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GENERAL ELECTRIC

PARTHEST-QORTH COLLEGIAN

Issued by the Students and Faculty of The Alaska Agricultural College and School of Mines

FAIRBANKS, ALASKA

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THE FACULTY ON HIGH Grayce Clarke, Frances Carnall, Martha Park, Lydia Jacobson

In Faculty Row

N THE FIRST YEAR of the College the faculty, with President Bunnell, numbered but seven. As classes grew, it was necessary to add to the teaching staff. Now, in the fourth year, there is a faculty of fourteen. Five of the "original seven" remain.

The four in the picture (caught off their dignity by the relentless Collegian staff photographer) are new at the College this year.

Miss Lydia Jacobson, Professor of Home Economics, has a Master's degree from Iowa State College at Ames, where she has been teaching for the past four years in the Home Economics Vocational Education Department. She has staught at the State Normal School, at Sheppardstown, West Virginia, and at the Iowa State Teacher's College at Cedar Falls. While a student at Iowa, Miss Jacobson was elected to membership in Phi Kappa Phi honorary scholastic society, and in an honorary Home Economics fraternity. She succeeds Miss Ruth K. Trail as head of the department here.

The newly created position of Instructor in Home Economics is filled by Miss Martha A. Park, who received her Bachelor of Arts degree from the University of Illinois. After several years of teaching Home Economics in the high schools of Illinois, she took graduate work at Iowa State College where she was last year an instructor in the same department as Miss Jacobson. Miss Park traveled in Europe last summer, making the long trip to Alaska immediately after her return.

Miss Grayce Clarke, a graduate of the University of North Dakota, was appointed Librarian and Instructor of Physical Education, another position created this year. During her last year at North Dakota, Miss Clarke served as an instructor in the Physical Education department of the university where she had won high honors in women's athletics. She is not a stranger to Alaska, having taught English and French in the Fairbanks High School during the year 1923-1924. Last year she was an in-

structor in the junior public schools of her home city, St. Paul, Minnesota.

The new Secretary to the President is from the "land of cotton." Miss Frances Carnall spent two years at the University of Arkansas and has since then been in the employ of several firms as stenographer and secretary, among them the Cleveland Real Estate Board. Miss Carnall began her work at the College in August.

The Effulgent College Spirit

By GENEVIEVE PARKER

HORTLY AFTER the opening of college a set of "Ten Commandments" was posted upon the bulletin board in true sophomorie fashion by the upper classmen. The following Monday the Frosh sought to beautify themselves by wearing be-ribboned skull caps, and began to use the foot of the flag pole as their natural rendezous.

Tennis played October 31 on an outdoor court is the record held by the Farthest North College! The accompanying picture shows the game in progress, and the new dormitory in the background. Winter sports must wait their season. But when an ever active student body turns its attention to tobogganing and skiing, there will no doubt be more "major sports."

As the completion of the new gymnasium will afford the means of much practice, everyone looks forward expectantly to the beginning of the basketball season. And competition will be keen for positions on what may well be the two champion fives.

The Student Association has obtained membership in the Fairbanks Hockey Organization. The Town, the High School and the College will all have teams. The organization intends to undertake the repairing and flooding of the Armory to make an indoor rink.

The gymnasium, for which new athletic equipment has been ordered, promises to serve



In the "Frigid North" Tennis Is Played Until

the students well in many social affairs as well as in athleties. It is large, has a good floor and orchestra aleove. Assemblies, dramatic and other entertainments, dances, can all be held at the college, fostering social unity on the campus, furnishing outlet and giving control to the effugent college spirit.

Jule Loftus, sometime president of the Student Association and captain of the College basketball team is now working at the U. S. Agricultural Experiment Farm near the campus. His course at the College was in Agriculture.

At the Western Alaska Fair, held in Anchorage, September 14th to 19th, Dean Ernest N. Patty of the College gave the official opening address. As last year, his display of minerals was one of the chief attractions.

Spotlights on Alaska Mining History

By DONALD A. MORGAN

NOTE—The history of mining in Alaska has been one of unparalleled interest for the diversity of fortune attending the makers of that history, for the natural hardships and dangers faced in finding and extracting the yellow metal, and for the ingenuity of methods employed to outwit a resistant Nature. The attempt will be made here and in two succeeding articles to cull from the numerous facts of that history some of those most significant in the development of the mining industry, to balance

somewhat the spectacular with the routine and the less romantic for the sake of giving a fair, small panorama. Fully cognizant of the magnitude of the task, the COLLEGIAN, and the writer, a senior in Mining Engineering, feel justified in thus summarizing chiefly for the layman, the history of the Territory's greatest industry. The present article deals with discoveries; the second will tell of early camps; and the third will discuss later developments and modern methods.

1. GOLD---the beginning

T BEGAN as a dream in the mind of that famous monarch of the Russias, Peter the Great. His strong interest and espousal of science as well as his natural excessive curiosity made him anxious to find just what manner of land lay beyond his great Siberia and that tongue of the Arctic that bordered it.

Siberia, his monstrous foothold in Asia, having been over-run by thousands of scientists, who had then written countless books upon the country, was now an established part of his domain and a portion of America would make a good addition.

His carefully laid plans for a great expedition to go east were interrupted by his death but were carried out in full by his wife, Catherine, and his daughter, the Empress Elizabeth. Vitus Bering, a Dane, was put in charge of the expedition. After six years of trouble and hardship he landed the grand expedition at Kamchatka where two packet boats were built. From there on, however, it was his lieutenant, Chirikof, who was the true leader and hero of the expedition. It was his ship that first touched at the coast of Alaska, July 15, 1741. Bering, older and more superstitious, sailed far to the southeast looking for the land where an astron-

omer in St. Petersburg, had dreamed that it ought to be.

