$23,000,000 RAILROAD TO REACH MINE

THE PORT OF CORDOVA

A LOFTY peak of almost pure copper in the mountain ranges of the Copper river district in Alaska is to be transported to a smelter at Tacoma, Wash. The first shipment of 2,000 tons of broken ore was shipped recently by a railroad just completed from Cordova on the southern coast of Alaska to Kennicutt, about two hundred miles inland, where the mine is located.

The mine cost its owners about one million dollars, the railroad with equipment calls for an expenditure of some twenty-three million dollars.

To the prospectors who originally located the copper lode now called the Bonanza, the property was practically worthless without a railroad. They could not get the copper to market. In fact, without capital they could not mine the ore, and it was with the greatest difficulty that the hardy pioneers who discovered the deposit could meet the legal requirements of the United States government and pay for the assessment work from year to year.

The law demands that $100 worth of work shall be done on each claim every year by any one taking up mining rights in Alaska. This demand meant not only the cost of labor, for which the liberal estimate of ten dollars a day is allowed for each man employed, but it necessitated carrying supplies of food from Valdez along a hazardous and narrow horse trail for a distance roughly calculated at two hundred miles.

The discouragements, sufferings and tragedies which followed this trail trip through the wilderness, in the winter months when the fierce blizzards of Alaska swept for days at a time down the Copper river valley, piling the snow ten to twenty feet deep in gulches, are heard of at the camp fireside today, and have caused many a chechak (newcomer in Alaska) to turn back before he has crossed the summit.

It was conditions like these with which Jack Smith and Clarence Warner, who discovered the Bonanza, had to contend from 1900 until they sold their interest in the property, several years later.

When they made the location the two men were prospecting with four or five others, and it had been agreed at the start that all were to share in any discovery made by any member of the party. Out of gratitude to Colonel Abercrombie, a government army officer, who gave them great assistance, the prospectors gave him an interest. Then a further division occurred when it was necessary to raise money to do the annual assessment work. They had to buy a dozen horses every year and canned food sufficient to last a dozen men for six to eight months.

One of the party took the role of hunter and supplied the camp with fresh mountain sheep and bear meat.

The trip inside was made in winter, because by using sleds drawn by horses a ton of "grub" could be taken in over the snow by each sled. In summer it was necessary to pack the supplies on the back of a horse, and 250 pounds was the limit for each horse, owing to the steep hills to climb. The wind blew so fiercely on the summit at times that horse and sled were blown off the trail and down declivities into soft snow 50 or 100 feet below.

It was then a labor of hours to get the horse on his feet and back to the trail. The "Sourdough" prospector, or old timer, had learned by experience to spread blankets on the snow for the horse to stand on, and in this way the animal was saved. But the trail is marked by many skeletons of horses and of men.

In their efforts to sell the property, Jack Smith and Warner went to Butte to see Senator William A. Clark of Montana, whose fame as a copper magnate had spread to Alaska. When Smith told Clark that the mountain peak was copper glance, assaying about seventy per cent pure copper, Clarke looked at his roughly clad visitors out of one eye and turned the subject to the weather and to Butte as a good mining camp. After a short talk Clark allowed the Alaskans to leave without making any further reference to the property. He did not believe their story.

Clark thought they were crazy.

In Montana bornite and copper glance are not found on the surface, but at depth. The formation in Alaska is entirely different. The Bonanza outcrop is a freak in a way. It is like a great blow-out from subterranean forces, a dome built upon the cathedral range of such imposing appearance, with its weather-stained green sides glistening in the sun, that it can be seen for a great distance. The copper is found in other parts of Alaska at the contact, where a layer of limestone rests upon a supporting basis of greenstone.

Senator Clark afterward sent an expert copper mining engineer to look over the field, but the Bonanza had been sold meantime to the Havemeyers of New York and Norman Schultz and James H. Ralph of Pittsburg, who made a fortune in oil and steel. Smith, Warner and their associates received about $23,000 each for their interest.

The Bonanza was now becoming the wonder of the copper world. Experts for the Guggenheims made repeated examinations and those copper magnates bought the property, paying, it was said, about one million dollars. Then the transportation problem was tackled in earnest. The last spike in the railroad from Cordova to Kennicutt, was driven this spring.

