

History and stories of the Donner Summit Historical Society and the most historically significant square mile in California.

September 2025 issue #205

Nitro-glycerine and Tunnel 6

We last visited Tunnel 6 last year in the July '24 <u>Heirloom</u>. That article was about details in construction from the National Historic Civil Engineering Landmark application made by Chuck Spinks of the American Society of Civil Engineers, Sacramento

Section. Previously the <u>Heirloom</u> had run a series of articles and then other articles and pictures which you can find in our <u>Heirloom</u> article index on our website.

If you somehow missed the July '24 Heirloom and you are an aficionado of trains and the transcontinental railroad, you should go to our website. Not only is there lots of information but a lot of good contemporary pictures. There is also a series of exhibits about Tunnnel 6 on our "Exhibits" page.

This month we revisit Tunnel 6 with details of nitroglycerine that may have escaped RR buffs' previous transcontinental railroad study and for those who were wishing for just a bit more tunnel building details. This is all from Mr. Spinks' application.

In terms of the use of nitroglycerine in tunnel building Tunnel 6 is of historical significance:

• First use in the U.S. of Nitroglycerine high explosive for railroad construction in

February 1867.

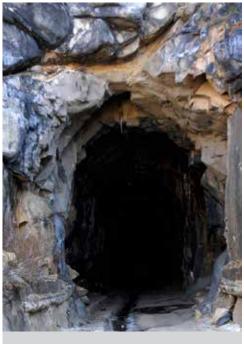
- First on-site manufacture in the U.S. of Nitroglycerine for construction, February 1867.
- Highest elevation tunnel in the world when complet-

ed in November, 1867 at approximately 7,030 feet elevation.

So here we have another couple of firsts for Donner Summit which can go with our collection.*

For centuries, black powder was used as a blasting agent in construction to ease the burden on manual labor. It was used extensively in construction of early railroads, including in tunnels. It worked fine for most blasting needs, but was not very effective in blasting hard rock like granite, and was difficult to use in wet environments.

Although nitroglycerine, was invented in 1846, it was considered too dangerous for use in blasting. Alfred Nobel developed methods for manufacturing and handling

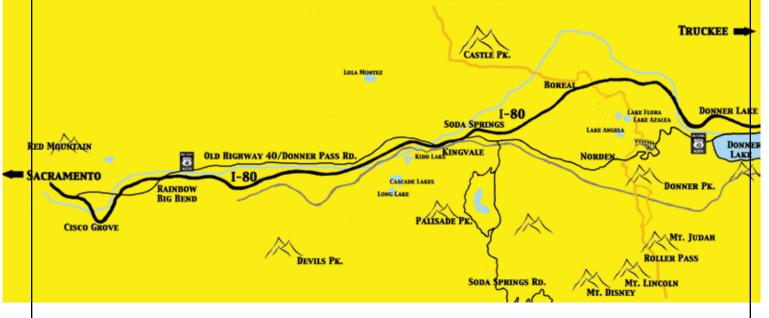


Tunnel 6's west end entrance today

*The first wagon train to California with wagons, the first transcontinental railroad, the first transcontinental highway, the first transcontinental telephone line, the first transcontinental air route, the first motorized crossing of the Sierra, the first auto across the Sierra, the first bicycle across the Sierra, etc. (all those stories are in our <u>Heirloom</u> collection on our website).

Story Locations in this Issue

DONNER SUMMIT



Finding Your Way Through Donner Summit History

We've done hundreds issues of the Heirloom: thousands of pages, thousands of pictures, and hundreds of subjects. You've probably begun to realize that you cannot keep all the history in your head. Even if you remember it all, retrieval is difficult.

Fortunately one of the choices we made back at the birth of the DSHS was to index all our Heirloom articles and pictures. We've diligently kept up the indices so that they are many pages long, full of alphabetized titles and subjects. Go to our website and to any of the <u>Heirloom</u> pages (one for each year) and you'll find links to the <u>Heirloom</u> indices.

One of the strengths of the DSHS is the incomparable historical photograph collection. The collection is thousands of pictures and again the sheer number makes finding anything in particular, difficult. Avoid the long URL by going to our website and clicking on the "photographs" link and then to the "historic photo collection link." A third link, to the FlickR URL will take you to those thousands of searchable historical photographs of Donner Summit. Have fun.

Find us on the the DSHS YouTube channel https://www.youtube.com/channel/UCJenAxPCb47Y14agmVGI-zA Or you can use this much shorter URL provided by Heidi Sproat of the Truckee Donner Historical Society.

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http://bit.ly/418lhxN







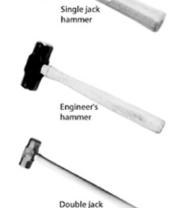




of nitroglycerine in 1865 that initiated its limited use in construction in Europe. Nitroglycerine was much more powerful than black powder and was the beginning of the development of high explosives for construction. Nobel invented nitroglycerine-based dynamite in 1867, but it was not widely used until the 1870s. The manufacture and use of nitroglycerine was never patented so it was in the public domain.

The nitroglycerine used on the Summit Tunnel was manufactured on-site by chemist James Howden. Howden's Chinese assistants would pour the nitroglycerine into 1 1/8-inch diameter tin cartridges either 4, 5, or 6 inches long, and place them in a wooden box. The most used were the 6" cartridges. They would take the cartridges to the tunnels where the Chinese tun-

nel crews would place them in 1 ¼ inch holes from 24" to 30" deep in the hard granite. Since nitroglycerin could not be exploded with flame like black powder, a black powder igniter was placed on top of the cartridge of nitroglycerine in the hole and a common safety fuse was attached. Electric firing with a battery for the ignitor was tried, but, according to Edwin Crocker, "electric battery was too deli-



cate a thing to put in hands of Irish foremen and had to give it up." The advantage of electric firing was that multiple concurrent blasts could be fired, whereas the common safety fuse only allowed one hole to be fired at a time.

With nitroglycerine, the progress of the tunnel headings went from 1.18 feet per day to 1.82 feet per day, an increase of 54%. For the bottoms, the rate went from 2.54 feet per day to 4.38 feet per day, an increase of 74%. The construction of a central shaft allowed 4 headings to be worked on simultaneously. Only one death was attributed to nitroglycerine, and that was an Irish foreman.

There were several reasons for the increased

- rate besides the greater explosive energy of nitro:
- The nitro required only 1.25 inch holes instead of the 2.5 inch holes for black powder.
- Fewer holes were required, 2 smaller holes for every 3 black powder holes.
- The granite was broken into smaller pieces easing removal of excavated material.

Double Jack

These large driving sledges have 36-inch handles and 6- or 8-pound heads. Because their use requires considerable expertise from both the driller and holder, we recommend that you use single jacking or modified double jacking until safety and proficiency with the double jack can be assured.