During the years following that Russia held Alaska (1741-1867), she did almost nothing toward the development of the mineral resources. Her chief interest lay in the immediate profit to be derived from the fur trading. ers, a most brutal and unscrupulous mass of cut-throats, by repeated cruelties and hideousnesses practiced on the Indians, showed how little civilization had placed them above the na-The only mining done during the Russian administration was that of attempting to mine the coal deposits of Coal Harbor in Cook's Inlet, about 1850. Steam power was used: a force of laborers from Siberia and several experienced miners from Germany were imported; while every soldier that could be spared from the Siberian line battalion at Sitka was set to work. It was expected that the coal could supply steamers and possibly be shipped to San But after 1700 feet of drift was run into the seam, and 2700 tons of coal mined. the project was abandoned, for the coal was completely unfit for use in steam boilers, burning out the grates, eating into the iron and otherwise endangering the boilers. This, with a little gold prospecting by Doroshin on the Kaknu in 1849, was the only effort made by the Russians to exploit the mineral wealth of Alaska.

It is due to the persistent efforts of the great fur trading companies that knowledge of Alaska's mineral resources was so long kept under cover. These business men conceived that immigration to this country would soon jeopardize their profits. So the generous use of propaganda that would influence people to believe this country barren, icy and devoid of opportunities for settlers, resulted.

Also many volumes, written by men seek-inc make salable their copy by the use of exaggerated, misrepresented, and extreme descriptions of conditions in the north, likewise caused the reading public in the States to become convinced—and the conviction has not been entirely dispersed now—that Alaska is a most unusual place to live, fit only for natives or extremely hardy whites.

However, in 1873, a few of these "hardy whites" had found gold in paying quantities. Many settlers, from all over southeastern Alaska became interested and much prospecting



ON THE FAMOUS GOLD BEACH AT NOME

was begun. Miners from British Columbia and Northwest Territory began to push forward into Alaska. In 1879 gold was discovered on the Lewis River, which is just on the other side of the line, and in 1880 gold was found near Ju-While Joe Juneau, the discoveror of gold there, and his partner, Dick Harris, were making themselves wealthy through placer mining, a Frenchman, Peter Erusard de Ville, found over on a mountain an outcrop of gold lode. Not having the courage himself, nor the knowledge to work it, he sold it to a carpenter, John Treadwell, for \$300.00. Treadwell had faith in himself and the mine and worked with persistence and energy. Starting with a small 5-stampmill it finally, in 1916, had 1100 stamps, the largest battery in the world.

Although it is known that men in the Hudson Bay Company found gold as early as 1860 in the Yukon Basin, still it was not until 1881, that any real development work took place. After that for six years on the other side of the boundary a few men were making \$100 a day apiece. Then in '87 gold was discovered in Fortymile River, this side of the line. The large yield from these placers during the next few years caused a steady stream of miners to pour over Chilkoot Pass and spread out over the basin. Thus Rampart was discovered in 1890 and Birch Creek in 1893, and then came the Klandike in 1897.93

Now began those first romantic days of Alaskan mining history—when history really began—when the West, with thoughts of the old days of '49 went crazy mad at the prospect of another Eldorado. Miners, eager to face this new country and battle with its new problems and greater difficulties, swept northward. With them, beside them and following them, came the customary jackals—although of a hardier type—politicians, grafters, swindlers, gamblers, tinhorns—all those vultures and parasites that follow the leaders and fighters of a nation, those men born with no ability of distinguishing between the honor of battling with nature for her treasure and the dishonor of seeking by devious

paltry methods to relieve the true "producer" of his spoils.

At this time sprang up that "custom of honor" among the frontiersmen-the "grubstake"-governed by the unwritten code that will not be broken by even the wildest, outlawed blackguard, that of treating fairly the man who trusted and grubstaked him when he was broke. Also men found it advisable now to make a distinction between the veteran "sourdeach" and the initiate "cheechako," this being necessary in order that men should be addressed with greater or less respect acording to their knowledge and experience. The distinction supposedly had a chronological basis although men may have lived (and do live) in Alaska the largest part of their lives, without having, apparently, been regarded as more than mere cheechakos.

One finds that civilization takes a very queer attitude toward these pioneers. Because smug "unrealists" of the fireside can not visualize the topography of this chameleon land. with its promises and disappointments; because they have never "necked" or "gee-poled" a winter's outfit up an unknown creek to an undiscovered goal; because they have never built and lived in a rude cabin, small enough for the owner to lie with the major portion of his body under warm blankets while his arms search out the makings of a fire in the Yukon stove; because they have never felt that sickening, nauseating sensation that comes to a man when he climbs up the ladder for the last time, his winter's toil, through any weather till bedrock is reached, ending in that last frantic panning of the final crosscut, nothing but a few measly fly-specks resulting; because men, oppressed by a civilization they did not form but only follow, have not seen these things and, more important, have not themselves felt these sensations, they are quite prone to find a thousand faults of which the frontiersman is guilty. His disregard for drawing-room English; the natural ways in which he lets out his spirits, spirits that were surplus of that fierce energy that men must have had in order to live and succeed in



THE PROSPECTOR IN THE HILLS

the north; his attitude of sarcasm toward sacred Law, born of the impulse of man left alone and unpandered to in a land where Government was in the hands of Nature and her sole Law that of Strength; these Failings caused Civilization to look at him askance and decide that Alaska was in an intolerable state requiring an early ministration of Civilization's balm for all ills-organized government. And still these men did their best. With will-power and perseverance they plodded ahead carrying their packs and pick and shovel over every creek in Never have men set foot in late years on creeks that the early prospector has not passed over, sinking his hole, finding nothing, saying nothing and passing on.

