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The Cadet Staff

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The Cadet.

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EDITORIALS.

The general deportment of the students this fall has been very commendable. While in camp at Castine it was very good and it has been kept up to the close. In each of the several departments, a very good amount of work has been accomplished. Some few changes have been made. Prof. Hart has given Astronomy by notes to the Seniors. Very satisfactory work has been done. Photography has been added to the department of Civil Engineering, under the instruction of Mr. Colby. This has been very satifactory and pretty work, as each man has made several negatives, and by borrowing from each other they have made prints from them all. The interest shown by the "Civils" awakened it in others of the several classes, who have borrowed the negatives to make blue prints. This is a very desirable way to obtain views of our Campus.

The Mechanical Seniors, in addition to the regular machine work, have made moulds and castings. The back end of the shop has been fitted up into a casting room and the Seniors have become quite proficient in the work. The usual railroad surveyed by the Junior Civils was longer this term than usual, extending from Engall's mill yard to Pushaw falls, a distance of six miles.

Whitney, '93, has instructed the Sophomores in shop work.

The Freshmen have not had such a "snap" this term as the classes before them. For instead of having one hour off in the forenoon and several afternoons to themselves, the present class have had setting-up exercises, dumb-bell, Indian-club, or sand bag drills in the spare morning hour, and three afternoons free-hand drawing, one, general history, and Friday afternoon to be spent in the library with Prof. Estabrooke, who guides them in their reading. The extra afternoon in the library and the morning drill hour have been added this term, and the physical development of the new men will be quite a bid toward a gymnasium.

Quite a strong spirit prevails among our alumni in Boston and vicinity as is shown by the following from the *Bangor Daily Commercial:*

Fifty or more of the alumni of the Maine State College met at the Tremont House in Boston Saturday evening, and organized the Maine State College Alumni Association for Boston and vicinity. L. C. Southard, '75, presided, and R. H. Fernald, '92, acted as secretary. The interests of their alma mater were discussed by the graduates, and finally an organization was effected with the election of the following officers: President, L. C. Southard, '75; vice-presidents, H. F. Hamilton, '76; E. O. Goodridge, '85, and W. N. Patten, '91; secretary, R. H. Fernald, '92; treasurer, S. M. Jones, '76; executive committee, officers, ex-officio are J. M. Ayer, '86, J. H. Burleigh, '87, H. B. Andrews, '88, F. C. Andrews, '90, and J. H. Flanagan, '91.

This makes the second association formed by our alumni. The first was formed last April in New York City. THE CADET extends her best wishes to these associations. Such organizations as these should aid our college by pointing young men to the advantages which are to be had here. We hope that similar associations will be formed in other parts of our country.

If, instead of complaining about our "personal column" each student and alumnus would, quite often, write us about themselves and send items about any other alumnus it would add greatly to the interest of this column. Also quite a number of our alumni have promised to write articles for our Literary department. We will be glad to have you redeem your pledges in this matter at the earliest date.

Among the many things which are needed for M. S. C., outside of being well advertised, are fitting schools scattered well over this state. At present there are but few schools which give certificates to enter this college. Why could not all the academies and most of the high schools fit especially for this college. If this was the case it would not be long before our dormitory would be too small and the State would be asked to give money for a building to accommodate the incoming students.

For several years this institution has sent samples of students' work to our State Fairs. But next May we are to send to the World's Fair a much more complete exhibit than ever shown at our home fairs. The Experiment Station will furnish under the department of Agriculture complete analyses of farm products. There will be maps of the college grounds, railroad sections and surveys from the Civil Engineering department. The Mechanicals have prepared plans for a new shop and a heating plant. Quite a display will be in the line of wood work and mould making machine work and castings. The special feature of the Chemical department will be the views of the Campus. Mr. D. W. Colby has made a very fine set of photographs of all of the buildings and their interiors. Another feature will be the drawings of microscopic objects, and of the flora of Maine which will come under the department of Natural History.

LITERARY.

RIVER DRIVING ON THE PENOBSOT.

How many, who see the logs floating slowly down the calm Stillwater, know of the hard work and danger necessary to get this lumber to Orono?

Let us take a trip up into the forests around Katahdin and follow the logs from the woods where they grew, down the broad Penobscot to the mills. Before the warm April rains have started the ice from the rivers and lakes, the logs lay piled in tiers on the landing quite often over a million feet.

The stream looks peaceful enough as it creeps along under its thick coat of ice and snow, but wait until the snow has melted from the sunny mountain sides and a day of warm rain has filled its banks to overflowing. Although driving usually does not begin until late in April the crew is here by the first of the month, and as the ice goes out they pry the logs from their icy bed, or, as they term it "break the landings." Before we go any farther let us look at the men. A large number of them are Frenchmen from Fort Kent and Madawaska. Most of the boatmen are from the towns along the river; but the larger share are from the Provinces. The pay ranges from $1.50 to $4.00 per day. They are provided with plenty of good, wholesome food, beans being the chief article. Until the drive is well under way the men all live in the camp, but they soon move into tents which are moved every day or two as the drive progresses. The cook is up in the small hours of the night and by daylight breakfast is over and the men are at work. At ten o'clock the cook assistants, who are known as "cookees," carry out "first lunch" and at two "second lunch" is served at some central point.

Nothing but darkness or the lack of water stops work, and the saying is that "there is no law or Sunday west of the East Branch."

The logs are allowed to "wing up" along the shores; that is, they let them catch behind the rocks thus serving as a sort of "shire" for the rest. The bank soon becomes piled with lumber which is known as "rear." The rear is taken off by a large crew that follows the rest of the drive and is known as the "rear crew." The logs set in motion by the rear crew run down through the rest and are kept moving by men stationed at frequent intervals along the stream. One can hardly imagine what an uncomfortable position a station would be on a cold rainy day.