Single Jack

These are also called 'club' or hand drilling hammers. Handles are commonly 10 inches long, and heads weigh either 3 or 4 pounds. The short handle is uniquely suited to hand drilling because it resists breaking better than longer ones, and it facilitates accuracy by requiring the hand to be close to the head.

Nitro-Glicerine Accident. — The <u>Virginia Enterprise</u> of November 26th says :

A day or two since a blacksmith In the employ of the Railroad Company, near the Summit, had both bands torn by the accidental and most singular explosion of nitro-glycerine. The accident occurred as follows: An Iron tube, some four or five feet long, which in process of blasting for the railroad near by is used to introduce the requisite charge of nitroglycerine into the drill-hole, had become bent and clogged up inside. In order to straighten it, the glycerine was cleansed out as much as possible, until it was thought there was none remaining. The blacksmith then placed the tube in the fire, in order to beat and straighten it. His attention was suddenly attracted by the tube commencing to writhe and twist about in a singular manner, and he caught hold of it to throw it upon the floor, when, before he could let it go, it exploded, tearing his hands to pieces in a most shocking manner, so that he will probably lose them both.

Sacramento Daily Union November 30, 1867

• Less time was required to clear the tunnels of smoke.

A plug, probably wood, was installed in the hole to keep the nitro in the tube. Black powder was inserted in the tube above the wood plug. The powder was ignited with a lit fuse.

Using metal tubes was a common practice in mining and tunnel excavation when using liquid nitroglycerine as a blasting agent. Unless the drilled hole was through solid rock without cracks or seams, the nitro would leak out of the hole. Also, the fumes from liquid nitro were dangerous and the metal cartridges kept them contained. Another advantage of the cartridges is that the drill holes can be horizontal or even upward slopping.

An article in the November 30, 1867 <u>Sacramento Daily</u> <u>Union</u> reported an accident with nitro-glycerince occurred at the summit. A blacksmith was repairing one of the iron tubes he thought he had washed clean of nitro when it exploded. The blacksmith lost both hands.

Nitroglycerine use was not continued after Tunnel #6 for several reasons:

- 1. The other 6 tunnels at the summit were completed quick enough without its use, other than some nitro use at tunnel #8
- 2. Logistics may have also been an issue. Tunnel #6 is at the top of the summit and near to where Howden was manufacturing the nitro. To carry the iron tubes full of nitro to the other tunnels increased the risks, and moving the manufacturing to each tunnel was not practical.
- 3. For uses other than the tunnels, nitro was not as practical as black powder. Nitro did not work as well for the seam blasting which was used for rock where large seams were filled with barrels of powder.
- 4. For the blasting of softer rock and material, the blasted material was frequently used for fill. The nitro would blow the material down the mountain, preventing its use as fill.

Nobel patented Dynamite in the U.S. in 1868, and it started replacing the use of liquid nitroglycerine. Julius Bandmann of Bandmann, Nielsen & Co. was given the rights for the

Nobel patents in the U.S. west coast in late 1865, and on May 26, 1868 Nobel assigned his patent for Dynamite to Bandmann. Bandmann opened the first "Dynamite" (called Giant Powder by Bandmann) manufacturing plant in the U.S. near San Francisco.

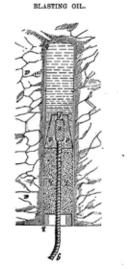
The Chinese became experts at double jacking the holes for the nitroglycerine. It took three workers, two with 8 lb double jacks, which were what we would today call sledge-hammers, and one holding and turning the steel. A double jack is a hammer held with two hands with heads between 6 and 8 lbs., while a single jack was held with one hand, and had a head of between 3 and 4 lbs. On the previous page are descriptions of single jacks and double jacks from "Hand Drilling and Breaking Rock for Wilderness Trail Maintenance," U.S. Forest Service.

The last heading for the summit tunnel was holed through by September 26, 1867. Removal of the bottoms was completed by November 7, 1867, and track was laid through the tunnel on November 29, 1867. The first locomotive went through on December 1, 1867. In the 4 months until the line down to Truckee was completed, passenger trains stopped at the east end of the summit tunnel on the Dutch Flat and Donner Lake Wagon Road and caught a stage into Truckee. The final connection to Truckee was made at Strong's Canyon on April 2, 1868. By this time the line below Truckee had been completed to Truckee Meadows in Nevada.

Chinamen, and most excellent hands they make, as will be seen when I state that a gang of three can drill three holes of one and a quarter inches in diameter and two and a half feet deep in twelve hours. Since the introduction of nitro glycerine smaller holes are requisite, and therefore lighter drills also. This pleases John very much, and he thinks the new blasting compound "belly good," and has repeatedly been heard to say "me likee him much." He does not now in the least, fear premature explosions, and with them the possibility of a hasty and forcible lodgment of a bowlder of granite in his stomach and a sudden transfer to the Celestial kingdom of Chow-chow.

11

Sacramento Daily Union April 22/, 1867



Directions for Charging Horizontal or upward bores when Cartridges are required.

- a Shows the rock.
- b A bore.
- d A conical wooden igniter, which is slightly pressed into the cartridge to keep tight.
- e Charge of gunpowder in the igniter. d.
- f A cork.
 - A tamping of loose sand or clay. The cartridge should be filled with oil till the igniter is sure to dip in it. In mines it is always safer to make use of cartridges, as if any oil should escape unexploded, it is diffused by the explosion in the atmosphere, which readers it deletations.

Bores of 20 to 30-in. of depth and § to §-in. diameter, with cartridges 4 to 8-in. in length and § to § in. diameter appear to be the best adapted for mines.

Nitroglycerine was used in the tunnel by pouring it into metal tubes or cartridges. A reporter with the <u>Sacramento Daily Union</u> described "Nitro Glycerine and its Use" in a visit to the site on April 17, 1867.

"A hole two and a half feet deep, and of one and a quarter inches in diameter, is drilled in the rock that is blasted, and three and a half ounces of the nitro glycerin are placed in an appropriately shaped tin box or cartridge. On the top of the compound is placed a small copper cap containing a few grains of powder. A hole is left in the cartridge to admit the fuse, connecting with the surface. The apparatus is then lowered to the bottom of the hole, and upon it a plugging of paper is first pressed down, and over that damp sand or earth is tightly rammed down until the cavity is entirely filled. The operators light the fuse and retire, and in about a minute a terrific explosion occurs."