Mineral development was earried forward on a greater scale from this time on. While Klondike miners were seeking the quick but transient wealth of the placers, others, with greater foresight were prospecting for the lodes. In '97 the Gladhaugh claim was staked in Virgin Bay. It later became the Ellamar mine. The same year the Bonanza Mine of Latouche was staked. These mines were still producing tons of copper when the Klondike was worked out, and all its produce spent.

The beach deposits of Nome, found in 1899, had a tendency to draw more miners than any of the other deeper deposits yet located. No machinery or equipment, except a rocker and

shovel was needed. The overburden was negligible. And the gold was as good as any other!

Late in the nineties a few prospectors from the Birch Creek region crossed the divides into the Chatanika Basin, where, after a little unsuccessful prospecting, Faith, Hope and Charity creeks were staked about 1898. That same year a party of gold seekers came up the Tanana in two small steamers, passed the present site of Fairbanks, and established a winter camp just above. These men covered most of the present placer district of Fairbanks but they were not prepared or equipped for deep mining and as that is the type of placers there they left with no definite knowledge of the valuable deposits of that portion of the Tanana Valley.

A trading station on a slough of the Tanana was established in 1901 and named Fairbanks. The next year, twelve miles to the north Felix Pedro discovered placer gold. The news of this strike spread slowly and when the rush of miners came the men were disappointed. The gold was there but a hundred or two feet of muck and gravel held it down to hedrock. This greater problem of mining was probably the cause of the surer and greater, tho slower, growth of Fairbanks. The need for heavy hoisting equipment, thawing points and paraphernalia caused the formation of betterbuilt roads, maintained by an association of the mining operators, and eventually of a narrow gauge railroad. The network of roads was later taken over by the Alaska Road Commission and to the narrow gauge has been added 470 miles of standard gauge-connecting Fair-

The Growing

Among the attendants of the mining short course this semester are several men from other parts of this district. One man, Edward Moody, comes from Kennecott. Another was advised by members of the Faculty at the University of Nevada when he applied there for short course work to come to the Alaska School of Mines for a good practical short course in minbanks directly with the coast. Incidental also to the conditions of mining in this region was the character of the mining population. The deeper placers, necessitating larger scale operations, drew men skilled in the drift mining methods of the Dawson district. Under their leadership haphazard methods of gophering gave place to more systematic work.

After Fairbanks became one of the producing districts hardly a year passed without news of a "strike" in some district. The Innoko, although found in 1889 and prospected several times since, became an economic gold producer some time in 1906. In 1908 the Iditarod District was discovered and within a year or so gold was found at Ruby. From then on, strikes were of common occurrence, the Chandalar, the Kantishna, the Tolovana and others being found, developed and worked out in the matter of a few years. Men were covering the country thoroly leaving nothing to hearsay. One can encounter experienced miners now who can tell without a moment's hesitation just who prospected such and such a creek, what holes he sank, what the depth to bedrock was, whether it was frozen or not, and what was found at the bottom. Still men come into the country and, like children who recognize nothing in the experience of their elders, having no direct knowledge of the work of the thousands before them, will be heard to quote authoritatively how this or that country "hasn't been touched," is "still unmapped." They do not appreciate the stoicism of the prospector which prompts him to say little of his failures, nothing of his hardships.

Short Courses

ing. Fairbanks is represented by the young aviator, Noel Wien, and by Luther C. Hess, prominent miner and banker, and by several others. Otto Geist came up from Bettles to take the course.

The various short-courses of the Home Economics Department for women started just (Continued on Page Nine)

Extracts from a Freshman's Diary

By JOHN D. CLARK

EPTEMBER 14, Monday—My first day of College. Went out on the 7:30 car. Seven-thirty! That's a time for the milkman, not for a human being There is some confidence to be gained from numbers; but what is a man supposed to do with his hands? Rumor has it that the freshmen are required to stand in the car. We stand.

Like very meek sheep we stand back in the corner until all the others are off the car and then respectfully trail behind the upper classmen. We try to look unimportant, but we don't feel it.

If feels queer to be treated as if we really wanted to know something. I wonder if this is the difference between college and high school; there knowledge was chasing us; here we're supposed to be chasing knowledge. I have a strong suspicion, though, that we'll have to work like thunder. When I got out of Trig class I was suffering from a severe head.

ache, and I have a feeling that it's going to get worse.

Sept. 15, Tuesday—More classes. The work piles up. What I've done already would suffice for a week in high school.

There are three times as many boys in the the Frosh class as in the Soph. We ought to be able to put up a pretty good fight.

Sept. 17, Thursday—We did—but they put up a better one and the upper classmen helped. A veil had best be drawn over the proceedings, which were painful, very painful.

A list of regulations for our conduct is on the bulletin board. We must wear skull caps with a yard of green ribbon tied on the top.

Sept. 21, Monday—We came four abreast across the bridge this morning, for moral support. The effect of our caps was even more outrageous than we expected. Several were hilariously purple and white. One had been made from that elastic upper portion of sister's stocking. On top of each reposed a wide bow of



A FRESHMAN RENDEZVOUS

green ribbon, such as might have adorned the top knot of a sixth grade girl of twenty years ago. People seem to find the things funny. But we are perfectly solemn faced and determinedly nonchalent. Secretly, it is kind of a thrill to be noticed this way, even for wearing a fool cap.

Sept. 22, Tuesday-A freshman has at last served a useful purpose. The bells are not yet ringing between classes. The quiet of the halls was disturbed this afternoon by the most inoffensive sweet voice, almost musical, (not the ordinary sound of a freshman in pain) cooing gently: "Cuckoo! Cuckoo!" It was two o'elock and one Shafer, at the request of the Sophomore class, had parked himself under the clock, opened up an umbrella over his head, and called the hour. The expression on his face was not benign, nor imbecilie, nor dove-like. It was a combination of all three. The same plaintive notes gurgled down the hall at each succeeding hour.