Roll dams, as they are called, are built over the rougher places, but in spite of this the logs often jam and then begins the work of the men on the stations. As soon as a jam forms they are hurried onto it and the logs at the head of the jam are rapidly picked out until the whole mass startes. If it cannot be started this way the water is shut off at the next gate dam above, the head of the jam picked to pieces and the water turned on again. Sometimes a jam is formed four or five miles in length, and that it takes days to start. Not unfrequently, if the water is low in the stream sought, a jam is formed that cannot be started and the drive "hangs up;" in other words the logs lay over until another spring.

Accidents are quite frequent and drowning is by no means rare. A disabled man is given a generous purse by his comrades and carried on a stretcher to the nearest settlement, which may be fifty miles or more.

After the logs get into the main river it is much easier work as it is all done in boats. By this time one would scarcely recognize the brilliant frocks the men wore when they started, and the fine long boots, each armed with a hundred or more sharp calks, have been cut off at the ankle and laced up.

After a drive of from fifty to one hundred days the logs arrive at the boom, the men paid, the logs sold, and rafted to the mills at Old Town, Orono, or Bangor.

—L., '96.

A TRIP TO THE COMET.

"At 9.45 Sunday evening the comet will have reached its minimum distance from the earth, one million miles." So said the *Bangor Daily Commercial* on Saturday evening, November 26th; and I at once saw that I now had an opportunity for a journey that I would not be likely to have again in my life.

Accordingly I called on Mr. Wilson, my electrical engineer, and asked him to have my air-ship ready to start out at 5.30 Sunday morning. He said that my orders should be carried out, and after a few questions regarding the direction and extent of the trip I left him and retired.

On the following morning I arose early, ate a hearty breakfast, and went down to my air-ship landing where I found everything as I desired, and Mr. Wilson waiting only for me to arrive to be off.

My ship, called the "Flying Dutchman," was shaped like a cigar, the larger end being the bow. It was constructed wholly of aluminium and was furnished with powerful storage batteries. It was driven through the atmosphere by two pairs of large wings, but it could be carried through the ether above the atmosphere by an electrical process known only to Mr. Wilson and myself.

I at once entered the car and at exactly 5.30 the ship rose gracefully from the ground and started for the comet. During the first forty-five miles of our journey we passed through the atmosphere of this earth and went very slowly, twenty miles in the first hour; but as the atmosphere became rarer we went twenty-five miles in the second hour, so that at 7.30 we were beyond the atmosphere.

At a distance of about four miles from the earth it had been necessary to close the car and to admit air from the compressed air tanks; but as it was fresh and pure we experienced no trouble in breathing.

For air supply we carried twelve tanks, and as we were to be out thirty-three hours and a half, (allowing one hour and a half for stopping on the comet,) and good ventilation requires two thousand cubic feet per hour per man, it was necessary to carry 11,166⅔ cubic feet of air in each tank, or 134,000 cubic feet in all.

We now had fourteen hours and a half in which to reach the comet, which at 9.45 P. M. would be at a distance of one million miles from the earth. Therefore, as we did not wish to get there before it we regulated the electrical driving apparatus to a speed of 70,172 miles per hour, although this was by no means the fastest rate at which we could go.

So we jogged along at this pace for the rest of the day. Through the glass sides of the car I saw the earth slowly fade from sight and many of the other planets come into prominent positions on the view.

At nine o'clock I went forward into the observation window to see how we were getting along. There at a distance of only a little over fifty thousand miles was the comet in all of its brilliancy, but just as I was about to raise my glass to examine it more closely something broke and I felt myself going rapidly down—down—down—

"Mr. ——." Was it Mr. Wilson that spoke?

"Mr. ——, you may go on with the translation."

I started up and rubbed my eyes; it was the same old story; I had been asleep in the German class.

—A JUNIOR.

A VISIT TO NEW ORLEANS, LA., AND TO LINCOLN, NEB.

BY PRESIDENT FERNALD.

Returning the first of December from a short visit to the above-named cities, I gave in the College Chapel a brief address upon the incidents of the journey.

Responding to an editorial request, I now seek to reproduce in substance a portion of the remarks then presented.

The object of the visit to New Orleans was attendance upon the sessions of the Association of American Agricultural Colleges and Experiment Stations. It may be of interest to recall that this Association was largely instrumental in originating and in securing the passage by Congress of what is known as the "Hatch Bill," in virtue of which, each state in the Union has assigned to it by the National Government the sum of $15,000 annually for agricultural research and experimentation. It has rendered also other important services in the interests of State Colleges of Agriculture and the Mechanic Arts. The recent meetings of this body were held in the Hall of Tulane University and were of very great interest, relating, as they did, to matters of administration in the colleges and the specific

work and obligations of Experiment Stations. Among the important topics considered was that of a collective exhibit by the state colleges at the Columbian Exposition. While each institution is free to make its individual exhibit, it is proposed to extablish at Chicago for the six months of the Exposition a representative college of agriculture and the mechanic arts furnished and equipped by contributions from these institutions throughout the country.

In a short article it is impossible to do more than to indicate the general character of the meetings, omitting all details.

The representatives from the Maine State College to the New Orleans meeting were Professor Munson and myself. We found the journey a pleasant one, especially in the opportunity afforded of witnessing the efforts making toward an industrial regeneration of the South. Our route from Washington, D. C., was by the Richmond and Danville railroad and its connections, and hence through Virginia, North Carolina, South Carolina, Georgia and Alabama, the line we followed taking us through the cities of Atlanta, Montgomery, and Mobile.