Death from Explosion of Nitroglycerin

On the 9th instant, soon after the workmen engaged in making the Summit tunnel of the Central Pacific Railroad had let off a blast of nitro glycerine, the foreman of the tunnel, Henry McCartv, went in to see what effect the blast had had, or to make preparations for another one. He took a hammer and struck on the rock to ascertain whether it was solid or not. There happened to be a quantity of the explosive combustible in or on the rock, which was ignited by the blow, exploding and scattering fragments and splinters of rock in every direction wounding him in several places, one piece of stone penetrating his right breast and entering the lung, making a terrible wound. Doctor Jones, of Cisco, attended the unfortunate man, who lived until Thursday, the 23d, when hemorrhage of the right lung took place, causing his death in a short time. In accordance with his last request, his remains were taken to San Francisco for burial, his fellow workmen paying the expenses and one of them accompanying the body to its final resting place. The remains were brought to this city and went down by yesterday's boat.

Sacramento Daily Union May 29, 1867

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Captain Elisha Stephens

1804-1887

A True California Pioneer Mary Lou Lyons

The July, '25 <u>Heirloom</u> was mostly about the Stephens Murphy Townsend Party, the first wagon train to come to California with wagons. They arrived in 1844 led by Elisha Stephens. There's a little more about him in this month's <u>Heirloom</u> but not a lot because he was a taciturn sort of fellow

and a manuscript about him was destroyed in a fire in Bakersfield. At it happens John Townsend's diary was stolen so whatever he might have said was also lost. Dr. Townsend died not long after arriving in California.

This book was hard to find. Eventually we found it at the Bancroft Library at U.C. Berkeley which doesn't allow checkouts. Fortunately the book is short and a iPhone camera copied all the pages.

If you're familiar with the San Jose, CA area you are familiar with the various geographical features named Stevens Creek. The namesake Stevens was actually Elisha Stephens, the leader of the first wagon train to reach California with wagons. His name is memorialized as Stephens Pk. on Donner Summit. Townsend too is memorialized in San Francisco but this is about Mr. Stephens.

He was adventurous even before he led his wagon train to California. He'd been a trapper and traveled all over. Naturally when he heard about the wonders of California he had to go. This was four years before the Gold Rush. Despite his predilection for being solitary he apparently had leadership skills and was elected the leader of the larger wagon train that included the Stephens Party. Most of the wagons broke off and headed for Oregon but Stephens continued on as leader of the smaller eleven wagon train headed for California. Besides eleven wagons the party included 26 men, 8 women, and sixteen children. His leadership must have been exceptional since the train arrived

in California with more people than it had left Council Bluffs after having traveled without any maps or familiarity with

the route. Unlike the Donner Party of two years later the Stephens Party arrived with no mishaps despite winter having closed in. They were a success, something not readily recognized. Hence the pass is Donner Pass and not Stephens Pass.



t"His features were of the eagle type; he was reserved, but aggressive in his rights. He was not overbearing like some men of the eagle type. He

was mild and peaceful until you stepped on his toes... Fate marked him for obscurity."

Thomas A. Baker in "Former Sheriff Describes Life of Elisha Stephens" page 56 from the <u>Bakersfield Californian</u> February 7, 1924

There are no real biographies of Elisha Stephens but there is a short one by Mary Lou Lyons. She said in her Captain Elisha Stephens 1804-1887 A True California Pioneer that Stephens was of medium height, active, quick, wiry, and untiring. He had a distinctive 'eagle beak' nose (see left and the caption). He never wore a coat and carried a large hunting knife. He wore a black hat and a kerchief which would all befit a former mountain man and trapper. He lived in Monterey for awhile, in Cupertino (near San Jose), fought in the Mexican War, and spent the end of his adult life in Bakersfield.

Stephens must have been interesting. He gave up blacksmithing for trapping and traveling all over the west. That adventurous spirit led him to joining emigrants for California. In California he built a house in Cupertino where he invited two inventors to live with him. One machine they invented was a steam

powered vehicle (which we'll play with next month so stay

tuned. He had a "halfwitted" man living with him to take care of blackberries. He also had a spiritualist in the household. Stephens even bought a \$400 (about \$15,000 in today's money) piano for the spiritualist's daughter. Given the difficulty of bringing pianos to California that's particularly thoughtful. Another example of his character can be seen in another anecdote. When neighbors moved in next to him in today's Bakersfield, he brought over a crate that contained two hogs, chickens and a rooster. Stephens wanted to give them a "Start in life." Stephens never married nor did he have children.

An interesting anecdote has Stephens serving rattlesnakes to visitors. "Rattle-snakes beat frogs all to pieces! Just cut off the snakes' heads, hang 'em on the clothesline and let all the oil run out. I save the oil

for my rheumatism, Then you cut the skinned snakes in little chunks, roll the pieces in eggs and bread crumbs and fry them. Beats frogs all to pieces."

It was getting too crowded in the Bay Area by 1862 and Stephens, age 60, decamped for what is today Bakersfield and became the first permanent white settler. There he died at age 84 in 1887.



The Stephens Party Finding their Way

The Stephens Party was the first to find their way with wagons to California. Without maps how did they find their way? This comes from Thomas A. Baker in "Former Sheriff Describes Life of Elisha Stephens"

They encountered but little difficulty until they reached the foothills of the Sierra Nevada's. It was often necessary to remain for several days in one camp while Captain Stephens and the scouts went on ahead to map out the way to get through the mountains. Stephens always had scouts two or three days ahead of the outfit and a scout came into camp each night to direct the next day's journey. So, by moving slowly and carefully, they managed to be very successful in their plans. Being the first emigrant train to pass through, and the whites being new to the Indians, they encountered very little trouble from them. Their main annoyance was their natural cupidity. This bothered them but little and the Indians

were of great help at times in directing the outfit over the best routes. This was done through the sign language. Sometimes the captain's patience was strained to a severe extent by the ignorance of the Indians. At times he would consume a whole day patiently mapping out on the ground, by means of mounds of dirt, small rock, sticks, etc., while getting them to understand what he wanted. Often the Indians knowledge of distance was greatly limited, but generally Stephens got along very nicely with them.



Stephens Pk. on the left of the photograph with Donner Lake in the distance. The road is old Highway 40 or today, Donner Pass Rd.

STEPHENS - TOWNSEND - MURPHY PARTY OF 1844 FIRST PIONEER WAGONS OVER THE SIERRA NEVADA

ON MAY 22, 1844, THIS SMALL WAGON PARTY OF 50 MEN, WOMEN AND CHILDREN "JUMPED OFF" FROM COUNCIL BLUFFS, IOWA, BOUND FOR CALIFORNIA THESE COURAGEOUS PIONEERS WERE THE FIRST EMIGRANTS TO TAKE WAGONS OVER THE SIERRA NEVADA, OPENING THE TRUCKEE ROUTE OF THE CALIFORNIA TRAIL.

THE MURPHY, TOWNSEND, MILLER, AND HITCHCOCK FAMILIES FORMED THE MAIN GROUPS OF THE PARTY, CALEB GREENWOOD WAS THE HIRED GUIDE, AND ELISHA STEPHENS WAS ELECTED CAPTAIN OF THE WAGON TRAIN.