THE GROWING SHORT COURSES.

(Continued from Page Seven)

before, on the twelfth of October. Quite a number of ladies from Fairbanks are in this way taking work in Sewing, Handierafts, Dieteties, etc. These women, matrons and mothers, find it a pleasant relief from the infinite household duties to spend each day a few hours, profitable and interesting, in the atmosphere engendered by bustling student activity.

Mrs. G. W. Hick, who sold lunches to collegians in the basement of the main building during the fall, has taken the contract to furnish meals for the dormitory. Lunches are served now for the whole college in the new dining room in the basement of that building.

Attesting to the popularity of the new gramasium, the largest class in the College is that in physical education for women. No mere man knows what goes on within those guarded walls, though many of the women are becoming noticeably adept in running for the ear. Sept. 25, Friday—Have been informed that we are to build the Freshman Bonfire. Sweet of them to think of us......

Sept. 28, Monday—Worked on the bonfire. Sept. 29, Tuesday—Worked on the bonfire.

Sept. 30, Wednesday—worked on bonfire. Oct. 1, Thursday—Worked on the bonfire.

Oct. 2, Friday—Worked on the bonfire.

Oct. 3, Saturday—Worked on the bonfire.

Oct. 5, Monday—Worked on the bonfire.

Oct. 6, Tuesday—Worked on the bonfire. Oct. 9, Friday—A bit retrospective today.

Oct. 9, Friday—A bit retrospective today. Wondering what it's all about. After three weeks, what have I learned? This business of being on your own is a bit trying. The responsibility of keeping one's own balance of work and play, instead of playing all the time that someone isn't forcing one to work, that's another spot where college hits you. But I think I'll get it yet, 'the synthesis of hyacinths and biscuits' in Carl Sandburg's phrase . . . And so to bed.

More than 600 books have been added to the college library since the beginning of school this year. There are now more than 6600 bound volumes on the shelves.

Ernest N. Patty, Professor of Geology and Mineralogy, was appointed last May to the office of Dean of the College, the first deanship created by the Board of Trustees.

The picture of College buildings shown in this number of *The Collegian* was taken by Noel Wien from about five hundred feet above the campus, with a large camera set for 1-250 of a second, Wien let go the controls, and while the plane shot downward he used both hands to snap the picture, righting the ship as it dived close above the roof of the main building.

The new cover used by *The Collegian* this year is a design made by the artists of the Seattle Engraving Company, sketched from photographs of Alaskan scenery and industries.

Farthest-North Collegian

THE FOURTH CROP

E ALL, particularly the upper classmen, denght in showing the freshmen in every possible way (and many inconecivably marvelous new possibilities seem to reveal themselves each year), how insignificant they are. And there is no doubt but that it is a wholesome thing. Humility is the first lesson for the devotee of learning; not the humility of the bended knee and the cringing slave's imaginary inferiority to equally fallible men, but the humility that means respect for the universe of knowledge and willingness to face facts.

But how quickly those who were freshmen but a short while ago seem to replace the ones who were giving them lessons, and the inevitable unflattering fact stands out (take warning all brands of bemoaners of "this younger generation"): the college work, yes, and the world's work, seems to go on much as it did before; even improvements can be noted.

The freshman class this year we feel, we say it with full knowledge of the danger of such a statement, is good timber with which to build a college, will be good timber with which to build a Territory. It may be that the younger generation supersedes the older through acquiring the humility that the latter has forgotten; humility in the face of knowledge; upright courage in its use, and its defense when need be in the face of ignorance.

NOW WE HAVE IT

T THE TIME the Collegian goes to press the dormitory, the long-hoped-for, wished for, just short of—well,now we have it!

One evening while Dean Patty was at the Anchorage Fair he asked all the young men present between the ages of twenty and thirty who had not the opportunity theretofore of acquiring a college education to speak to him; he believed he could interest those who had initiative. A dozen or more responded.

Old ways are hard to leave, but several after the interview showed willingness to fry for the education that lies at their door. Never before had the challenge been put so diretly, nor the chances been so easily available.

The dormitory will bring the cost of education at the A. A. C. and S. of M. down to the level of that in the States. With steam heated study rooms half a block from a modern, wellequipped college, with six thousand books at his disposal, with the best and most complete scientific equipment in the laboratories to work with, with personal attention in small classes, and with the genial social life of a democratic student body, what does the young man lack but energy and persistence if he will not make use of it in preparing himself for greater service and success after a few years of the "happiest moments of his life," college life!

IN THE DULL DAYS

A LASKA is a land of summer work, and of winters spent by the fire. How often the miner, the prospector, the farmer, has wished for some more profitable way of spending the dull days than around the eard table or in the reading of cheap fiction. Some, it may be, have set courses of study for themselves. But the self-discipline is too great, the obstacles too many for the man long away from books, unused to the methods of learning, except in the dear school of experience.

For three years past these men have found

a place where the dull days are changed to ones of lively and piquant interest: where knowledge is made living by study in laboratories under expert tutoring; where the knots are straightened out by those who understand the difficulties; where congenial association with others headed for like goals, graced with like ambition, fills the winter with pleasurable moments that lengthen into memories—and friends.

This year with the dormitory open to short course men, the enrollment promises to be a record one.

Business on the Frontier

By LA DESSA HALL

AD YOU been one of the privileged of a half generation or so ago—assuming a college education in the field of business then to have been attainable—in round dollars what would you measure that training to be worth today? In attempting to arrive at the impossible calculation, devote a thought to the changed course your ship would have steered.