From the citizens of New Orleans, the Association received numerous courtesies. Among them should be mentioned a carriage drive to Audubon Park, a few miles from the city, and a visit to the Louisiana Sugar Experiment Station. At this station the diffusion process of sugar making is principally adopted. The Station is equipped with the most approved modern machinery, and in conducting it, high scientific skill is brought into requisition. In connection with it, a "Sugar School" is maintained. Just as in the north, young men go to a dairy school to acquire the most approved modern methods of manufacture of butter and cheese, so to this Louisanna Sugar School young men come to learn the best methods of sugar manufacture. A number of students were thus engaged at the time of our visit. Professor Stubbs, the director, applies scientific methods to all processes involved, testing different fertilizers in the growing of cane, testing different varieties of cane for percentages of sugar, testing different processes of manufacture, in short, keeping a vigorous oversight and control of all processes from the planting of the cane to the securing of the refined product.

The Association was indebted also to the citizens of New Orleans for a pleasant excursion by rail to Baton Rouge, ninety miles up the Mississippi. As the train was a special, it allowed stops by the way to visit sugar plantations and other points of interest. The members of the Association were thus afforded an opportunity to inspect the methods of sugar making by the old process, in which the separation from the sugar solution and the crystallization go on slowly, as well as by the modern methods, by which centrifugal machines driven by steam power are brought into use to effect the separation and crystallization rapidly. At one plantation (Reserve) visited, the product for the week was 323,703 pounds sugar, first grade, and 98,700 pounds, second grade. Reckoning the former at three cents per pound and the latter at two cents per pound, and adding two cents a pound government bounty on sugar of first grade we have the snug little sum of more than $18,000 as the value of the week's product, not including the molasses, which, taken into account, would considerably increase the above figures.

As is well known, much of the land of Louisana is below the water level of the Mississippi River. Protection is sought by a system of levees. At times a fissure occurs in the embankment and before it is detected or the outflowing waters can be stopped, large tracts of land are inundated. Reports of such occurrences ordinarily produce but little impression upon the northern reader. Witnessing the effects of such an inundation changes the picture, dim before, into vivid reality. On the route between New Orleans and Baton Rouge, we passed extensive plantations, otherwise sources of wealth to their owners, wholly ruined by the breaking of the levee.

The people of Baton Rouge seemed to vie with those of New Orleans in efforts to make enjoyable the stay of their visitors. On arriving, it was found that a sumptuous dinner had been prepared for two hundred guests. It was pleasant to meet on the committee of reception at this dinner, His Excellency, Governor Foster, and to bear to him greetings and congratulations from the State of Maine on his splendid achievement in leading to a successful issue the campaign in Louisiana against re-chartering the lottery in that State.

A visit to the State University, presided over by Col. J. W. Nicholson, and an hour's speech making to the Cadets by several members of the Association, in a pavilion open on three sides to a November sky, terminated the brief stay at Baton Rouge. It may be of interest to state that the four principal buildings of the University were formerly occupied as a garrison for United States troops. Soon after the close of the war of the Rebellion, by recommendation of General Sherman, these buildings, no longer needed for their former purpose, were turned over to the State of Louisiana for the State University. Their value must be several hundred thousand dollars, a noble gift for a worthy purpose. Col. Nicholson takes pride in pointing out to his visitors the site on the University Campus, of the house occupied by Gen. Zachary Taylor when he was elected President of the United States.

Of the city of New Orleans, nothing has been said. Some features of it impress the visitor as unique. Its situation below the level of the river makes the surface drainage, which obtains, a necessity. Its French markets afford an interesting spectacle of one phase of the city's life. Its business streets compare favorably with those met with in all sections of our country. The residential streets and avenues are beautiful even in November. It was a pleasure to a northerner at this season of the year to look upon the ample grounds surrrounding stately residences, rich in shrubbery and bright with semi-tropical flowers in full bloom. Returning to a higher latitude and a colder climate, the picture thus presented is one that often returns and lingers long in the memory.

A visit to Louisana cannot fail to disclose to the careful observer how vastly important are the three great staples of the South to the prosperity, wealth. and life of the region. Rice, cotton and sugar are to this State what the great cereal products are to the central western states, what hay and lumber are to Maine. It is a gratifying thought that throughout our vast country, products suited to the wants of every region are ready to respond to the efforts of the active brain and the industrious hand.

It was my design at a single sitting to write of the visit both to New Orleans and to Lincoln, Neb. So much space, however, has already been occupied with one division of the subject, that I must leave for another number of THE CADET, the account designed of the visit to the second city and of attendance therein upon the sessions of the National Farmers' Congress.

OUR ATTITUDE TOWARD THE AMERICAN INDIAN.

Before carefully studying my subject I had the same opinion that is held by a large number of people to-day, that the American Indians are diminishing in number and soon will become a thing of the past; that they will be known to the future only in stories and traditions recorded by Cooper and others, who have described the red man as a picturesque being full of strange contrasts, capable at once of the most exalted virtures, the fiercest passions, and the most degrading vices. But careful study will convince one that the Indian stripped of the novelists' tinsel and removed from the glare of the foot lights, is only a very ordinary human being, with vices and virtues differing from our own only as his environment differs from ours; also that he is here with us not only in a comparatively large numbers, but that his tribes are increasing in size. The reason for this is obvious; the Indians do not go on the war path as formerly, and if they die only from old age, accident, or disease, they must increase unless they are less prolific than the negro and other kindred races.

To understand this matter properly we must take a hasty glance at the condition of the Indians when the country was young.