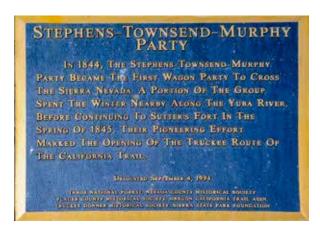
AFTER FOLLOWING THE OREGON TRAIL TO FORT HALL, IDAHO, THEY TURNED AWAY FROM THE WELL-WORN PATH AND HEADED WEST INTO THE UNFAMILIAR NEVADA DESERT A PAIUTE INDIAN CHIEF SHOWED THEM HOW TO REACH A RIVER FLOWING FROM THE SIERRA NEVADA, WHICH THEY NAMED TRUCKEE IN HIS HONOR.

OVERCOMING SEVERE CONDITIONS, THEY FOLLOWED THE TRUCKEE RIVER TO THE BASE OF THE SIERRA SIX MEMBERS, ON HORSEBACK, CONTINUED TO FOLLOW THE TRUCKEE RIVER AND EVENTUALLY ARRIVED SAFELY AT SUTTER'S NEW HELVETIA ON DECEMBER 10, 1844 SIX OF THE WAGONS WERE LEFT IN THE CHARGE OF TWO MEN, AND YOUNG MOSES SCHALLENBERGER, NEAR TRUCKEE LAKE (PRESENT DONNER LAKE), NEAR THIS SPOT, WITH TWO FEET OF SNOW ON THE GROUND. THEY WORKED THE REMAINING FIVE WAGONS ACROSS THE SUMMIT OF THE MIGHTY SIERRA NEVADA ON NOVEMBER 25, 1844.

DEEPENING SNOW FORCED THEM TO CAMP NEAR BIG BEND. ON THE SOUTH YUBA RIVER LEAVING THE WAGONS WITH TWO MEN AND THE WOMEN AND CHILDREN. THE REMAINING IT MEN CONTINUED ON TO NEW HELVETIA TO SEEK HELP SOMEHOW. JOHN SUTTER PERSUADED THE MEN TO ENLIST IN HIS FORCES TAKING PART IN A MEXICAN CIVIL WAR EVENTUALLY THE FAMILIES WERE REUNITED, AND ALL MEMBERS (INCLUDING TWO BABIES BORN ON THE WAY) ARRIVED SAFELY AT SUTTER'S FORT IN EARLY MARCH 1845.

DEDICATED BY THE NEVADA COUNTY HISTORICAL LANDMARKS COMMISSION SEPTEMBER 24, 1994

Above: Stephens Party plaque at the Donner Summit Bridge turnout. Below left is the Stephens Party plaque at the State park. Below Right is the Stephens Party plaque along the trail from where the Pacific Crest Trail intersects with the Summit Canyon Trail on the way to the underpass.





Bicycling Across the Sierra (1884)

and then across the country and around the world.

Of all the stories in 204 issues of the <u>Heirloom</u> this is one of our favorites. Imagine riding one of those machines, nicknamed "bone crushers" as Thomas Stevens did over the Sierra, across the country and around the world.

Thomas Stevens had never even ridden a bicycle when, in 1884, he announced he was going to ride one around the world. Ste-

vens must have been an interesting guy. He was born in England. His father came to America and was going to send for the family but ended up having to go back to England when his wife became sick. At that point Thomas asked his father if he could go to America alone. You can imagine the father's response but then Thomas showed his father that he'd saved up his passage money. Thomas, age 17, came to America and worked in a railroad mill in Wyoming and then in mining in Colorado. He got into a little trouble and ended up in San Francisco. He rectified his lack of bicycling experience with a two hours' trial in Golden Gate Park.

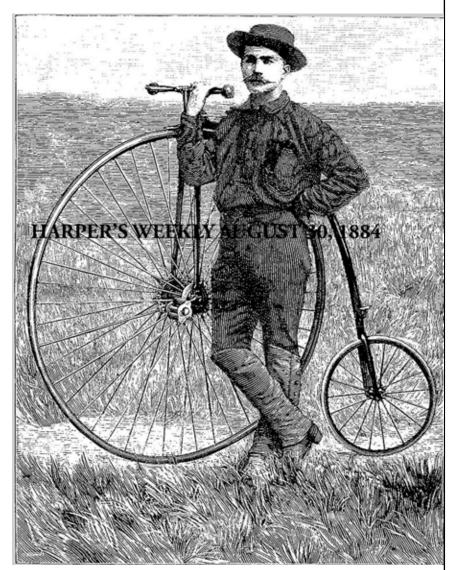
Stevens began his journey around the world on April 22, 1884 in San Francisco, CA. Stevens crossed the Bay on a ferry and then started cycling from Oakland. By the time he got to Rocklin people were asking, "What'll you do when you hit the snow?" Stevens had made plans. "...the long snow-sheds of the Central Pacific Railway make it possible for one to cross over, no matter how deep the snow..."

The next day Stevens began to travel through the snowsheds, "built at great expense to protect the track from the vast quantities of snow..."

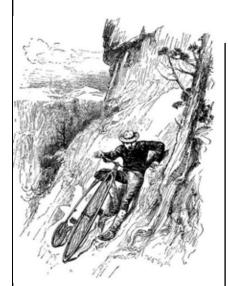
The "roofs [are] built so slanting that the mighty avalanche of rock and snow that comes thundering down from above glides harmlessly over...

The section-houses, the water tanks, stations, and everything along here are all under the gloomy but friendly shelter of the great protecting sheds."

It turned out the "difficulties of getting through" were much less than rumors had said. He could not ride in the sheds but could "trudge merrily along..." Occasionally there were short breaks in the sheds and then he could trace the "sinuous structure" of the sheds as they wound their "tortuous way around the rugged moun-



Graphic: Harper's Weekly August 30, 1884 Thomas Stevens and his bicycle



Crossing the Sierrra



Stevens dangles his bike and himself off a railroad trestle to keep from running into a locomotive

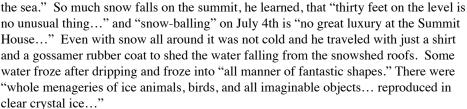


In the Central Pacific snowsheds

tains sides, and through the gloomy pine forest, all but buried under the snow." He imagined the snowsheds were "some wonderful relic of a past civilization, when a venturesome race of men thus dared to invade these vast wintry solitudes and burrow their way through the deep snow, like moles burrowing through the loose earth." Trudging "merrily along" he had a lot of time to compose evocative prose.

Here it might be more accurate to say that Stevens crossed Donner Summit with his bike. Long distance bicyclists in those days had no compunction against hopping on a train, a steamship, or walking. Some played very loose with the facts which is not to say our new hero did any loose fact playing.

