concrete instances, and I could cite many others. I could not have

**SALARY**

hoped to keep these men but for the fact that this Legislature was to make a new provision.

My confidence in the future of the institution and their own loyalty are holding them until we know the action of the present Legislature.

**NOT  
CHIEF OBJECT**

Salary is not the chief object of these men; they feel most keenly the lack of equipment to adequately serve the needs of the students and to do the kind of work expected of institutions of this class.

I know that many of the warm friends of the University have been shocked at the size of the appropriation asked. This is no more than could be expected, and for various reasons. Even the friends have not grasped our actual necessities. We have apparently prospered upon our small income, and to the outward observer we have successfully concealed our deficiencies.

Perhaps we have done this too successfully. The fact of it is we have been for the past two years running on hope. This hope of the faculty and student body combined has been a most valuable asset to the University and can be

**APPARATUS  
NEEDED**

measured in actual cash value of thousands of dollars. We have existed without proper apparatus, the ingenuity of the professors has been exerted to give each student full value and at the same time to conceal from him for very pride, our deficiencies. Some students who have realized departmental shortcomings have gone out and personally begged and acquired new apparatus. It is humiliating, but true, gentlemen, that this apparatus has come entirely from outside of the State. These are unpalatable truths, and I would withhold them from you, but if you cannot see that the sum the trustees have asked is as modest as possible, we must divulge our real poverty and tell to what supreme lengths loyalty has been carried. We should prefer more dignified revelations. If the real needs of the institution expressed in dollars is a snock to its friends, it might better come now than be longer deferred. Some

**DUTY  
OF  
TRUSTEES**

friends have even suggested that this bill be withdrawn. But if the trustees who have studied this matter from every possible viewpoint should ask for less than their real need because of shocking people or because they feared failure in getting what they ask, they would be derelict to duty and unfit for the trust imposed upon them.

I have fought the fight as long as I can. We cannot hold our best men on the present hand to mouth system. Managing the institution with its abnormal growth and attendant necessities upon the same income apportioned it when it was less than one-third as large, has held some of the mental stimulus which might be offered in the guiding of a pair of blooded horses with a tow string. It has been of absorbing interest, but nobody could consider it a comfortable life occupation.

Outside of salaries some of the necessities which demand an annual income, are:

**ANNUAL  
NEEDS**

1. Repairs.
2. Regular purchase of books, particularly scientific and technical publications which must be kept up to date.
3. Tools, machines and implements for the shops and farm.
4. Apparatus and supplies for Chemistry, Physics and Biology.
5. Animals for the farm.
6. Instruments for the engineering departments.
7. Fuel, light and labor.
8. Salaries.

In line of permanent improvements there are so many buildings needed that it is difficult to arrange them in order of importance.

Agricultural building; dormitories; heating plant; horse barn; greenhouse; physics building; chemical laboratory; a woman's building, which should include equipment for instruction in Domestic Science; a

**BUILDINGS**

chapel or assembly hall, large enough to seat at least the present number of students. We should also build laborers' cottages, or we cannot obtain or keep men to care for the farm and buildings.

Other buildings seem to us important, but as it will be absolutely impossible for us to acquire more than a portion of the above in ten years with the money we have asked, there is no use of enumerating them.

To sum up briefly, Maine has earned a place in the principal group of



State Universities, which she can retain if supported. She has more than a local recognition. It has been no easy task to gain a creditable reputation among her richer sisters. It lies with you, gentlemen, to support her where she is, or to push her back into the minority. She stands today Maine's representative among other State Universities. Shall our State be represented by a great institution of learning with the broadest technical and cultural ideals, or shall she be forced to take a backward step full in the lime light of the educational stage with the eyes of the other states upon her?

Her faculty and Board of Trustees feel that they have brought you a good thing, a thing worthy of your State and of you who represent her. Is it your will to crystallize their work or cast it back at them broken and unappreciated?

It is no small work to build up a perfect educational scheme. It means the richest brain and blood of experts; of men trained in this particular calling; of men who unselfishly lavish their best strength upon it and with hope of very small financial gain. These men are working for a principle, for a cause, for educational progress in its highest sense. Gentlemen, if they cannot work uninterruptedly in Maine they will be driven to some other place where they can so work. Our best men are not unsought. I have given you concrete examples of those who are unselfishly standing by Maine just now because this is her crisis and they refuse to leave her in her time of need. You, gentlemen, have it in your hands to settle the matter forever, and it were more merciful to do it once for all time.

Do you choose to have a sturdy, healthy, typical-of-your-State educational representative, or will you have a cripple? We are giving her to you perfect in health and as near perfectly co-ordinated as our limited means have permitted. The choice of what she shall be from now on is yours.

Vol.

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