A half generation ago when that bark was launched, a pioneer condition existed. ters not where, geographically, that reminiscence may return you-somewhere in the New World, probably in the West, and almost safe to say not in Alaska. Natural resources featured in a flush of exploitation; the precious metals were sufficiently easily available to permit of high-grade methods of extraction showing a profit; timberlands were virgin and little thought was given to reforestation, fishing banks and streams teemed with finny hordes almost untouched by the inroads which later caused restriction to be placed upon their taking; manufacturing methods and modern production were in their inception; the conduct of business, viewed in the light of today, indeed seemed Opportunity, the chance to prosper, was spread before you often, you will say in looking backward, if you had only known when and how to avail yourself. When and how!

We may draw an analogy, placing Alaska in the light of the West of that day.

Alaska has been much in the popular mind for its natural resources, among them potential mining, fishing, agriculture, lumbering, with also a thought to manufacture. What of development? Natural resources vield fullest reward by the method most conducive to abundance -therefore, call is made upon the highest technical skill. Certainly all who enter into the development of a land's resources are not engaged in the purely technical pursuits which bring the varied harvests to market. Business plays its part, and a major part, in the building of an empire; and in the business world the empire is known. The history of the West of today may be repeated in the Alaska of tomor-Alaska will have her roster of names prominent in her true placement in the world of commerce and trade, and it is safe to surmise that among the chosen few success may in major part be measured by a background of early training.

How is an early training sought today? Not by bluff, luck, or seldom even by timed apprenticeship, especially in a pioneer country where modern institutions are few. Colleges today strive to meet the needs of progress and to them we turn not only for the classically trained, but for the technically equipped—in business as well as in other pursuits. The Federal government recognizes this need, through endowment of land grant colleges, well-equipped to disseminate basic knowledge and the newest approved practice. Alaska in her early era has been acorded this advantage.

It is only recently, comparatively speaking, that business has been added to the college curriculum. To many the association remains vague

Continued on Page Twenty



HEAD CHIEF ELIJAH ENTERTAINS AT TEA, NEAR ARCTIC VILLAGE

The Lure of Arctic Mountains

By MERLE HOWARD GUISE

NOTE—If there be those who feel that adverse in Alaska has been wrung dry, let them read the simply-told narrative of Merle Howard Guise, a young mining man who attended the first short-course given at the College, and they may believe that there is much adventure yet for those who follow to the ends of trails.

ITH A HEAVE and a shrug the packs settle into place. A grunt to dogs, and the long overland mush north from Fort Yukon is begun.

The heat of the sun makes mushing hard for the seven weary dogs struggling under heavy packs. The four natives and lone white man, similarly burdened, also find relief when travelling schedule is changed to the cool of night or rather when the sun swings to the north.

Swamps are waded; rivers and lakes crossed by building small, rude rafts; but on other days water is so scarce it has to be carried ten miles or more, for tea and a "lap" or so for the dogs. The areas of "niggerheads" (a lumpy type of bunchgrass growth indigeneous to Northern latitudes) are crossed only after man and dog are completely "done up" in the ordeal. An incessant battle is waged, day and night, against the all-devouring hordes of mosquitoes.

If only the aeroplane—the big, comfortable-cabined Fokker monoplane—could pick up this outfit and land it up there at Arctic Village. Why, the few hours in the air from Fairbanks would suffice to save many weeks of hard packing; miles of mushing through dense underbrush over colossal "niggerheads", across the barren, waterless tundra of the North.

The "flu" epidemic has taken toll of natives and the Yukon. At the suggestion of the worthy Dr. Burke of the Episcopal Hospital, the wanderer readily consents to carry in his pack any medicines. The course is altered so that the natives of Arctic Village might receive aid without unnecessary delay.

When the foothills of the Arctic Mountains are reached, after many nights of hard mushing on limited rations, we find game. Here at Chief Esaia's meat-drying racks, we rest for several days and all partake of freshly-killed earibou. Head Chief Elijah, of Arctic Village, has been called from his hunting camp at "timberline" by means of smoke signals set up several nights before—a "Signal Fire to Elijah."

Second Chief Esaia , likewise out hunting, is recalled to his camp by messenger and by signal smoke.

It now develops that not one of the four natives who composed the party thus far would consent to venture north of Aretic Village. The distance, the country to be traversed, the shortage of supplies, and the uncertainty of game in the valley of the Sheenjek are given as reasons. Besides, all the families of Arctic Village are now engaged in hunting caribon at "timberline" that their meat caches might be filled for the long winter ahead.

When the prospects for continuing the journey appear exceedingly gloomy, Head Chief Elijah returns to camp and offers a million light-year rays of hope! He has spoken briefly to his wife over the condition of their family kitchen supplies; he now consults with his assistant, Chief Esaia. Out of gratitude for the aid rendered his people, and the urge of "far-off green hills," he will leave behind his family of ten, to act as guide—a trail companion—to the North. Together we will make our way, then, into the mountains of the Arctic Divide, to prospect for gold and to search for our mutual friend, alone somewhere in the headwaters of the Sheenjek—or beyond.

Several days are required to make further preparations. Caribon must be shot and hung up in the sun to dry that the Chief's family might be provided for. Mrs. Chief Elijah must make moceasins from the moose and caribon hides and museles; dog packs must be repaired, and the seant equipment put in order.

A sad duty here devolves upon the wanderer. The half-dozen pair of sox have worn out, one by one. Absolutely nothing is available for hose—nothing but a knit sweater, a gift from the Sutherland, Iowa, Red Cross, a cherished protector against the damp of Flanders Fields. After perplexing scheming, a compromise composite design is adopted, permitting of one long and one short pair of sox. An axe handle takes the place of the "trap door" and a hunting knife completes the mutilation.

