

At such a distance it stands alone. No other peaks break the even line of the horizon anywhere in its vicinity, showing that it overtops all its neighbors.

Since the discovery of Mt. St. Elias by Peary in 1891 many expeditions have sailed along the coast to the southeast, known to navigators as the "Fairweather grounds." Among the celebrated explorers who visited this region about a century since were Cook, La Perouse, Malaspina, and Vancouver. These navigators, however, confined their attention to what could be seen from the coast—they did not venture into the interior. It is only within the past few years that attempts have been made to explore the land and to climb the mountains.

**Reaching for the Mountain's Top.**

The first expedition aiming to reach its summit was sent out by the New York Times in 1881 in command of Lieutenant Frederick Schwatka. This expedition landed at Icy Bay, 50 miles west of Yakutat, marched inland about 20 miles and reached an elevation of 200 feet on a range of foothills skirting the southwest side of Mount St. Elias.

The second attack on the mountain was made by an expedition in charge of Mr. Edward Topham, of England, in 1888. An elevation of 11,400 feet was attained, a remarkable success considering the difficulties encountered.

A third expedition visited the St. Elias region in the summer of 1890. This was sent out by the National Geographic Society and the United States Geological Survey, and was placed in my charge. We landed at the head of Yakutat Bay late in June, and marched northwest for about 50 miles over moraines and glaciers and across snow-covered passes to the northwest base of the culminating pyramid of St. Elias. The storms of winter coming on, we were obliged to abandon the hope of reaching the summit, but found that the northern slope of the mountain was far more practicable than the steeper southern face, and could probably be climbed in favorable weather.

**Professor Russell's Second Attempt.**

Explorations made in 1890 showed that the region about Mount St. Elias was one of unusual interest to geographers and geologists, and having failed in the first attempt to reach the summit of the great mountain a second expedition, under the same auspices as the first, was decided on. I was placed in charge of the undertaking and sailed for Fort Townsend, Wash., on the United States revenue steamer Bear, on May 20.

My companions were six camp hands, who were selected on account of their experience in frontier life. Three of the men—Thomas P. Stany, J. H. Crumbaugh and Thomas White—were connected with the expedition of the year previous; Neil McCarty, Will C. Moore and Frank S. Warner gained their first experience in high mountains during the season just ended. The success that attended our efforts in the first attempt to reach the summit of the great mountain was due to the willing service rendered by my faithful companions.

Our voyage from Fort Townsend to Yakutat Bay was uneventful, but exceedingly pleasant, owing to the kindness of Captain M. A. Healy, the veteran navigator who commands the Bear, and his wife, who for the first time was to share the hardships of an Arctic voyage with her husband. We left Yakutat early in the morning of August

6, and Icy Bay was reached about 9 o'clock.

**Camped in Icy Bay.**

Two boats left the ship, the first in command of Lieutenant Jarvis and the second of Lieutenant L. L. Robinson. Each boat carried a load of camp stores, tents, etc. Four of my men went in the first, but only one, Will C. Moore, in the second. The boats entered the bay, but we soon saw that an accident had happened. The first boat capsized, and we saw the men it had carried struggling to gain the beach. They reached shore safely, and soon drew their boat up on the sands out of the reach of the waves.

The first boat had scarcely turned over when it became apparent that the second had suffered a similar accident, but farther from shore. Of the men who went in the second boat only one reached shore alive. Lieutenant Robinson, four seamen belonging to his boat's crew and Moore were drowned.

All of my party and all of our supplies having been landed, I embarked with Lieutenant Broadbent and rejoined my men on shore without accident. The boat returned to the Bear, which immediately steamed

away to the south, leaving us to take care of ourselves—a task by no means novel.

**Acres of Strawberry Blossoms.**

Our first camp was in a grove of young spruce trees on the east border of a broad, open prairie of grassy land bordering the Yakuse river. This open level area comprises a tract about three square miles in extent, which at the time we landed was literally white with strawberry blossoms.

The day after landing we had the sad duty of burying the body of a sailor named Smith, one of the boat's crew that was lost. The next day the body of Moore came ashore and was buried. I have since learned that a party of Yakutat Indians while sea-otter hunting found two other bodies and buried them.