Many suppose that America at the time of its discovery was nearly covered with Indians. It may be that the whites saw Indians wherever they went, of whom fleetness in moving from place to place gave to the strangers an exaggerated notion of their numbers. It has been estimated that probably there existed east of the Mississippi at this time only about 160,000 persons.

The Algonquins was a name given to a large and powerful body of Indians scattered over all the country east of the Mississippi and south of the Saint Lawrence, and constituting nearly one half of the entire population of that region. They had a common language and common traditions and customs. Among the Algonquin

tribes were the Narragansetts, Pequots, Mohicans, Delewares, Powhatans, Chippewas, and several others. These tribes have greatly decreased in numbers since the beginning of our history. It is supposed they once numbered 90,000 persons, but now only about 18,000 can be accounted for. What became of them? If we call to mind the history of this county, how the whites (Christians) deceived and killed off this innocent people, and the many wars among themselves since, the answer at once presents itself. The survivors were driven north and west; the few which remained have become partially civilized. Some of them can be found in Connecticut and Rhode Island and a few other states. Wherever found they are fast mixing with the whites.

The Iroquois were another great family chiefly occupying Western New York and the shores of Lake Ontario. They included the Mohawks, Senecas, the "Six Nations," and several other tribes. These tribes organized themselves into a confederacy rudely resembling the government of the United States. They built villages and pursued agriculture. Some of them became noted orators among whom were Logan and Red Jacket. Their ranks were decreased, however, during the Revolution, for they took sides with Great Britian, and their lands were finally ceded to the United States. This group is now much scattered, and its members have found homes in Wisconsin, New York, Canada and elsewhere. It is thought that their numbers have increased since 1812.

The Cherokees are considered by some as a branch of the Iroquois because of the similarity in their language. Their tribes are mostly in the South. In 1819 they nnmbered 15,000, and during that year 6,000 were persuaded to move to Arkansas; and in 1838 General Scott marched into the Cherokee country and compelled the emigration of the remainder to Indian Territory.

Among the southern tribes are the Creeks, Choctaws, Chickasaws, Seminoles and other smaller tribes. Of these the Creeks were warlike, and were subdued by General Jackson in 1814. Their land then came into the hands of the United States. In a like manner the lands of the warlike Chickasaws and Seminoles came into the possession of our government and their owners escaped to Indian Territory. The Choctaws, unlike their neighbors, were peaceful, but like them followed the others to the Indian home.

The number of Indians now living east of the Mississippi is about 24,000 The entire Indian population (exclusive of Alaska) is in round numbers 243,000. In the Indian and Oklahoma Territories their numbers are a little more than 68,000, and of Oklahoma Territory 12,000.

Now that we know where the most of our red brothers are, what are we going to do with them? We see that the Indian Territory has become the home of a great number of Indians. But how long shall these people hold their lands? Since March, 1889, about twenty three million acres of this country forming the new territory of Oklahoma have been thrown open to settlers, and have become inhabited as if by magic. Still there remains a vast extent of land for the remaining Indians. But our country is filling up so fast with foreigners that all this great extent of land will soon be in demand. Then the Indians must sell, divide with the multitude, or leave it. He can do neither. If he leaves it, where can he go? When it comes to this, "the fox," as it were, "is penned." He must stay where he is and become civilized. It seems, however, that these people do not care to become better, but much prefer to live in their old ways by hunting and fishing as formerly. If he occupied some other land than the rapidly filling United States, he might remain in his desired conditions for many years to come. But he lives where he does, and therefore he must change his ways.

President Harrison says: "The relation of the five civilized tribes now occupying the Indian Territory to the United States is not, I believe, that best calculated to promote the highest advancement of these Indians. That there should be within our borders five independent states, having no relations except those growing out of treaties, with the Government of the United States, no representation in the National Legislature, its people not citizens, is a startling anomaly."

Yes, these people should become citizens, should be represented in Congress. Then, and not till then, can they lay their claims before the people of this nation.

Can this be done now? Probably not. The Indian must be taught what he is and what he ought to be, and when these points are clear in his mind, he will quickly learn what must be done in order to cope with the world.

The five civilized tribes before mentioned have schools, which have proved of much benefit and are a growing power for good among these people.

Should a naturalist wish to grow new species of plants, he can do so only by crossing the parent plants and patiently waiting for the results. In a like manner, the Indians cannot be brought into civilization all at once. There must be a pruning of the less desirable parts and the grafting of our manners into his life: in short, the cultivation of his better nature.

Their education at first should be of a practical nature, such as the different modes of farming, carpentry, and iron work. With these well learned, there will follow a desire for something higher. He should then be given a good common school education and be instructed in the rudiments of music and art. What then is to hinder the Indians from becoming some of our most noted men in the future?

Our knowledge of the handicraft of the Indian in the manufacture of baskets, boats, blankets and many other things leads us to believe that, if the right influences are brought to bear, good must come from it. He should be made to feel that he helps to make up a part of the nation, and that he must become responsible for his share of the work of making the world better.

Some have said that the Indian is lazy; but what can be expected of a person who has always had the necessaries of life given to him for the asking? Our future contact with him should teach him to depend upon himself for a living, and then only will he become industrious.

We learn from good authorities that General Grant had an Indian upon his staff during our late Rebellion, and that he was of great use by his advice, his knowledge of the topography of the country, and his tact in overcoming difficulties. If this is a sample of the Indians of to-day, what good results may we not expect.

When he is properly treated by the Government let us then take a hearty interest in the education of the Indian, and in all movements made to lift him out of his present condition of degradation to that higher plane of manhood and usefulness which are his by the rights of nature.

—'93.

FRESHMAN WORK.