Contractor Heaney, who built the White Pass & Yukon railroad, carried out the plans for the Copper River railroad under the direction of Chief Engineer Hawkins. The difficulties to be overcome were stupendous.

To avoid the two huge glaciers which form ice walls for miles along the Copper river, it was necessary to cross the river twice by bridges of steel costing millions of dollars to build. In places the cliffs of rock were blown out and leveled to make a roadbed for the rails, and the track runs along the edge of deep canyons through which the river waters rush in mad torrents or fall in boiling rapids to a lower level.

The scenery along the Copper river is a continual surprise. From glistening glaciers to snow-capped peaks, and from brown forests of cedar, rusty from exposure, to brilliant fields of flowers of every color, thick as buttercups in a meadow and covering vast expanses of the mountainside, the traveler's eyes turn in wonderment. The melting snows fall in great bridal veils of shimmering beauty from precipitous cliffs. The mild temperature of July and August, in the valleys and along the rivers, is sure to draw the sight-seeing traveler from every quarter of the world, with the same fascination that Switzerland holds for the sojourners abroad.

The superintendent of the Bonanza says the assay values of the ore will amaze the mining world. When it is understood that copper ore yielding two per cent. in pure metal is good enough to induce capitalists to invest millions, ore assaying 32 to 72 per cent. copper justifies the name Bonanza.

Jack Smith, the original discoverer with Clarence Warner, retired some years ago to live in a small town near Albany, N. Y., which was his home in his early youth. But the Alaska fever seized him again, and he went to Seattle to be once more with his old associates who cannot resist the allurements of the trail and camp. Warner spends most of his time in Chicago, but he, too, makes a trip every year to the Copper river belt and camps at the familiar streams along the government trail where he met and conquered hardship.

WITH HER SWEET HELP

ADDISON WETMORE FINALLY IS EMBOLDENED TO ASK.

But His Question Is Not Exactly the One the Young Lady Had Been Expecting for Nearly Three Years.

Miss Derringforth felt a delightful fluttering in the vicinity of her heart.

Addison Wetmore seemed to be nervous and eager. It was clear that he had something on his mind. He picked up one of the six best sellers and glanced for a moment at one of the illustrations, then threw the book aside and drew a deep sigh, gazing earnestly at his pretty companion.

"What has come over you this evening?" she asked. "You seem to be awfully nervous."

He crossed to the baby grand and, leaning upon it, gazed down into the beautiful girl's deep, dark eyes. There was in his look an earnestness that she had never seen there before and suddenly she realized that this was to be perhaps the most thrilling moment of her life.

"We have known each other a long time, haven't we, Shirley?" he replied in tones that were tense with emotion.

"Yes," she admitted, permitting her pretty slim fingers to fall from the ivory keys and modestly avoiding his eager gaze, "it is nearly three years."

"You have had a chance in that time to get to know me pretty well, haven't you? I have always tried to be a perfect gentleman when I was with you, haven't I?"

"Yes, I have never seen you do anything to be ashamed of."

"Has your father ever objected to our friendship?"

"No, father has always liked you very much. He has often said he didn't think you were one of those young men who thought their lives would be wasted unless they squandered their money on women who smoked cigarettes and drank wine in public places."

"I'm glad to hear he has such a good opinion of me. There's something I want to ask you."

"Is there?"

"Yes. It's something very important."

"The folks have all gone out. We are alone here."

He took one of her soft hands in his and she looked up at him with sweet, girlish innocence.

"It is something I have been thinking of for several days."

"What is it, Addison?"

"I hardly know how to say it."

"But I can't say it for you, can I?"

"No, of course not. You are sure your father likes me?"

"Yes, he couldn't think more of you if you were his son."

"Well, I want to borrow $50. Do you think he would let me have it?"

"I don't know," she replied, drawing her hand from his. "If you wish me to do so I'll ask him at breakfast tomorrow morning. If you don't hear from me you will know that he has refused. Dear me! How late it is. I will be glad to let you have a nickel if you need car fare to get home."

Not an Old Man's Game!

"I may have lost my golf ball," thought the old man, as he crept on all fours round the bush into which it had rolled, "but I will not lose my temper."