The distance of the summit in a straight line from camp 1 is 33 miles. Owing to the difficulties of travel, however, one would have to make a journey of nearly twice this length to gain the desired goal. Our first march was nearly due north across a sandy flat, intersected by swift, muddy glacial streams and in part densely covered with

forests. A camp was established on the north side of this lowland and at the foot of the cliff of moraine covered ice, which marks the southern limit of the Malaspina glacier. Owing to the number of loads to be carried and the small number of men to do the work, progress from camp to camp was slow at first. At the start we had 40 packs and only five packers. As we advanced, however, the number of packs was reduced, both on account of rations used and because it was found that we could dispense with many things which at first seemed necessary.

**Covered the Ground Six Times.**

Our next advance was to the Chaix Hills, the lower slopes of which are covered with large spruce trees, dense thickets of alder and a great variety of smaller plants. The march from the camp on the outer border of the moraine fringing the Malaspina glacier to the Chaix was exceedingly tiresome, requiring 12 hours of constant tramping, even when unencumbered by packs. In order to bring up all of our supplies the men had to make this fatiguing journey at least six times.

I remained in a comfortable camp at the Chaix Hills while the supplies were being

of the Samovar Hills. The tents were pitched amid luxuriant blossoms on the immediate border of a stupendous ice fall in the great glacier we were ascending.

Owing to the glare of the sunlight on the snow fields, and the softness of the snow at night, our marches were made principally at night. Although traveling at night was far more comfortable than by day it was more dangerous, as we were forcibly reminded the night we made our first advance north of the Samovar Hills. We started as soon as the snow began to freeze after sunset and worked our way with a loaded sled around the worst part of the ice fall at the west end of the Samovar Hills and through a maze of crevasses above the fall. The snow ahead looked smooth and but slightly crevassed, and I turned back, leaving the men to advance without me. They had scarcely proceeded 100 yards, however, when Stany and White, who were in the lead in the sled link, suddenly broke through and fell some 20 feet into a crevasse. Fortunately, they landed on a mass of soft snow, which had been caught in the chasm and formed a kind of bridge.

**Rescued From a Perilous Position.**

The men could not move from the position in which they landed, because of the snow that had fallen on them, and because on either hand the chasm descended to unseen depths. Their position was exceedingly critical, but owing to the coolness and promptness of McCarty a rope was lowered to them almost before they reached the bottom, and they were drawn to the surface. On the way down White again dropped through a snow bridge near the same place, and disappeared in the blue puff below, but was again rescued with the aid of a line without serious injury.

Our night marches up the Agassiz glacier continued until July 14, when we reached the place where the Newton glacier pours down a steep rocky descent and joins the Agassiz. This was as far as we could take our sleds. Our course then led northwest up the Newton glacier, which we knew from the experience of the year previous was exceedingly rugged and broken by several great ice falls.

The work of "packing" our tents, instruments and rations was now resumed, and we advanced more slowly than when we could use the sled. Our camps were on the snow at a sufficient distance from the mountains to be out of danger of avalanches. Cooking was done over oil stoves, and our food was necessarily simple in the extreme, although usually sufficient as to quantity.

**Cutting Steps to Cross a Crevasse.**

At several localities steps had to be cut in steep snow slopes, which made progress very slow and tiresome. At one place advance seemed to be impossible, owing to a maze of huge crevasses which crossed the glacier from side to side. After viewing the wild landscape from the summit of a towering pinnacle of ice it was decided to cut steps down into one of the broadest crevasses and then up the precipice over 200 feet high, which formed its opposite wall. This was accomplished in about a day by McCarty, Stany and myself, who were then in the advance of the rest of the party.

Cutting steps up the precipice was more difficult than in any case previously encountered, owing to an over-hanging cornice like ridge, about six feet thick near the top, but was finally accomplished, and a rope put in place to

facilitate our return. Above the great crevasse, which we called White Cliff, the surface of the glacier was less broken, and we made good progress for about five miles to the foot of the next great ice fall. This was a precipitous descent of over a thousand feet, up which we toiled with heavy loads through soft snow for several hours before reaching the magnificent amphitheater in which the Newton glacier has its source.