Taking the Orono post office as a starting point, a brisk twenty minutes walk up the maple-lined college road will bring one to the most beautiful ond sightly campus in the State of Maine—the great, semi-circular campus of the Maine State College.

Very near to nature's heart lies the college, with its stately buildings and beautiful grounds for far away to the north, east, and south stretch fair, green meadows with the college woods, silent and dark as boundaries; while at the foot of the westerly sloping campus flows the wide, deep Stillwater river.

At 7.45 A. M., the college bell, whose rich, resonant peal can be heard so plainly in the streets of Orono, three quarters of a mile away, rings out. Through the great arched doorways of Coburn Hall, up over the wide stair-case into the chapel, pour the hurrying students. Bright with the morning sunshine streaming in through the windows, is this large, pleasant hall with its easy opera chairs, into which the students settle with something of a bustle, and a low, deep hum of voices. No Miss Nancyish looking set of young fellows are these, but tall, broad-shouldered and well built, they look the embodiment of lusty, young manhood; the quiet, girlish faces of two young lady students are especially noticeable in all this array of strongly-marked, manly features; but only a glance is needed to assure one that no fears need be entertained in regard to their ability or ranking.

The president rises, and forthwith a hush falls over the hall. The chapel is well supplied with singing books called "The Morning Hour." The morning hymn is announced. One of the young ladies seats herself at the chapel organ. All join in the singing, and the deep, full undertone suggests to the hearer, that bass voices are the predominant ones among the State College cadets.

"He that dwelleth in the secret place of the Most High shall abide under the shadow of the Almighty" begins the clear voice of Professor H. M. Estabrooke.

"I will say of the Lord, He is my refuge and my fortress: My God: in him will I trust" rolls up a rich, heavy chorus of strong, young voices. Every head is bent over that grand, old psalm.

After the Scripture reading follows the prayer, strong and full of feeling: then, a few general directions to the students, and the next moment the chapel is empty, save the two or three who linger to have a few minutes talk with the president.

The number of applications for admission to the Freshman class of '96 is sixty-five. Of these fifty-three passed a satisfactory examination. Forty-one entered the Freshman class, two entered the Sophomore class, and ten are specials, that is, men whose work is confined to no particular grade, but who have the privilege of choice of studies from the various grades. Besides these, two former students have returned to complete their courses.

The general grading of the examination papers was very high. Perley Walker of Embden, passed the best examination. He was fitted for the college at Anson Academy, which has the reputation of sending some very smart, well-equipped men to the Maine State.

In regard to the courses selected, it may be stated that any list of first year preferences is entirely provisional, subject to considerable change; and also, that some members of the class are as yet undecided in regard to the course preferred.

At 8 A. M. the Freshmen hasten to Wingate Hall for their first recitation of the day—geometry. Entering the room a little later, one finds the recitation in full swing. The class room is large and finished in ash and splendidly lighted by seven large windows. The students occupy large, comfortable looking arm chairs, whose right arm is specially fitted with a very wide book-rest which must be of great assistance when "taking notes" is in order.

On the blackboards are a number of well-constructed geometrical figures and an array of letters, numerals and signs that suggest the old time mysterious labyrinths; but those boys, one by one, rose up and calmly rattled off their respective problems in a way that spoke volumes for their familiarity with the subject.

"A hetrogeneous class," asserts Professor Hart, smilingly, "but taken as a whole, the work done so far, has been of very high order."

Just across the hall is Professor Estabrooke's class room and which in size, finish, lighting and furnishing is the counterpart of Professor Hart's class room. Here, at nine o'clock, come the Freshmen for theri hour in Rhetoric, where the instruction in English is made as thoroughly practical as can well be done. The subject of the morning lesson was "Purity." Here is one of the questions:

"Construct a sentence that shall be faultless in regard to purity of expression and yet convey the identical subtle shade of meaning contained in the sentence, 'He was in the swim with the rest of the politicians.'"

Much attention is given to structure and analysis of sentences, classes of modifiers, etc., as a basis for accurate pronounciation. Here is an ingenious method used by Professor Estabrooke to secure accuracy in the preparation of manuscript:

Blocks of theme paper have been prepared on the covers of which have been printed the rules of capitalizing, punctuating, etc. The rules are all numbered and when an error is discovered in a student's manuscript, the error is not corrected; he is referred to the rule violated and he corrects his own work.

In the second term of the Freshman year the students have a weekly exercise in extemporaneous speaking in order to accustom them to thinking while on their feet, and to secure confidence the student speaks entirely without notes.

Lieutenant Hersey was absent from the college on the day of the writer's visit, but the next day, came the following courteous letter, which speaks for itself:

"In compliance with your request for information in regard to the work of the Freshman class in the Military Department for third hour. I submit the following: The Faculty of the Maine State College adopting the idea from the United States Military Academy at West Point, have set apart one half hour (10.10 to 10.40 A. M.) daily for Military Gymnastics. It is believed that the half hour's break in the otherwise four consecutive hours close application to study returns the Cadet to his work aroused, invigorated to an extent that at least compensates for the time taken from the books to say nothing of what is gained in physical training. The seventeen (17) setting up exercises of the drill book, supplemented by some of the Swedish gymnastic movements, marching with fifteen pound sand bags on heads, two (2) mile runs, short dashes and building pyramids

for climbing, comprises the work taken up thus far this term. When the weather will not admit out door work, exercises with Indian clubs and dumb bells will be given, Swedish gymnastics further taken up, also fancy steps and such other work as can be accomplished without the aid of gymnastic appliances.