At the summit Stevens stayed at the Summit Hotel "seven thousand and seventeen feet above the level of



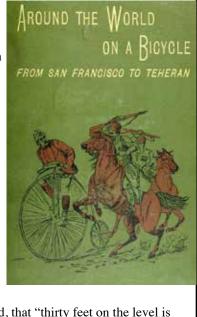
That wasn't the only difficulty. Stevens didn't have a train schedule. He'd just make do when a train passed. Once he was crossing a trestle when a train approached. He had to "get out on a rail and hang his bicycle over the precipice as the train passed."

Traveling through the snowsheds was anything but "pleasant going" as he traveled the "gloomy interior" that was both "dark and smoky." Groping his way over the rough

surface was not pleasant. When he heard a train he'd "proceed to occupy as small an amount of space as possible against the side, and wait for the "smoke-emitting monsters" to pass. The engines "fill every nook and corner of the tunnel with dense smoke, which creates a darkness by the side of which the natural darkness of the tunnel is daylight in comparison. Here is a darkness that can be felt; I have to grope my way forward, inch by inch; afraid to set my foot down until I have felt the place, for fear of blundering into a culvert..." "I pause every few steps to listen" for an approaching train.

When he emerged from the sheds he climbed a pine tree to "obtain a view of Donner Lake, called the 'Gem of the Sierras.'"

Then it was down to the Truckee, a "rapid, rollicking stream" along which were dams and mill sites without limit. There was little ridable road down to Truckee but Stevens eventually found good road at Verdi.





After the Sierra it was on to the 40 Mile Desert in Nevada. In Reno "the characteristic whiskey-straight hospitality of the Far West at once asserts itself" and he stopped for a few days to "paint Reno red."

On August 4, 1884 Stevens completed his cross country jaunt. He had gone 3,700 miles in 103 days. Then it was off to conquer the world. He sailed into San Francisco in January, 1887 completing 13,500 miles of bicycling and walking (he walked about a third of the journey. On the way he'd had to confront a mountain lion, deserts, lack of roads, 130 degree Indian heat, inability to communicate in foreign lands, loneliness, and almost being stoned to death. He had to dissuade highwaymen and he had to cross Afghanistan (where he was arrested as a spy and ended up having to take a steamer to India). He lost 25 pounds from his

5' 5" frame on the journey.

If you want to read his adventures, his book is available from various sources on the internet for just a few dollars. It can also be found for free as some variety of "ebook." It's called <u>Around the World on a Bicycle</u> by Thomas Stevens, published in 1887. It's a fun read.

Stevens' bike was a 50 inch 49 pound steel Columbia Ordinary that cost \$110.00. Those bicycles were affectionately known as "bone crushers." Stevens traveled lightly, taking only socks, a spare shirt, a raincoat that could be a tent, bedroll and pistol (which he would use to dissuade a mountain lion and thieves). He did not even take a coat since "coats are not in style among the Wyoming cow-boys". The bike had

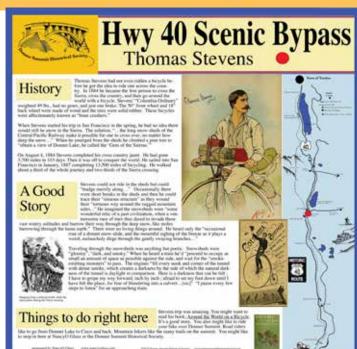
wooden wheels and solid rubber tires.

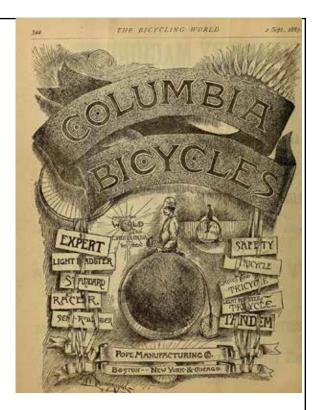
T. **Stevens**, the English bicyclist who left San Francisco on April 22d for New York, arrived in Truckee Wednesday. He has undertaken to make the trip in 70 days using nothing but the bicycle as a means of locomotion. He is keeping a journal of each days incidents with a view of furnishing material for a book to an English Publishing House, who pay him for making the trip. He reported the road from San Francisco here to be in very bad condition for a bicycle—the snow was in some places 20 feet deep. The best days run was 45 miles, in Alameda county, the remainder of the way was heavy from recent rains. He says he can make 75 miles per day on a fair road.

> Truckee Republican May 3, 1884



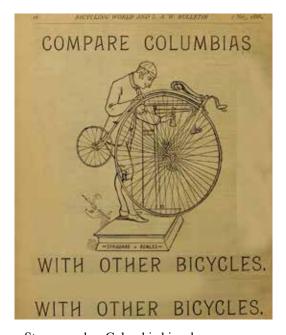






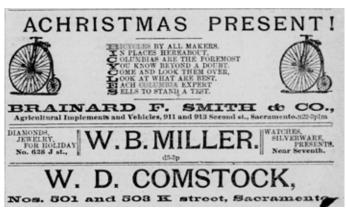
Left top: The DSHS traveling exhibit of Thomas Stevens. This is on our website's Exhibits page.

Left below: our 2) Mile Museum sign for Thomas stevens in "downtown" Soda Springs and on our website.



Stevens rode a Columbia bicycle.









AN IMPORTANT ANNOUNCEMENT!

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From the DSHS Archives

Regarding why the Donner Party wasn't saved by just going back down to what is now Reno....

The <u>Heirloom</u> staff has some fun replying to an important query

The question keeps coming up – here from an email from Frank Gifford in March, 2025

Bill— We're staplemates! [he also had an article in the Overland Journal—see the rest of the sentence] I enjoyed your OJ [Oregon and California Trails Association's Overland Journal in the winter '25 issue] article and will go through the Heirloom tomorrow. A question: Do you know of any article/book on how the Donners could have survived? I'm thinking they could have gone back down to Truckee Meadows, where mule deer should have been available, and where (at least) their animals would not have been lost under a snowpack. Thanks, Frank

We at the <u>Heirloom</u> editorial offices are responsive to our readers' queries. Here is the quick answer.

They'd come so far and could not quit; going back might seem like failure.

They figured the snow would melt like it did back East; they couldn't imagine it would keep accumulating

They were exhausted

They couldn't fight the snow; it was too deep They had no idea what was in store for them. They could almost smell California - they were so close.

They were focused west not east and had made four escape attempts west

By the time they might have seriously considered going back it was too late.

Mr. Gifford's email reminded us that we'd given a more complete answer in the July '16 <u>Heirloom</u>. It bears repeating because people keep asking the question and it turns out that not everyone has read the July '16 <u>Heirloom</u>.