**A Vast Amphitheater of Crystals.**

Near the entrance of this amphitheater we made what proved to be our highest camp. The elevation was a little over 8,000 feet. The scenery while traveling up the Agassiz and Newton glaciers had been magnificent, but the towering precipices of ice which surrounded our highest camp surpassed anything we had seen. Mount Newton, forming the northeastern end of the vast semicircle, rose nearly vertically for fully a mile. Its sides were covered with which frequently fell in thundering avalanches. On the southwest was the roof like slope of St. Elias, a vertical height of two miles. From its glittering slopes avalanches of fearful grandeur repeatedly rushed down into the snowbound valley in which our little tent was pitched.

Between Mounts Newton and St. Elias there is a "saddle," the lowest front of which was 4,000 feet above our camp. The slope leading to the "saddle" was rugged and steep, and crossed from side to side by blue crevasses, the upper walls of which frequently rose 100 feet or more above their lower lips. Our advance above the highest camp was up this slope of ice and snow, so steep that steps had to be cut the greater part of the way. In the higher region my companions were McCarty and Stany. The rest of the party were at lower stations advancing supplies.

**The Highest Point Reached.**

With my two companions I left the highest camp at 3 o'clock on the morning of July 24 and climbed the ice cliff leading to the divide between Mount Newton and Mount St. Elias. This was a task of no mean difficulty, requiring eight hours of hard work. On the divide we had a magnificent view of the desolate mountainous region to the north, and could see the thousands of snow-covered mountains that intervene between Mount Fairweather,

some 200 miles to the southeast, to Mount Wangel, an equal distance to the northwest.

After having some lunch on the divide and making such observations as were practicable, we continued the ascent and at 4 o'clock reached an elevation of 13,300 feet on the north slope of the great pyramid forming the summit of Mount St. Elias. Measurements of the height of the mountains made after returning to Icy Bay have shown that Mount St. Elias has an elevation of 18,250 feet. This measurement was made with care and is believed to be correct within 100 feet. When we reached our highest point there were nearly 4,000 feet of precipitous snow slope yet above us.

**Returned to the Tent.**

I deemed it advisable to return and advance our camp to the divide before making an attempt to reach the summit. We were reluctant to turn back, but felt confident that if we placed our tent upon the divide we should be able to reach the summit in one day and return. Working our way down the precipitous trail we had made during the ascent, we regained our tent at 10 o'clock at night, just 20 hours after leaving it.



VIEW UP THE ATHEDE GLACIER.

**PHOTOS OF THE HAIR**

Prove Very Effective in the Identification of Criminals.

**NEW PLAN OF LIGHTING TRAINS.**

An Incandescent Light That Depends on Hydro-Carbon Vapor.

**THE SCIENCE OF EVERY-DAY LIFE**

(WRITTEN FOR THE DISPATCH.)

A valuable addition has been made to the means by which criminals can be traced by the introduction of photo-micrography. Photographs of forged notes and checks, showing the difference in the color of the ink used in the original writing and by the forger, have long been employed, but now photographs of human hairs and blood corpuscles are found to give great assistance to the detective. The difference in hairs is so marked that it can be easily detected by this means, the variation extending from the root of the hair to the tip.

Dr. Jeserich, who has been making a study of this branch of science, was recently able to save an innocent person from conviction. A murder had been committed, and the only trace of the perpetrator that the police had been able to secure was a single hair. A man whose hair was the same color, and apparently of the same fineness, was arrested and imprisoned. Dr. Jeserich photographed the hair from the head of the real murderer and one from the head of the suspect. The difference was so plain that the man under arrest was promptly released. It is found that human hairs possess a marked and distinct individuality as the features of the human face.

Police officers in Europe, where the new science is constantly called into requisition, find that the only forgery that cannot be detected by means of photo-micrography is where the forger uses ink from the same bottle that was used for the original writing. It is not in the badly joined connection of letters that have been tampered with so much as in the difference of the color of ink that the value of this means in detection is displayed.