Now follow nights of steady mushing over never-ending barren mountains and across valleys so silent that the sound of moccasined footsteps, the scrape of pack against rocky slopes, is methodically monotonous. of "niggerheads" spread themselves in the creek bottoms, while phalanxes of buzzing mosquitoes inhabit both hill and vale. Once the winter trail of their friend is crossed, though it now offers no clew to his whereabouts. The searching, the prospecting, the signal fires, even the hunting, all are in vain. Neither gold nor a trace of their friend, nor food, could be found. In this vastness beyond timberline they are alone with their dogs.

The valley of the Sheenjek is reached. On the bank of this ill-omened river we hold a conference. A few nearly empty sacks are all that remain of the food supplies. To leave this country, devoid of game, is imperative! Here the two trail friends must of necessity part—one to return with his four hungry dogs to the village of his people on the Chandalar, one to attempt the rapids of the Sheenjek in search of his friend—both looking for food.

A raft, when suggested, had been voted



LAST CAMP AT TIMBER LINE

down by the Chief; a skin or canvas boat would have but little chance in the "strong" waters, a raft none at all!

One day was devoted to shipbuilding. Small spruce and willows, tied with babbish and grass, served for a sled-shaped frame. (A supply of babbish, or strips of caribou hide, had been included as Mrs. Chief Elijah loaded the dogs).

For a covering an accumulation was stitched together. A small piece of canvas, a frayed cloth of many holes, a canvas parka, overalls and other items of habiliment, too intimate to mention, are readily sacrificed for a patch-quilt to hide the frame. The red pocket of the parka and the blue seat of the overalls are placed in extreme or strategic portions of the hull, yet without regard to a color scheme.

Moccasin strings hold in place the masterpiece covering draped loosely over the frame. Below an estimated "water-line" a coating of hot caribou grease is applied (a caribou stomachfull of the latter had been placed in a dog's pack by the Chief's emergency forseeing mate) to hold out the water.

An axe, a hunting knife, a semi-hairless shaving brush, yarn from clothing, and needles and muscle thongs packed in by Mrs. Chief—all are available in this shipbuilding emergency.

The hood of the dissected parka, filled with stores, serves as anchor; pack straps, the line. A sleeve, lashed up to a crossbrace, easily holds the precious food supplies above the "watërballast"; while the other sleeve holds another application of equally precious fat. A dry spruce pole in a pile of driftwood furnishes a pair of oars. A wolfskin robe, a cross-fox and lynx pelt, wrapped in the mosquito net, supplies the royal couch, as well as the chair of state.

Elijah, architect-in-chief, could not predict how long the grease would keep out the water; maybe one day—maybe to the end! Verily, the native is as evasive as an oil magnate on the witness stand.

Upon completion of the eraft the chief is keep for immediately starting out with his hungry dogs. Yet not by a whine did they complain of the absence of their daily meal, not by a single look of reproachment—for such is the psychology of the malamute of the native.

But the Chief is prevailed upon to assist in a trial spin. With his help at the pole, the "Faith, Hope, and Prayer" battles the swift river to the farther shore and back.

By the light of the campfire—for it is just midnight and the Chief has asked for his "release"—with the sleepy-eyed dogs surrounding as witnesses, the entry is made in his diary, probably never to be read:

o' **** to all and sundry that he, Elijah John Henry, head chief of Arctic Village tribes, did design and construct for me one contraption—a hybrid of uncertain motif—but that he, Elijah, is not in favor of maritime excursion that I, Merle Howard Guise, am now prepared to embark upon—for 'Heaven, Hell, or Hoboken' ''!

The two friends stand up and elasp hands, for the last time. No word is spoken. The Chief turns away into the silent night.

The anchor is hoisted. Almost immediately the "Faith, Hope, and Prayer" is in the first rapids. The rocks seem fairly to race upstream to meet us half way. Hastily turning the hulk about, the better to pick out a channel among the snags and stone boulders, we go running down over the riffles. The water grows shallower, the cobbly bottom races back faster and faster-a foot of water, now eight, now six · inches, the blade is out-four inches-and just as I am ready to jump overboard-why, we are in deeper water. Rocks to left, snags to right, and sinister black forms just under the surface. Fast steady rowing upstream, works the boat to one side of obstructions and keeps it in the channel until it is expelled out into fairly still water.

Now I can fully appreciate the flat bottom design. Even if it looks unlike a fairy barge—a figment of fantasy—it is the only type. A deeper boat would have had the bottom rubbed off and then been deposited in the deeper, swift waters. And several hundred riffles must be crossed or rapids run before the Yukon is reached. As I round a bend, my heart stops! A log jam of snags, ten or twenty

feet high, seems to cover the river from bank to bank. The swift waters drop under the tangled mass with a frightening roar. It is now too late to make the bank! Pulling with all my might to the side of the river that cannot be seen, but gradually losing down stream, I miss the ragged barrier by inches! A jerk with the starboard oar and the frail side just clears a jagged rock. A quick pull at both oars out of the thole pins, and swiftly ducking my head, I shoot through a veritable "hole" in the barricade. Spruce needles shower me from the branches scraped; the top of the head net catches on a twig—and the Faith, Hope and Prayer floats serenely out on the placid waters! But



THE "FAITH, HOPE AND PRAYER" AT THE MOUTH OF THE PORCUPINE

for that big rock planted in the bed of the river, the good ship with all on board would now be a part of that log jam.

Scanty food supplies demand fifteen to twenty hours a day at the oars; strong headwinds necessitate constant rowing; no lazy drifting between rapids while eating a cold bite. Shortening days and necessity of wearing constantly the head net, which further darkens the view, forces extreme caution in navigating in the half dusk of night. Food can be prepared only when opportunity presents. Once a day the advance is halted and the craft hauled out on a sand bar. A meal can be prepared and consumed by means of, or in spite of, head net and gloves. But there comes a time when the clouds of ferocious mosquitoes force a hasty retreat-supperless-into the bed net, or back to the water.