We are now allowed to use the drawing rooms in Wingate Hall when necessary, but the tenure occupancy is by no means secure and our work cannot be well and thoroughly developed until we get a gymnasium and armory combined, that is suitable to our needs. Individual measurements of the New Cadets have been taken following a system adopted from that of Dr. Sargent, the well known director of the Hemenway Gymnasium at Harvard College.

These measurements taken at the beginning of the Freshman year and again at the close enabled first, the instructor to give special directions if necessary for the development of a particular Cadet, and second at end of year show both Instructor and Cadet what has been accomplished.

Respectfully submitted,

MARK L. HERSEY.

2nd Lieut., 9th U. S. Infantry.

At 11 o'clock, the Freshmen enter Professor Brigg's class room. A manikin in all its ugly length reveals the work taken up in this room. Physiology, Kirke's hand book of Physiology, is the text book used. This is an English work that has gone through twelve editions and contains excellent illustrations and many tables of value.

A written test is the class work to-day; and the students bend over their rustling papers with earnest, thoughtful faces, as the first question, "What are the functions of the skin," is given out. Much work is done on the blackboard, especially in making drawings of the different organs of the body, diagramatic work and classification. The chief aim of Professor Briggs is to make this rather obscure study as plain as possible.

A 1 P. M. the regular military drill takes place, which every able bodied male student is required to attend. Then, the Freshman class gives two hours each Monday and Thursday afternoon to the practice of free hand drawing under the instrction of Professor Briggs. The class begin with Bartholomew's system of drawing, which serves to train the eye and the hand. After finishing these books, the remainder of the term is spent in drawing objects. In this the student learns the laws of perspective, and prepares himself for the word of his preferred course.

Tuesday afternoon, Professor Briggs instructs the class in laboratory work and dissecting. These consist of a thorough examination of the skeleton and manikin, and the dissecting of some of the lower animals. Drawing constitutes an important part of laboratory work, it being believed that a student must have a fairly good idea of an object before he can produce a cut of it. The effects of alcohol and narcotics on the system is treated of, and the laws governing health are discussed.

Wednesday afternoon, Professor Rogers gives the Freshmen instruction in general history, "Myer's Handbook on History," is the text book used, and the work done so far is most excellent.

Friday afternoon is given up to work in the library, a superbly lighter room with its hundreds of volumes. An oil painting of the benign face of ex-President C. F. Allen adorns an easel, and a picture of Governor Coburn is on the wall. A list of books for the term's reading is selected by Professor Estabrooke. Each student receives a card, at the top of which is the name of the book he is to read. Below this is a list of the chief points to which his attention is directed. The contents of the card he copies into a note book. After copying, he places his name on the back of the card and returns it to the professor. As he reads he makes full notes and when the book is finished, his note book is passed in for examination. He then receives another card and the work goes on as before. The books chosen are such as Scott's historical novels, "Percy's Reliques," some Shakespearian plays, Swinton's "Rambles Among the Words," "Our English," Grant White's "Words and Their Uses," etc., etc.

Thus it will be seen that the Freshman class of the Maine State College is thoroughly drilled both physically and mentally and in such a way as to produce the best results.

CAMPUS.

Examinations!

Feathers!

Vacation!

Not tactics but drill regulations.

Second term commences Tuesday, Feb. 7, '93.

A horse! A horse! My kingdom for a horse.

Prof. A—— informed the Sophomores that boiled microbes did not make soup.

Mr. P——, don't you know your alphabet?

T-h-r-e-e-nine. For further information in regard to this new spelling consult Runball, '94.

Prof. Walter Balentine lectured before the farmers' institute at Waldo Station, Dec. 29th. His subject was the "Relation of Crops."

Lieut. Hersey acted as judge in an individual competitive drill for the championship of Lewiston and Auburn and a twenty-five dollar gold medal, which took place at the Nealey Rifles' military carnival on Dec. 8.

It is expected that the new catalogues will come out during the coming vacation.

Prof. Estabrooke and Prof. Balentine will attend the thirteenth annual meeting of the Maine Pedagogical Society which will be held at the hall of the Oak street school, Lewiston, Dec. 29-31.

Lieut. Mark L. Hersey delivered a lecture on "Life at West Point," at the Young Men's Christian Association building in Bangor, Dec. 22.

Mr. D. J. Callahan, one of the World's Fair Commissioners, visited the college during the past month and expressed himself as well pleased with the exhibit which the college will send to the Fair.

Prof. H. M. Estabrooke has been engaged to deliver the annual address before the Gorham Normal school.

Why did so many students look at the ceiling at supper, Dec. 20?

The following students have been appointed to represent their courses at Commencment: Walter Wilson Crosby and Charles Clark Murphy the course of Civil Engineering; Geo. Ansel Whitney the course of Mechanical Engineering; James Almore Alexander the course of Agriculture; Hiram Williams the course in Chemistry. There will probably be some additions to these.

Among the visitors to the college during the past month we have noticed the following: Asher Dole, '85, Geo. S. Seabury, '88, Gilbert S. Vickery, '89, Hugo Clark, '90, Hugo G. Menges and Clarence Scott, '91.

A Junior informs us that the difference between drill regulations and tactics is that when the class has a recitation in drill regulations and the students recite, it is called a recitation in drill regulations, but when they succeed in keeping the lieutenant answering questions the most of the hour, it is called a recitation in tactics.

On his return from his trip to the South and West, President Fernald entertained the students with brief sketches of the principal points of interest on the journey. He spoke of some of the industries which he visited and gave his impressions of the various parts of the country through which he passed. He also spoke of some of the different institutions of learning which he visited. He informed some of the students that mosquitoes were quite plentiful and active in New Orleans.