**Electric Train Lighting.**

A new application of the old idea of lighting a railway train by means of the energy derived from the axle of the car or locomotive promises to lead to one of the most practicable systems of electric train lighting yet brought before the public. The new machine is a cylindrical dynamo, which is attached to the forward axle of the locomotive. The whole machine does not weigh more than 300 pounds, and it is completely incased in an iron jacket, so that snow, rain or dust will have no effect on it. It is supposed to run for several weeks without any attention except oiling. An excellent feature of the new system is that

the lights retain their full power when the cars are at a standstill. The trouble in lighting by storage battery heretofore has been the great weight of the batteries and the cost of charging. Both these difficulties have now been overcome to a considerable extent. In each car a small but powerful storage battery will be placed. When the car is in motion these batteries become charged. With the stoppage of the train the current from the dynamo ceases, but the storage batteries come into play and light the train. In case of a car being shunted on a side track from any cause whatever, the lights remain in service for six hours, with the normal battery power. This power can, however, be supplemented at any moment as desired. It is stated that within six months this system will be established on one of the most important railroads in this country.

**Incandescent Platinum Light.**

M. Paquelin has devised an incandescent platinum light, which, whatever its practical recommendations may be, is quite ingenious. The apparatus consists of a strip of platinum coiled on itself and placed in a platinum bowl with a hollow stem. A mixture of air and hydro-carbon vapor in specific proportions is then introduced under pressure. This mixture is ignited, the flame disappears, and the platinum strip incandesces, the degree of incandescence increasing with the pressure. Even with moderate pressure it is said that the degree of luminosity compares favorably with that of an electric lamp. If the whole apparatus is placed under water the light continues to burn.

**A Sliding Telephone.**

There are many occasions on which it is inconvenient to have to go to a distant part of a building in order to use the telephone. A provision which meets the requirements of a portable telephone, always available, is the sliding device recently brought out in Florida. The telephone is mounted as a whole on a sliding board and is counter-balanced. The board slides up and down between two guides from floor to floor, much in the same way as a dumb waiter, and a cord is attached for pulling it one way or the other. Enough slack is given to the wire, connecting to the instrument, to allow a rise and fall equivalent to the height it is raised.

**Simple Cure for Diphtheria.**

The late prevalence of diphtheria has brought out many popular remedies. One of these, which is frequently adopted in Germany, is to close the room on the first appearance of the disease in the throat of the child. A tin cup is then filled with equal parts of tar and turpentine and held over the fire until the fumes fill the room. This will cause the little patient to expectorate copiously and to expel the membranous matter which is the source of the mischief, often saving its life.

When making your holiday selections in fine diamonds, watches, jewelry, silver-ware, clocks, bronzes, etc., call on M. G. Cohen, Diamond Expert and Jeweler, 26 Fifth Avenue, who has the largest stock in the city and will save you from 15 to 25 per cent. No trouble to show goods.