Moceasins are worn to minimize the danger of stepping through the bottom. When leaks develop at the "pocket" the ambidextrous craft is turned, bow for stern. When water persists in entering, the gondola is hauled out, turned over, and an application of hot grease applied to the sagging contours.

B-r-rip! Or something like that. I awake to find the craft thrown up on the jagged branches of a spruce tree snag. I also jump out on the tree.

Here, then, is a dilemma; we are in the middle of a deep channel and not upon a shallow bar. To push the boat off is to tear the bottom. Reenter the hull and holes will be punched in the covering; hesitate much longer and the pressure of the swift current against its isdes will do all the punching necessary. Being at an extreme end of the boat, I am unable to lift it. The bank cannot be reached, for a step off the tree into the swift current would mean disaster. "Lone survivors" at least are given the usual sandy beach underfoot and palms overhead.

One of the oars is within reach. When this is worked under the ribs between the covering and the top of the snag, the hull is soon balanced and easily pivoted around like a turn-

Continued on Page Twenty

By the Light of a Bonfire



"* * * SENDING A RICH, YELLOW FLARE INTO THE NIGHT"

HE EYENING of October 10 was clear and still. People walking up from College station found the road a bit dark, though a few, familiar with its gravelled length, picked their way with ease. Ahead the building loomed darkly, hiding for a time the secrets of promised festivity. Coming nearer, those plodding up the hill could see the now imposing silhouette of the new wing take shape in the starlight. There on the top floor the dance was to be, initiating the new gymnasium.

It was the night of the annual freshman bonfire, the first gala time of the year on College Hill, more significant now than ever with the new buildings, with upper classmen supervising and giving an air of established tradition to the affair, with friends and visitors, many of them, coming out from town to view not a curious experiment but the activities of a college demanding respect and interest.

Japanese lanterns in the halls and the library cause many to exclaim as they come up the steps. They lend just that magic of changed reality so essential to the success of any festive occasion. The cool air comes through open windows and has almost as much the scent of Spring as of Fall

Many wander about the building, impressed it may be with the business-like aspect of classrooms and laboratories, or merely feeling lost in the strange milieu of learning. Others gossip on the steps, watching dazzling headlights swing around the corner or greeting new arrivals. The twinkling row of lights that is Fairbanks, gives the final touch of atmosphere.

But the time has come. The rumor runs through the building that the bonfire is to be lighted. The human stream flows toward the brow of the hill. At the signal President Bunnell touches a match to the huge pile of dry wood that the freshmen have spent many hours in gathering. It flames up immediately, sending a rich yellow flare into the night. Nothing escapes its brillianey. The whole hill is lighted like day; the buildings, the road, the ears, the faces, even the birch grove in the background must yield to the light and be shown for good or ill.

The freshmen are given the order to march. They leave their small piles of sticks and, filing past the crackling blaze, light torches to kindle their individual bonfires. With torches aloft they take the pledge and are welcomed formally into the student association. A serpentine begins, led by the freshmen. The streaming flames mark a winding path; the crowd surges back, following at last the line of students now headed for the building.

What need to speak of the dance that followed; of the banjo and drums and saxophone that harmonized with the lively notes of the piano, bought and paid for by the student association; of the memorable waltzes on the new floor; of the streamers of azure and gold suspended from the red steel girders of the ceiling;

Continued on Page Twenty-Two



THE NEW COLLEGE BUILDINGS FROM THE AIR

The New Campus

The one building which was "The College" when it first opened its doors to students in 1922, had shed five winters from its back before it was graced with the addition of a wing in the summer of 1923 equal to itself in size. The last Legislature appropriated money for three new buildings: a power plant, a dormitory for men, and another wing which makes the floor space of the main building more than triple that of the first structure. The campus begins to look imposing with eleven buildings (counting residences of employees, storehouses, etc.)

The power plant furnishes light for the entire campus, power for the machinery in the mines building at the foot of the hill and for the main building, and heat for the latter structure and the dormitory. The tall black smokestack overshadows the whole campus, and easts its white smoke into the air on cold winter days quite majestically. An underground passage-way that a man may walk through earries wires and steam pipes to light and heat classrooms and laboratories.

Continued on Page Twenty-One

With Gum Boots and Mucksticks

By EARL PARSONS



LOOKING FOR THE "COLORS"

HE SUMMER work of college students is always an important part of their education. Where that work can be closely allied to the line of their specialty, it is doubly profitable. It gives the wherewithal to continue in school and the practical experience to make theoretical and laboratory work mean more. Mining students in particular have found remarkable opportunties in the vicinity of Fairbanks to gain experience in the field.

Bob and John McCombe hurried off to Nugget Creek to do assessment work on eighteen elaims which they located there two years ago. On arrival they found that considerable work would have to be done on the old cabin they intended to occupy before they could commence assessment operations. Two or three weeks of intermittent repairing produced satisfactory living quarters and shortly afterward they commenced sinking holes. The greater part of the

summer was spent in unsuccessful attempts to reach bed-rock because of the great amount of water that came in near the twelve-foot level. After experimenting with boiler and hand drill they finally reached gravel and found a good showing of gold. A test conducted by themselves at the time showed the dirt to be running from fifty cents to two dollars a cubic yard. All of their samples were taken to the College and weighed up under their supervision.

Lynn Goyne, special student at the College this year, spent the largest part of one summer month uncovering an old prospect hole on the Nowitna River, in hope of finding a "pocket" in it that its former owner had overlooked. When all the water had been pumped out the hole proved to be merely a "salt" and he and Frank Zimmerman who accompanied him on the trip were forced to abandon it. The return journey covering ten days was made with but twenty pounds of food to sustain them. The horse they used to transport their supplies grew so weak that they were forced to shoot it. In spite of the fact that their financial hopes were greatly dashed they both pronounced it a very enjoyable "outing." Lynn has established himself in the Loftus brothers frat-house at the foot of the college hill where he intends to stay until he completes his special course in the spring.