So he continued to grovel and grope, and to wear a persuasive, patient smile. His knees bagged, his back ached horribly, and the bush bestowed upon his hands a generous quantity of thorns. But he refused to discard his smile, and kept on repeating:

"No, I will not lose my temper. I will not!"

Suddenly the elusive ball caught his eye. Flopping flat, he stretched his hand towards it, grasped it among its nest of thorns, and gingerly withdrew it.

"Hoity-toity!" exclaimed an old woman behind him. "You ought to be ashamed, birdnesting at your time of life!"

And then he did lose his temper.

Appropriately Named.

Few St. Louisans are so notoriously bald as Walker Hill, president of the Mechanics-American bank. The other day a friend thrust his head into Mr. Hill's office.

"Getting up in the world, aren't you?"

"Huh?" Mr. Hill said.

"I understand they have named a new town for you."

"That so?" the banker responded, not unflattered by the news.

"Yes—some place down on the Iron Mountain."

"That's funny," Mr. Hill said. "I don't know anything about it. What's the name of the town?"

"Bald Knob," the friend said, withdrawing uproariously.—St. Louis Post-Dispatch.

Poor.

Mrs. Highupp—How was the new rector's sermon?

Mrs. Blase—Very disappointing. He was going to talk on "Revelations," and all the scandals that he had to offer were about cities and people dead and gone centuries ago!—Puck.

Marriage and Business.

"Frederick Townsend Martin, the New York society leader, says that marriage is a business proposition."

"That probably accounts for the large number of failures."

PASSING OF ST. AGNES LIGHT

Famous Beacon on British Coast Is to Be Replaced After Centuries of Service.

One of the oldest and most famous lighthouses in the world is to disappear. According to an official "Notice to Mariners" issued by Trinity house, the St. Agnes light, Scilly, is to be replaced by a light on Peninnis head, St. Mary. For centuries it has gladdened the eyes of passengers from the other side of the Atlantic or has blinked a parting to emigrants.

It stands inland on the highest ground in the island of St. Agnes and the first light was lit on the spot as long ago as 1680. Coal was the only illuminant and the light was often allowed to go out. But in 1790 oil lamps and reflectors were installed and flashes of the present one-minute revolving light can be seen at a distance of 30 miles.

Probably one of the chief motives which prompted the placing of a guiding light on the island was the reputation which St. Agnes bore for wrecking in the old days. Many a ship was lured on the rocks by false lights and the tradition was preserved among seamen for many years afterward.

It is stated that almost within living memory a crew who were shipwrecked on the island kept their would-be rescuers at bay with stones. They feared that they would be massacred and could be approached only when they dropped helpless from hunger and exhaustion.

The most famous of many wrecks off the Scillies occurred in Port Hellick bay near the site of the new St. Mary's light. It was here that Admiral Sir Cloudesley Shovel with four men of war and many hundreds of sailors was lost in 1707 while returning from the capture of Gibraltar. It is stated that a sailor warned the admiral, to whom there is a much abused monument in Westminster abbey, of his danger and that he was promptly hanged at the yardarm for insubordination. On another occasion a ship turned turtle and was driven into the bay. Sounds were heard from the upturned hull and when an opening was cut in the hull a number of the crew were found alive within.

The new light will be semi-watched and will be exhibited from a circular iron tower which will be painted white and will be 45 feet in height.

Why the Women Fly.

A man observer has found out why Washington society women are taking such an active interest in aviation. Many have delved deeply into the lore of aeronautics and several of the more daring even have been tempted aloft. The reason is because the feminine students of flying wish to wear the strikingly becoming costume which Gladys Hinckley has devised for herself and her sisters who soar. Miss Hinckley, when she practices flights from the Speedway, is dressed in a gown of pale lavender corduroy, fitted tightly. The waist, also of corduroy, is made with what are known as "peasant sleeves," and has a Dutch neck. The hat is an effective as it is novel, but after all, it is the boots which take the eye of the women and make them desire to play at aeroplaning, even if they never get off the ground. The boots are of soft tan leather, and lace to the knee. The skirt is short enough so the footgear is by no means hidden. Many of the aviation enthusiasts are planning to have machines sent to their summer homes, and in the fall it is intended to have a meet in which debutantes and matrons will compete.