From the July '16 <u>Heirloom</u> Dear <u>Heirloom</u> editor,

Thank you for reading my email. I know how you get

hundreds of letters each day and the commitment of your staff to wade through all of those envelopes and read my question is very much appreciated.

In the March ['15] edition on page 10 [in a book review of Saving the Donner Party] Linda Cashion shared a page from Patrick Breen's diary. The last sentence says, "...the snow nearly gone from the valleys."

My question: why didn't the Donner Party turn around and go to lower elevations to wait out the storms? The passes were impassible. It was quite clear they were not going to get through until some of the snow melted. They had climbed the mountains and found the snow blocked any ability to make it over the summit. Why didn't they just turn around and get to warmer, dryer areas?

Thank you again for all of your staff's commitment. The <u>Heirloom</u> is great reading on a rainy day like today. [This shows Mr. Hall's exquisitely sophisticated taste.]

Best Regards, Ken Hall [Serene Lakes]

The Preliminaries

Here at the DSHS our many departments are always scrambling to acquire, digest, and disseminate local history. There are a lot of stories to tell. Our Mobile Historical Research Team (MHRT) has placed the original Soda Springs Station buildings (stay tuned [that was the 11/18 Heirloom]), explored the largest Chinese railroad workers' camp (June-September '16 Heirlooms [and 10/23]) as well as some future explorations to other camps), found petroglyphs and grinding rocks [see our article index on our website's Heirloom pages], mapped Summit Valley history, walked the Lincoln Highway finding long lost signs, explored the emigrant trail and emigrant rust marks, found Sierra Ski Way signs and Emigrant Trail markers, etc. The publishes the most fascinating history. The 20 Mile Museum crew places signs each spring, retrieves them in the fall, maintains them, and adds to the collection (two new ones just installed). The publications committee develops and reprints a host of brochures and other publications about local history. Hike leaders lead hikes. [You really should check out our article index on our website; it's fourteen pages long as of this issue of the <u>Heirloom</u> – that's a lot of history.]

Then there is the web crew, sitting patiently by the DSHS

From the DSHS Archives

computer, keeping up and just recently completely redoing the website [this was 2016] and trolling historical resources. They also answer queries from time to time. Some are just about Donner Summit such as is it snowing? Others are more historic in nature. One high school student wrote from Florida asking about the Transcontinental Railroad. Our reply listing our and other sources elicited an "Awesome" as he passed on our email to his group partners.

So it was that not long ago a local eminence in Serene Lakes, Ken Hall, emailed with his query about the Donner Party. The actual email, preserved for posterity, is above. You can note what a polite and clearly upstanding personage of eminence he is in his community.

First, that's a very good question as we'd expect from our readers. It seems to defy common sense that the Donner Party locked themselves into starvation at Donner Lake (or half of them – the other half being at Alder Creek some miles away) rather than just return to the Truckee Meadows (Reno today) for the winter. It being a good question we should answer it. It's a responsibility and we should shoulder it.

Second, though, the question has nothing to do with Donner Summit. So there's a conflict. How to get around our mandate to deal with our local history and leave others' history to others. This occasioned passioned debate. Our mission is clear and the Donner Party was not on Donner Summit. The [actual] Donners were not even at Donner Lake (except for a few who passed through and one who died there).

We often get questions about the Donner Party given that we're on Donner Summit and we gently direct people to the museum at Donner Lake (where, incidentally, Linda Cashion, referenced in the email, work[ed] sometimes).

Wanting to satisfy our reader's query caused us to look more broadly at the question. There must be an historical loophole. Donner Summit did not have any Donners and had there been no Donners the pass would probably have been called Stephens Pass (the Stephens Party* was the first wagon train to cross with wagons). The Donner experience sat more clearly in people's minds though. There is the vision of Old Man Keseberg sitting "before the fire... holding in a vice-like grasp a roasted arm and hand, which he was greedily eating..." (Heirloom March, '16 from an 1878 publication). That's a lot more evocative, even if it was untrue, than a successful journey over the summit by the Stephens Party. We won't address the many jokes that go along with Donner Summit such as serving "finger food" at meetings which is really beneath the dignity of a quality publication like the Heirloom. But Keseberg as well

as the fact that people in the old days were just like us (enjoying the sensational) are other stories for other times.

There is a relation between Donner Summit and the Donner Party which should bring the Hall Question (now so named for the archives [this is truly an honor; not many people are enshrined in the <u>Heirloom</u> archives]) into our "sphere of influence" and not leave it to other groups like the Truckee Donner Historical Society in Truckee. They've got enough history being so lucky to have the Donner Party in their sphere as well as all of the skullduggery that went with early Truckee.

When the Donner Party first arrived at Truckee's Lake, as the lake was known then, they tried to get up the pass but were turned back by snow. After hunkering down at the lake one group decided to make a bid for freedom. The Forlorn Hope climbed the pass in the snow and experienced incredible hardships on their way to the Central Valley. Only seven survived of the 15 who went over the pass. It was partly the reporting in California of that group's survival that started rescue parties heading for Donner Lake. All of those rescue parties went over Donner Summit. The Starved Camp and John Stark's heroism took place on Donner Summit (see "Heroism on Donner Summit in the May, '14 Heirloom) and the tall stumps recorded by Carleton Watkins as having been cut in Summit Valley by Donner Party members were definitely photographed on Donner Summit. All of the rescue parties came over the summit. On the wider Donner Summit there is the grave of Charles Stanton. He'd gone ahead to Sacramento for supplies and returned to the wagon train even though he had no family ties. He died on the way out as part of the Forlorn Hope. A number of other members of the Donner Party died on or around Donner Summit. Most pathetically, Old Man Keseburg, while being rescued, saw a scrap of cloth in the snow on the summit and discovered the body of his daughter who had gone with one of the rescue parties.

So, there are some connections to the Donner Party on Donner Summit even though they were trapped a thousand feet lower in elevation and miles away. We could answer The Hall Question.

Answer to the Hall Question

There had been some problems with the Indians but I don't think any of the books give that as the reason for the Donner Party not returning to Truckee Meadows (today's Reno).

We know more than the emigrants did by virtue of our experiences. The emigrants had the experience of back east where the snow did not stay on the ground all winter. It would melt away. The emigrants expected the same thing in California.

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From the DSHS Archives

Moses Schallenberger, who crossed in 1844 and stayed at Donner Lake alone for most of the winter (see Heirloom references above and the January, '16 edition [as well as the 7/25 Heirloom]), said that in Opening of the California Trail (Heirloom December, '15.

We've also got to put ourselves in the Donner Party members' mindset. They were exhausted. It had been a hard journey from Reno. They could see storms coming (and in progress) and they could "see" their goal, California, in the distance. Some of the first of the party to get to Donner Lake tried immediately to get up the pass but did not get very far and had to return. They tried again and failed. Then the snow started in earnest and did not stop. They were also a bit ahead in the calendar of when the Stephens Party had gone up two years before so they thought they'd just wait a bit; the snow would melt and they'd be able to get over. They were focused on California and by the time they realized there was a long-term problem they were snowed in. Even before that realization the idea of giving up hard-earned miles to return to Reno would have been anathema.