Albina Miller, ambitious student of business administration, spent her vacation in the employ of the Alaska Railroad at Anchorage. For a short time she worked in the Accounting Department, but later was moved to the Disbursing Offices where she worked steadily up to the opening of school this fall.

Clarence Isberg and William McCarty, accompanying Professor Truesdell, spent the greater part of August and part of September in Hot Springs where they were employed as surveyors for George Elliot, a member of the Fairbanks Exploration Company's staff.



THE M'COMBE TWINS DRILLING ON NUGGET

Charley Wheeler and John Luss were again co-partners in a contract for painting the college buildings and doing odd jobs on the camnus.

Ray Hamilton, as the result of a desire to get away from the bustle and bang of Fairbanks' congested traffics, selected Harrison Creek in Circle as an ideal place of employment. He spent his summer months there doing assessment work on his parents' mining property.

Frank DeWree, after two or three years of earnest labor in the N. C. Co.'s employ, was awarded last spring with a promotion to the position of keeper of heat and light accounts of the firm. His college training qualified him for the position.

Jack Hosler and Clifford Smith, as formerly, were employed by the Fairbanks Exploration Company during the summer months. Smith was drafting and mapping in the office and later



MUCKSTICKS

worked in the field as transit man. Hosler ran a drill for the Company on Dome Creek.

William Hering spent his entire vacation period in the employ of the Alaska Road Commission, where he held the steady position of truck driver for nearly three months.

Lawrence McCarty spent fifteen months in the employ of the Curry Hotel, returning to



GUM BOOTS

Fairbanks this fall to take up his unfinished work at the College.

At the suggestion of Professors Pilgrim and Patty, of the mining faculty, Donald Morgan spent the major portion of his summer at one of the Kennecott Copper Mines at Latouche gaining experience in hard rock metal mining with which he was previously unfamiliar. Morgan states that Superintendent Van Presley and the other officers of the company at Latouche are very willing to give young mining students experience in any branch under their management. During the latter five weeks of the summer Morgan made a trip to Seattle, spent some time there looking up old Alaskan acquaintances and then went on to Los Angeles in company with Bob Bartlett. The practical experience gained at Latouche earned him college credit, substituting for the required senior field trip.

THE LURE OF ARCTIC MOUNTAINS

Continued from Page Fifteen

table. In this position I can lift it up, drop it into the water and scramble in after.

At the mouth of the Porcupine examination—autopsy—reveals that the once-proud but ever frail frigate cannot much longer hold together. The four hundred mile cruise down the Yukon to Fort Gibbon is not to be. The wolfskin robe, the pelts, the axe and the frying pan are salvaged.

* * * *

The cruise of the Faith, Hope and Prayer is monorable—to me. Hauled out on a sandbar, the hulk, with its emaciated sides, constitutes a memorial to that unreal, altogether unnatural, adventure—the perilous passage of the Sheenjek.

BUSINESS ON THE FRONTIER

Continued from Page Eleven

if at all understood. What can college give a man or woman in a field materialistic and throbbing to ever-changing successive conditions? The question may be answered, at least to a partial satisfaction, through a numeration of courses given in the Business Administration Department of the Alaska Agricultural College and School of Mines.

The department offers specialization in three majors; general business, accounting and secretarial work. In these major courses are given subjects required for graduation, electives within the department and free electives which may be chosen from other departments. Selecting at random a few of the subjects listed in the eatalogue under Business Administration



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In the introduction the reader may have been led to infer that claim was being made upon the attention of the established business man. In part, yes. If you have time and the desire, it is not too late—there is room for you. If you have a son or daughter contemplating a business career, parental guidance may be timely. If you are a student entering upon the threshold of higher education, with an attitude of indecision, think it over in the light of what the future will require. Alaska will make an ever-increasing educational demand upon its manhood and womanhood. To the youth who does not intend to remain here, let it be known that competition is great without the portals.

THE NEW CAMPUS

Continued from Page Seventeen

The main floor of the new wing will house the departments of Geology and Business Administration. Dean Ernest N. Patty now has his office at the end of the lengthy central corridor. The departments of Physics and Engineering will occupy the whole of the basement of the wing, and the top floor with its high ceiling braced with steel girders is the finest gymnasium in the Interior, regulation size for basketball and ideal for dances, assemblies and other all-college affairs. A stairway leads from the alcove at the end to a shower bath in the basement.

Those who a very few years ago witnessed witnessed witnesset is epiticism the laying of the cornerstone for a college among the birch trees on a hill in the wilderness, have difficulty in realizing what has been done to transform that wilderness into the eampus they see filled with activity. The long line of students who climb the hill each day are themselves forced to wonder at the transformation.

BY THE LIGHT OF A BONFIRE

Continued from Page Sixteen

of the cake and coffee at the little tables in the Home Economics rooms? And what need to speak of the stunts of the freshmen; of the jointed pollyzoodle that danced across the floor, scratched its ear, feined death and chased a frightened young princess to the door; of the novelty chorus; of the ballet dance, "O, Budding Rose?"

The music has stopped. Reluctantly the guests depart. Still small flames rise from the hot embers of the bonfire. There is a whir of starting engines; the still air vibrates to the honk of jovial and confident horns. In the valley below a string of lights marks the crooked road to town. Others follow the path to the station. A big white moon, just emerging from a few straggling black clouds, makes a picture of the building on the top of the hill, pouring its subdued light from the windows; the careening Northern Lights roll above. The evening is over but not forgotten.

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Small Scot: "Oo ay. Ah saw the mannie an' his caddie lookin' for it."-Punch.

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