A certain Junior has such a thorough knowledge of German (?) that he has answered the questions in the examinations so that last term the requirement being sixty per cent., he obtained just that amount. This term the requirement being seventy per cent. he obtained sixty-nine and a fraction, relying on the generosity of the professsor to give him seventy.

Lieut. Hersey has assigned subjects to the Seniors and Juniors to write up during the vacation and be prepared to read their essays in recitation next term.

Hiram Williams, '93, who has been stopping at Prof. Aubert's, has had, not long since, a narrow escape from suffocation. It seems that during the night the coal gas escaped from the

furnace by means of the pipes leading to the different rooms. When Prof. Aubert awoke he rapped on Mr. Williams' door and then awoke the other members of the household. His wife and neice complained of not feeling well, and thought that they detected the presence of coal gas in the rooms. As Mr. Williams did not appear promptly the professor decided to investigate matters and accordingly rapped on the door a few times more but receiving no answer. He then pushed the door open and found Williams in an unconscious state. Restoratives were quickly applied and he was soon able to be out.

TARGET PRACTICE FOR THE YEAR ENDING DEC. 1, 1892.

Best three scores.

At 200 yards.

	Total.	Average.
Jack and Whitney	56	18.6

At 300 yards.

Capt. Crosby	64	21.3

At 500 yards.

Merrill, 1st	53	17.6

Best individual scores.

At 200 yards.

Grover	22

At 300 yards.

Crosby	22

At 500 yards.

Crosby and Gould, 1st	20

Individual scores of 20 or over.

At 200 yards.

Grover	22
Farrel and Frost	21
Lewis and Moulton	20

At 300 yards.

Crosby	22
Hall, Boardman, Achorn and Buffum	20

At 500 yards.

Crosby and Gould, 1st	20

Men having an average of 15 or over.

At 200 yards.

Jack, Whitney, Gilbert, Farrel, Grover, Frost, Lewis, Moulton, Boardman, Ellis, Achorn, Calderwood, Ricker, Rumball, Haynes, Hall and Merrill, 2nd.

At 300 yards.

Crosby, Achorn, Atkinson, Hall, Jack and Hutchinson.

At 500 yards.

Merrill, 1st, Gould, 1st, French, 1st.

PERSONALS.

'73.—Clarence Pullen, who has been on the editorial staff of *Harper's Weekly*, has secured a position on the *New York Sun*.

'85.—Asher Dole of Superior, Wis., is visiting friends and relatives in Maine.

'86.—J. M. Ayer is with the West End Street Railway Company, Boston.

'88.—The engagement is announced of John W. Hatch and Miss Mary E. Evans, Kent's Hill, '94, the daughter of Rev. C. K. Evans of Madison.—Seymore F. Miller is in Lincoln, Me., and is suffering severely from rheumatism. —H. B. Andrews is in the civil engineering department of the West End Street Railway Company, Boston.—Dudley E. Campbell is instructor of sciences and mathematics in the public schools of Providence, R. I.

'89.—G. S. Vickery, who is engaged in the civil engineering department of the West End Street Railway, Boston, is in Maine for a short time.

'90.—Chandler C. Harvey will spend the holidays in the East.—E. S. Williams is taking a post-graduate course in chemistry at Columbia.—A. J. Coffin, secretary and treasurer of the Cushman Iron Company of Roanoke, Va., has been put in charge of the company's branch office which has just been opened at Richmond. To quote from the *Roanoke Times* of a late date: "The friends of Mr. A. J. Coffin will regret that he has left town to assume charge of the branch office of the Cushman Iron Co. at Richmond. The Bachelor Club, of which Mr. Coffin was a member, gave him a very enjoyable farewell reception at the club house last nigth, which was attended by a large number of Roanoke's best society people.—Frank O. Andrews is in Providence, R. I., with the Harris Corliss Engine Co.—W. E. Croeford is in the draughting room of the West End Street Railway Company, Boston.

'91.—From a local paper: A pretty and pleasant wedding took place Monday afternoon, Miss Effie Byther being united in marriage to Mr. Byron C. Hodgkins. Both are very popular young people, and the bride was the recipient of many beautiful present. After tea the bridal couple left for Waterville, their future place of residence.—R. W. Lord is draughting for the West End Street Railway Company of Boston.

'93.—Harry Orman Robinson is the strong man of Tufts, his record being 2,424 pounds. This is 200 pounds above the record of Harvard's strong man.

EXCHANGES.

Michigan University has 2,962 students, thirty-four more than Harvard.

We see that the *Bowdoin Orient* complains of the inevitable cold recitation room." That reminds us that the heating of our own recitation rooms could be greatly improved.

Vassar has Republican and Democratic clubs, but no report has come out of a woman suffrage organization.

One of the most amusing of the many novel "schemes" for which the New York dailies have become famous, was the *Record's* offer of a prize to the lady who should make the greatest number of purchases, within one month's time, from the advertisers in its columns. The list of the purchases made by the prize winner, is, in some respects, a remarkable document. They numbered seventy-seven, the total cost being $85.64.—*Printers' Ink.*

We notice in several of our exchanges that the students are making plans for social and literary gatherings for the winter. Such things are a part of a man's education, and he should attend them.

The Polytechnic of December contains a very interesting engineering article on "Passenger Traffic in Great Cities." This article is a full report of a lecture delivered to the members of the Institute by J. James R. Croes, M. Am. Soc. C. E., M. Inst. C. E.

The best endowed college in this country is Columbia, with $9,000,000; Harvard's endowment is $1,000,000 less.

The University of Berlin has three thousand students enrolled. Of these eight hundred are Americans.

Connecticut has more college students in proportion to her population than any other state in the Union.