**KEECH ALWAYS THE BEST. KEECH ALWAYS THE CHEAPEST. KEECH**

**OUR GRAND OPENING SALE OF HOLIDAY GOODS! OUR ASSORTMENT DOUBLE THAT OF ALL OTHER DEALERS.**

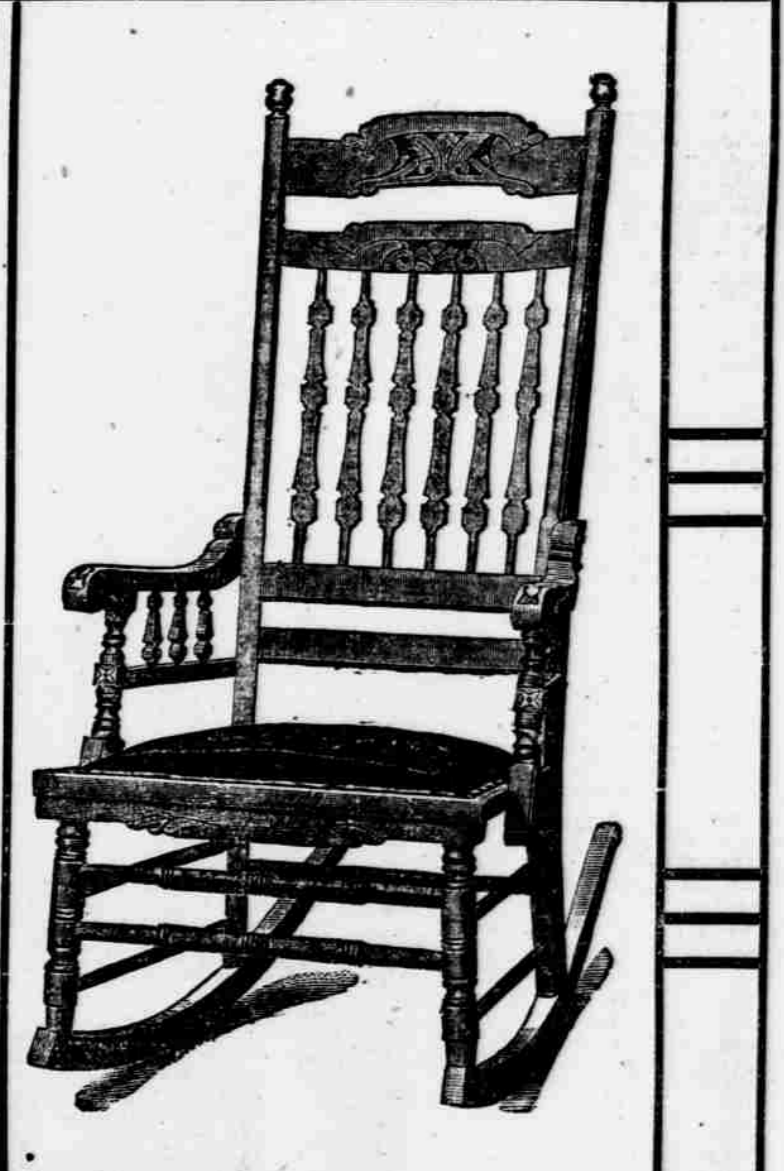
**NEVER IN THE HISTORY** of the Furniture and Housefurnishing trade have you found an assortment in Quantity, Quality and Low Price to equal that now offered by KEECH. We ask you to compare our goods and qualities with those of other dealers, whose vain endeavors to attract trade have led them to make promises that their customers find, too late, that they cannot fulfill. Our stock is larger than that of all the other local installment dealers combined. Our prices we guarantee to be lower, and KEECH'S name is a guarantee of reliability. **DON'T BE MISLED. WHEN YOU BUY, BUY RIGHT. THEN YOU BUY OF KEECH.**



**MISSSES' ROCKER**  
(A BEAUTY)  
**ONLY \$2.00**



**TASTY AND FANCY**  
(A GEM)  
**JUST \$7.50**



**\$10.50** Embossed leather seat. Magnificent high polish; thoroughly first class. Antique Oak, best style and design and a pattern that pleases the most fastidious taste. Many other styles and prices at proportionate prices.

**\$8.50** Imitation Mahogany Sixteenth Century and Antique Oak. Beautiful finish; assorted styles, with Rug, Silk and Tapestry Seat and Fancy Assorted Backs. Full size, strong and handsome.

This prettily Upholstered Chair, with Silk Plush or Tapestry Seat of fine polish in Antique Oak and Imitation Mahogany, is first-class in every way, and an ornament to any room. It's a rare value at the price offered—\$2. It'll make a nice holiday gift.

**\$16.50** Embossed leather seat and back. Elegantly carved. A most desirable chair, because it can't be beat for the money. The finish is of the best—Antique Oak, Sixteenth Century, etc. A present for a loved one, par excellence.

A pretty present for any woman. Antique Oak, Sixteenth Century and Imitation Mahogany finish, with fine Silk Plush Seat and back. As well made as the best and just as handsome. Our qualities are what make our trade. Compare this chair with others at the same price.

**STOCK OF CARPETS UNRIVALED. ALL GRADES---ALL PRICES! EXCLUSIVE PATTERNS IN CURTAINS AND FOLDING BEDS! THE BEST TERMS AND PRICES AND RELIABLE HOUSEFURNISHINGS!**

**KEECH**

**CASH OR CREDIT 923, 925, 927 PENNAVE. NEAR NINTH STREET. OPEN SATURDAYS EVENINGS.**