Incidents of Census Taking.

Many curious incidents cropped up at the taking of the British census a few days ago. An old woman at Northwich had to visit the churchyard to ascertain how many of her children had died; the number was four: "I have to keep him—I am the head of the family," pleaded a wife in Kingston-on-the-Thames, but the enumerator entered the husband first. A family of seventeen sons and daughters, required a second form at Barnton, Northwich, as the ordinary schedule has only fifteen spaces. Resenting the persistence of a census officer, who had to knock three times before he could get a reply, a Hoxton man struck the enumerator, badly bruising one of his eyes; while a proud father in Ecclesall who had a baby a few hours old calmly explained on the census form that the baby was single and not married.

A Break in Heredity.

"Mother," said little Willie, who had been whipped for story-telling, "were you always good when you were a little girl?"

"Yes, always," answered his mother.

"And didn't you ever tell stories?"

"No, never."

"Did father ever tell them, then?" he asked, after a pause.

"Certainly not," she replied.

"Nor grandma?"

"No."

"Nor granddad?"

"No, of course not."

Willie's brows contracted for a moment; then he gave a sigh.

"Well, what I can't make out," he observed pensively, "is where I got it from!"

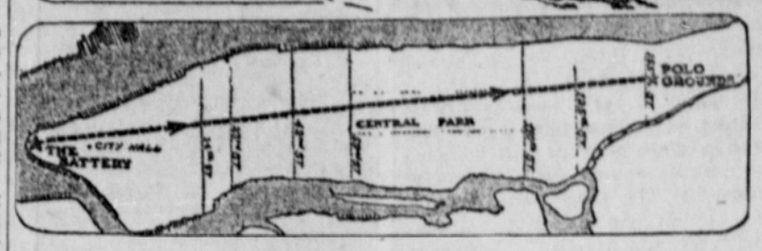
Our American Ruins.

With a grandiloquent wave of the hand the guide exclaimed:

"Ah, gentlemen, these are historic ruins! You have nothing like them in America."

"No," sniffed the American contemptuously, "but our girls are rapidly annexing the ruins of the guys whose ancestors built them."—Judge.

WONDERS OF "EXPLOSIVE D"



THE United States government is now the sole owner of an explosive which is the most powerful in the world and one which it is claimed makes the defenses of New York harbor impregnable. No hostile ship of even the most advanced type can now approach within ten miles of Sandy Hook without danger of being sent to the bottom by a single shell.

It is the recent perfection of "Explosive D" that has placed in the possession of the government a weapon far superior to joveite, nitroglycerine, melanite or the shimose that Japan used against the fortifications of Port Arthur. It is startlingly destructive in its effects and yet so safe in the handling that accidents to gunners are unknown.

To Col. Beverly W. Dunn of the ordnance department of the army, and at present chairman of the American Railway association, belongs the distinction of inventing the wonderful agent of destruction. He is the inventor of "dunnite" and "Explosive D" is his improvement on the original invention. He has given it freely to the government.

Hudson Maxim, the inventor, made this statement the other day:

"The United States government owns and controls a brand-new explosive which will prove a revelation in warfare and will do most everything except perhaps blow the white crust off the top of the earth."

In Washington experts of the ordnance corps were asked:

"Why need the United States fear war with any nation?"

"We fear no one!" was the answer.

Then the experts set forth just how the explosive could be used, how dangerous it is and, in a measure, how it is made. They would not go into the latter very deeply, because that is the government's secret.

"To show what it would do if used in the forts about New York against an enemy's ships," said an ordnance expert, "picture a modern dreadnought of the North Dakota type ten miles at sea steaming toward Sandy Hook. Then glance toward the Hook and see a burst of flame from one of the big fourteen-inch guns and a heavy projectile go plunging through space direct for the waterline of the dreadnought.

"The dreadnought suddenly stops, trembles and settles. In a minute it disappears, leaving struggling men in the water. One shot of this mighty explosive has sent $10,000,000 worth of steel and the finest workmanship to the bottom of the sea, and with it one thousand officers and men.

"It is almost inconceivable, and yet it appears to be true, for with the discovery made it only remains that our men should have marksmanship—and we have that."