First Newspaper Man—"Did you ever do literary work on your voyage across?"

Second Newspaper Man—"Yes, I contributed largely to the Atlantic."

The Antiochian contains a very interesting article on "The Influence of the Columbian Exposition on the Future of Our Country."

Prof. in Latin (dictating a Latin composition)—"Tell me, slave, where is the horse?"

Startled Freshman—"It's under my chair, sir; I was not using it."

The condition of the reading room of Colby University receives a thorough talking over in the last *Echo*. In fact this same subject seems to require the attention of several of our exchanges. An improvement in the manage ment of our reading room is very much desired.

The new students' directory of Cornell University, which has just been published, shows that there are 1,576 students registered in the University. Of these 153 are in the law school and 108 are working for post-graduate degrees.

The students of Cornell bring over $500,000 every year to Ithaca, and leave it with the business and professional and boarding-house keepers.

They say that the Yale freshmen are so numerous that they can't find places to sleep in New Haven, nor standing room in chapel. The numbers in different departments at Yale will undoubtedly excel 2,000.

There is a commendable rule at Brown University by which in May of each year one member of the Faculty, designated by the Faculty and Secretary of the Alumni, shall publish a brief paper setting forth the chief events of the college year and the principle events of the college.

Aunt Tabby—"John says in his letter that the Fraternity of E X has been admitted to Yaleton."

Uncle Josh—"Well, I guess we had better have that boy come home. I don't whant any son of mine to go to school with a lot of Chinese laundry-men.—*New York Tribune.*

The Amherst plan of government, through the co-operation of a college senate chosen from the students, worked so well last year that "in no instance has disciplinary action been necessary."

GLEANINGS.

SHE COULDN'T AFFORD IT.

She couldn't afford a bonnet,
She couldn't afford a hat,
She couldn't afford a sun-shade,
There was no use thinking of that.

She couldn't afford new dressess,
She couldn't afford new shoes,
She hunted the glove stock over,
A pair of cheap ones to choose.

She couldn't afford a jacket,
She couldn't afford to ride,
She couldn't afford the theatre,
Or candy, or aught beside.

But, the greatest of all her troubles,
The cause of her deepest sigh,
Was—though living proved so expensive,
She couldn't afford to die.

—*Boston Evening Transcript.*

THE THEATRE HAT.

The man who queried, "Where am I at?"
Was anchored behind a theatre hat—
A tower of feathers and things like that—
And, seeing nothing, there he sat.
The dancing girls were on the go,
But all he caught was a flying toe,
Or once in a while the end of a row,
As the fairies marched in platoons, you know.
The lover's wooing was wholly lost,
Unless the pair had been skywood tosssd;
He looked at the flies till his eyes were crossed
And balanced the value received with cost.
No wonder he rails at the theatre hat,
And the cruel mind who the thing begat;
One might as well look for the gates of Herat
As to see a play through a thing like that.

—*J. B. Alden in Boston Transcript.*

"I've got a tongue-tied child, doctor. Can anything be done for it?"

"Boy or girl?"

"Girl."

"Humph! I think you'd better not interfere with the workings of Providence, ma'am.

—*Life.*

The Head Waiter—The Prince of Wales.

Johnson—What's the funniest comic paper, Robinson?

Robinson—To tell you the *Truth*, I should *Judge* all of 'em would *Puck*-er the *Life* out of you.—*Truth.*

Directory of the Secret Societies and Associations Connected with the Maine State College.

Q. T. V. Fraternity, Orono Chapter, No. 2.

Meetings every Friday night in Chapter House.

W. G. M.....C. H. Gannett.
V. G. M.....O. J. Shaw.
Cor. Sec'y.....A. T. Jordan.

Maine State Chapter, the Beta Eta of Beta Theta Pi.

Meetings every Friday night in Chapter House.

Pres.....G. A. Whitney.
V. Pres.....F. G. Gould.
Cor. Sec.....T. R. Atkinson.

Psi Chapter of Kappa Sigma, Maine State College.

Meetings every Friday night in Chapter Hall.

G. M.....C. P. Kittredge.
G. M. C.....J. M. Kimball.
G. S.....Albion Moulton.

Me Beta Upsilon of Alpha Tau Omega.

Meetings every Friday night in Chapter Hall.

W. M.....J. A. Alexander.
W. K. E.....G. W. Rumball.
W. Scr.....F. A. Hobbs.

Reading Room Association.

Pres.....G. F. Rowe.
V. Pres.....C. F. French.
Sec.....L. O. Norwood.

M. S. C. Publishing Association.

Pres.....H. E. Doolittle.
V. Pres.....G. W. Hutchinson.
Sec.....J. A. Alexander.

Coburn Cadets.

Second Lieutenant, Mark L. Hersey, 9th U. S. Infantry, Commanding.

Cadet W. W. Crosby, Captain.

Cadet H. M. Smith, First Lieutenant and Adjutant.

Cadet G. A. Whitney, First Lieut. and Quartermaster.

First Lieut. C. H. Gannett.
Second Lieut. C. P. Kittredge.
Third Lieut. J. F. Jerrard.

Geo. H. Hamlin Hose Company.

Foreman.....W. W. Crosby.
Assistant Foreman.....M. L. Urann.
Sec. and Treas.....A. D. Hayes.
Steward.....J. W. Martin.

Y. M. C. A.

Meetings every Wednesday evening in the Association Room.

Pres.....A. T. Jordan.
V. Pres.....G. H. Hall.
Cor. Sec.....H. P. Gould.

Athletic Association.

Pres.....W. W. Crosby.
V. Pres.....A. D. Hayes.
Sec. and Treas.....L. R. Folsom.