Two years before when the Stephens Party left Moses at Donner Lake, he and the two men who were initially with him had no fears about food. They thought they'd keep the larders filled with their hunting successes. They had no idea the snow would drive away the game and make starvation probable. It was common sense but often common sense isn't much sense.

Finally, the Donner Party was made up of city-folk and farmers. They were not experienced in the ways of the wilderness.

The Donner families exhibited all of the above at the camp at Alder Creek, some miles away from the lake that would be named for them. They just put up tents apparently assuming the stop would be temporary and the journey resumed. They wintered in the tents. Imagine.

We get an average of 34 [now the Central Sierra Snowlab in Soda Springs it's more like thirty] feet of snow on the summit in winter. When you tell that to people today they are amazed. The emigrants didn't know that. Another example, to illustrate the inexperience is Theodore Judah. He laid out the route of the Transcontinental Railroad over Donner Summit. He analyzed things carefully and concluded that snow would not be a problem (See the Heirloom for February, '15). They'd just push the snow out of the way and trains would keep going. Snow is a problem and to deal with it 40 miles of snowsheds had to be built to keep the trains running. Not only trains but automobiles and bicyclists used the snowsheds to get around the problem of snow on Donner Summit (see the July, '15 Heirloom).

By the time the Donner Party figured things out it was too late to go back. The snow had already piled up.

The best book about the Donner Party I've found is Ethan Rarick's <u>Desperate Passage</u> (<u>Heirloom</u> for May, '14). On our web page for book reviews there are reviews for a number of other books on the subject from the very first, by C.F. McGlashan, the <u>History of the Donner Party</u> (April, '15 <u>Heirloom</u>). George R. Stewart's book, <u>Ordeal by Hunger</u> (October, '15 Heirloom)is good as an earlier one too.

*See the <u>Heirlooms</u> for 11/13, 7/12, 7/11 ("Forgotten Journey" video review), 2/09 (<u>Truckee's Trail</u> book review), and references to Moses Schallenberger (5/11, 11/11, 8/13, 12/15

[with all the references to <u>Heirloom</u> issues above the interested reader has her work cut out for her.]

Book Review

White Hell

Sean Tyler 2025 212 pages

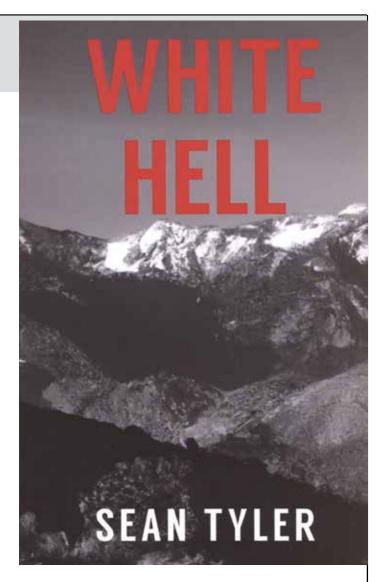
Don't read this book.

Sean Tyler, the author, must have been fascinated by the Donner Party. In White Hell he has written his story of a party of emigrants trapped in the Sierra. The inspiration is not just that Tyler's story is about emigrants caught in the Sierra in winter; there are many equivalent details. The Donner Party story has Lansford Hastings who wrote a book to help emigrants and whose "shortcut" doomed the Donners, White Hell has Gaylord Hightower who has written a book to help emigrants and has a shortcut that dooms the McEwan Party. Lansford Hasting left notes along his trail for those following. So did Gaylord Hightower. The Reeds have a customized wagon as part of the Donner Party. Likewise one of the emigrants in the McEwan Party has a customized Conestoga wagon or "land yacht." It gets left behind in the desert just like the Donner Party's Reed Family wagon. Just like the Donners, the McEwan Pary takes time off from traveling which will put them behind for winter.

The McEwan Party crossed the continent in 1846-47 just like the Donners and was trapped in the Sierra snow just like the Donners. Given that they were on the same route it's surprising they didn't run into each other. They had some of the same problems as the Donners.

The story opens with the McEwan Party coming across some stranded former slaves. Their one ox has died and there is nothing to pull their wagon. They claim to have been freed by their master. The McEwans Party argues but the blacks get an ox and continue with the McEwans.

Violet is one of the former slaves and she is beautiful. The main plot of the book is the MeEwans becoming trapped in the Sierra and resorting to cannibalism. There is a subplot which is about Peter, the wagon master's brother. He is smitten with Violet. He can think of nothing else. She has "twinkling green eyes". She's big and gorgeous "with an exotic thickness of eye-catching hips and thighs." It goes on and on and is tiresome, "And did I say her body was soaked in sweat? And hardened and busty from the exertion of her muscles? Jesus Sweating Christ...there was something extraordinary erotic about that...A busty sweaty brown body glistening in the sunlight." Then there is every adolescent's delight as Peter describes Violet bathing. The fantasy goes on for pages and since Peter is the narrator we are subjected to his lust whenever he's telling the story – which is always.



Another subplot is the still in the Crabtree wagon. Hard liquor is dispensed in huge quantities with its attendant problems. Some of the party are just drunks. The author must have thought this bit of "realism" was important because drunken behavior drives a lot of what happens. It's ridiculous though. What emigrants would have made space in their wagon for a still and all the grain needed to make the alcohol? How they did the brewing on the travel is another issue.

Another apparent aim for realism in the book is the profane and racist language. The more bad language, apparently, the more realism. Modern readers may find this as tiresome as Peter's lustings as well as obnoxious.

It seems too that for realistic depictions of 19th Century emigrants the more obnoxious the characters the more realism we have. These are some of the most despicable characters in any book with the "highlight" of the despicableness being the ravings of Boggs at the end as he butchers bodies. Were people in the past so vulgar? We'll let one example suffice. One of the emigrants is a former priest who apparently cannot remain sober He is asked to pray one day,

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"And forgive us Lord, for trespassing upon the lands of naked savages and half-wit Mexicans."

"Oh, and lord, please forgive me for squirtin' out liquid shit all over this heavenly desert you've guided me, too."

People chuckle because this is in such good taste apparently.

"Oh, and lord Jesus, please forgive me once more... for I confess that I've messed my trousers every dog'on day for the last month. My wife can't stand me anymore..."

The prayer goes on. Tyler says it is "comedy gold" when the priest is drunk, which is all the time. The prayer here shows how uproarious this can be.