There are enough shells loaded with "Explosive D" stored in the magazines of Fort Hancock, Sandy Hook, Fort Hamilton and Fort Wadsworth to prevent the city of New York and the surrounding country from being damaged one iota by the combined fleets of the powers of Europe.

The explosive is a compound of which picric acid is the base. In a projectile used in a twelve-inch gun of the army or navy, and weighing 1,046 pounds, there are sixty-five pounds of the explosive. That is as near to the nature of the ingredients of the compound as any but the experts are allowed to get.

The Dunn explosive is fired by a time fuse and will not explode on contact. But when it does explode its powers are almost supernatural.

At Sandy Hook, for one of the secret tests, the government built a large compartment of steel armor plate several inches in thickness. In front of the compartment facing the gun was a sheet of armor plate 11¼ inches thick. The regulation 12-inch gun was used and the projectile, containing sixty-five pounds of Explosive D, fired with an ordinary charge of smokeless powder. It went through the armor plate into the compartment and exploded. Great holes were torn in the steel box on all sides and demonstrated that had it been a ship it would have gone to the bottom with all on board.

Among the other tests made was that of shells fired from field pieces into an embankment to determine what could be done to an enemy's entrenchments. One shell went into an embankment several feet and exploded in half a second. There was a great hole in the earth. Had it been a real entrenchment with men behind it the entrenchment and every living thing in it would have been destroyed.

Nothing resists the terrible force of Explosive D. It tears through iron and steel as a revolver shot goes through a tin can. Penetrating the deck of a vessel, it would explode on the second deck, blowing out the sides and driving the second deck down through the bottom.

Hereafter all torpedoes of the navy are to be charged with Explosive D, and they will do fearful work. This secret, worked over for years by a thoughtful man, is known to but four officers of the government. So valuable is it considered the government does not think it best to let the ingredients of the compound be known to more than that number.

All the nations of the earth have been watching the experiments with Explosive D and have been experimenting with high explosives, but there is not anything in the world at present that represents such tremendous power as does this thing which a quiet army officer living in Bay Shore, L. I., has been developing in his laboratories and at the Sandy Hook experiment grounds.

OPEN, BRAZEN CONFESSION

One Man Finds the Game of Chess Too Much for Him and Admits It.

The chessboards which are occasionally given to us by our benevolent friends and relations are invariably of the very useful type. They are studded with spikes so that no piece can be removed fortuitiously from its own separate square. When people give us a chessboard they seem to think that we are likely to play chess more often than not on the deck of a ship in a hurricane. They picture us tossed this way and that by waves which run mountains high. They feel that though we may be physically incommoded by the fury of the tempest, the game of chess in which we are engaged will be undisturbed. They are right. Nothing short of a volcanic eruption immediately beneath our feet would cause the dislocation of the arrangements of pieces on these presentation boards.

Personally, however, we have not played chess at all for sometime. Our knowledge of the game stopped shortly after we mastered the various moves of the various pieces. Every now and then we get a wild longing to rival those experts who win twenty-seven games blindfold simultaneously while playing. "The Lost Chord" on the banjo. But our ambition generally fades away when we get out one of our chessboards and realize that we cannot make full use of its capabilities unless we go to the Bay of Biscay on a rough day. Besides, we once suffered a violent discouragement. We were playing with an opponent who also was no flier, and each thought it was the other's move. We sat waiting for each other to move for three-quarters of an hour; until, in fact, some casual bystander mentioned that there was a time limit in such cases. That incident has soured us permanently.

Invincible Modesty.

Modesty was a prominent feature in the character of the eminent physicist, J. Willard Gibbs, for many years professor of mathematical physics at Yale. He had a just appreciation of the value of his own discoveries, says the author of the biographical sketch of Professor Gibbs contained in "Leading American Men of Science," but shrank from any form of praise or publicity.

In 1901 the Copley medal of the Royal society of London, which is awarded for the most important scientific work done in any country, was given to Mr. Gibbs. He deprecated the congratulations of his friends who had read the announcement.

"Better not say anything about it," he urged. "Very likely it is an error."—Youth's Companion.

One Way.

Brown—You say your boy made an opening for himself somewhere?

Jones—Yes, he went skating on thin ice.