The cast of characters arrives at the Sierra and cannot get over. They come back to a small cabin they've found (like the Donner Party cabin that had belonged to Moses Schallenberger who wintered two winters before). All twenty-five members cram into the cabin. Snow will get to be ten feet deep and the oxen will disappear into the snow. It is a wonder that the little cabin is still standing given that its roof is mud and sticks. It will snow nine days straight and still the roof won't collapse. Amazing building. Slowly the group begins to starve except that there is still a lot of alcohol. This ubiquity of alcohol, called "trail brew," does not further the plot and does not further character exposition. We already know the characters are not just flawed but without any redeeming social value. The alcoholic ubiquity is carried to extremes. Peter needs to perk himself up as they leave the wagons and head for the cabin and maybe to plead his case to Violet by jumping out from a snowbank on the trail to the cabin. Boggs carries two slabs of beef and ten gallons of Trail Brew and nothing else on his way to the cabin.

When we get to the cannibalism things get grossly disgusting. Fingers and toes get gnawed and flesh gets sucked clean from the bone. Then there is the butchering. Boggs becomes maniacal. Peter says the cabin is full of lunatics. People don't just die of hunger even though Boggs seems to maintain himself. There is murder too.

Also without much value to the plot is the run in with Mexican border agents. There was no such thing in real life but maybe having some criminal Mexicans who appear out of nowhere is needed to convince the reader of the authenticity of the story. The result of the run-in keeps the blacks from being taken back into slavery. There is a standoff and at the end and most of the Mexicans are dead and the McEwan wagon master, Irwin, who is also Peter's brother, is wounded. He will later die. All good westerns have to have a shoot-out. But in this case not before the border agents present the wagon train with the head of the one Indian who had been accompanying them. This just pops out of nowhere because we never hear Takoda

has disappeared. Takoda has no real part in the story. He just appears on a spear. Here too we meet the head of Gaylord Hightower. The bad guys were dead and the "good" guys continue on except that Irwin is wounded and will die. This will open up the leadership to chaos.

Eventually after weeks of starving in the cabin Peter will get knocked out and everyone except the villain, Boggs, will decide it's time to cross the mountains. Somehow they have regained their strength. When Peter comes to he discovers he's been left behind. Everyone heading over the moutains happens despite the fact that everyone is starving, whimpering, and are lunatics. Peter says his own flesh is rotting on the bone and his hair is falling out. Everyone else must be in the same shape. Regardless, everyone is able to walk through the snow and climb over the pass. Peter, a few days later, will be able to ride off on his brother's horse which reappears.

Here we get to admire the author's craft beyond the setting, realism, and characters. We've got to tie things up. Authors have to be careful not to get their characters in too much trouble or they won't be able to realistically extricate them from the plot's conflicts. Here's how Tyler extricates his main characters. Don't worry there are still plenty of details that this review has not covered for what comes next to be giving to much away.

There's not enough room in the book to follow the majority of the surviving party that left Peter behind. What happens to them we don't know. Violet reappears though, as does a slave catcher who has been tracking her across the country, and maybe the other surviving former slaves (those not having been eaten), but he only says he's after Violet. He forces her to put on the extra snowshoes he's carrying. Violet is carried off into slavery again. Here the Violet part of the story ends which leaves things open for a sequel.

Tyler still needs to end the Peter part of the story.

Peter has found Irwin's missing horse, mounts the horse, and heads for California. Peter ruminates "I was in love... and that's what love will do to man. Get him up on that horse and send him down that dusty road through uncharted territory, striving and suffering day after day giving it all to reach that fabled promised land." Did Peter find Violet again? Again, there weren't apparently enough pages. We have to admire the craft here though. The slave catcher has followed the former slaves across the country, gotten to California, picked up two pairs of snowshoes (apparently if he found more than Violet they would go without snowshoes) and then came to the east side of the Sierra to intercept Violet. The Sierra are that small mountain range in California where everyone will take the same routes, the same river valleys, etc. and so run into each other (except that the McEwans won't run into the Donners). Miraculously the slave catcher crossed the Sierra

at exactly the right time at exactly the right place to run into Violet. That required massive work on the author's part and the reader should appreciate it.

We're not done with it yet though. Peter, riding Irwin's found horse, goes down into California, apparently without food, comes across the source of a river, goes behind a waterfall and finds a warm water pool. Miraculously there's room for three beautiful nude American Indians to arrive to bathe along with their father who speaks perfect English. Suddenly they disappear. What was the point? Like the rest of the book it's unfathomable.

More of the author's craft.

There are homonym errors in the book. Those don't get caught by spell checkers. Editors are good to have.

Then there are lapses in logic.

Peter wants to jump over the wagon tailgate "and storm into his [Irwin's] bed, snatch him into a good wrestler's underhook, and shove him out of the wagon in a burst of tough love, forcing him to be the boss man again." Irwin has been shot and is dying but I suppose this gives insight to Peter's character

The wagon train is camped for a few days at what must be Donner Lake and Peter and Violet go swimming. It will snow the next day. With it being that cold they could not have lazily swum around in the lake. The oxen have disappeared, but one member goes out probing for them. That doesn't work but apparently he dug so much there is a cavern big enough for Peter and Violet to make love in. The author had to figure out a way to get the pair out of the cabin where everyone is living so Peter and Violet could have their fun. Imagine the fun they had in the ice cave.

It had been snowing feet and Peter wants to know if Crabtree has been following hoof prints of the oxen as a way to find them. Interestingly, as snow falls, let alone feet of it, it fills depressions like ox hoof prints.

Old Man Crabtree died. His son went out to dig a grave in the earth (under ten feet of snow.)

Then there are errors.

The McEwans travel in Conestoga wagons. That's not what emigrants across the country had at that time and people did not ride in the wagons; they walked along.

Finally, inexplicably, there is one chapter titled, "The Essex." This was a whaling ship in the early 19th Century that ran into trouble. The survivors engaged in cannibalism. Those pages could have been given over to some actual plot elements like what happened to everyone after they left Peter. or what happened to Violet.

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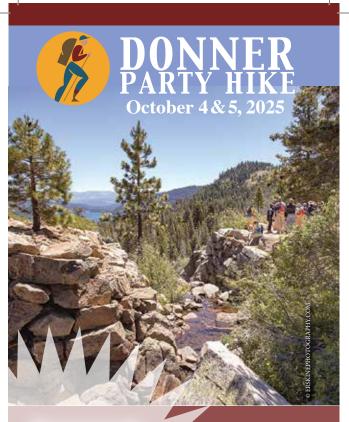




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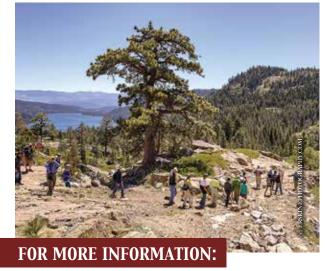


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*We bring along lots of old photographs



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