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HOW THE PUMP STOPPED AT THE MORNING WATCH

by Mary Hallock Foote

INTRODUCTION

Elsewhere in this *Bulletin* the reader will find a notice of a recent book by Lee Ann Johnson on the artwork and the writings of Mary Hallock Foote, who lived in Grass Valley from 1895 until 1932 and who wrote seven novels besides several short stories during that time.

One of her novels and one of the short stories play in Grass Valley and, since this short story is now almost forgotten, I am pleased to offer it again to our readers. *How the Pump stopped at the Morning Watch* was published in the *Century Magazine*, vol. 58 (July 1899), pages 469-472.

The story is based on two events which took place at the Morning Watch Mine (which is actually the North Star Mine), the fatal accident of the pump man John T. Thomas on October 2, 1896, and the break down of the pump on February 3, 1897.

The pump was a Cornish pump, such as has been described by Dave Beesley in the *Bulletin* for April 1979 and of which a working model can be seen at the Empire Mine State Park. Water is constantly seeping into a mine and, in order to keep the mine operable, it has to be continuously pumped out. In a mine of some depth, one pump is not sufficient, there is a series of them, each of which pumps into the sump of the pump, located above it. All these pumps are operated by one engine, located at the surface. They are linked by a flexible beam, moved by the surface engine, which beam follows the main tunnel of the mine. In order to keep the mine dry, this Cornish pump had to operate all day, day in- day out, the year around; a failure could not be allowed. For this reason, the job of the pump man, whose task it was to see that the



Mary Hallock Foote as a young girl.

pumping machinery was in good order and to anticipate trouble, was an important one. In most mines, the pump man was on the day shift; during the two other shifts, the pump was unattended.

Mary Foote's story is based on two actual events, the first of which was the accident of the pump man John Thomas. The *Daily Morning Union* for October 3, 1896, reported it as follows:

**TERRIBLE ACCIDENT.
JOHN THOMAS STRUCK BY A CAR
AT THE NORTH STAR MINE.**

"John T. Thomas, pumpman at the North Star Mine met with a terrible accident yesterday morning and it is feared that he can not recover. He was engaged in adjusting a bell wire at the 400 foot level when an empty car descending the shaft struck him near the knee and knocked him down a distance of nearly 100 feet. As soon as the car struck Mr. Thomas, Will Tierney, the engineer on the surface noticed that something was wrong and immediately stopped the car, thus saving the unfortunate man from instant death. The cries of Mr. Thomas brought assistance and he was taken to the surface and Dr. Jones summoned. It was found that the bones at the knee joint are badly broken and that several severe cuts and bruises were received. He is also injured internally and his recovery is extremely doubtful.

Mr. Thomas is well known and resides with his family on Winchester Hill. He has been employed at the North Star Mine for a number of years and is considered a first class workman."

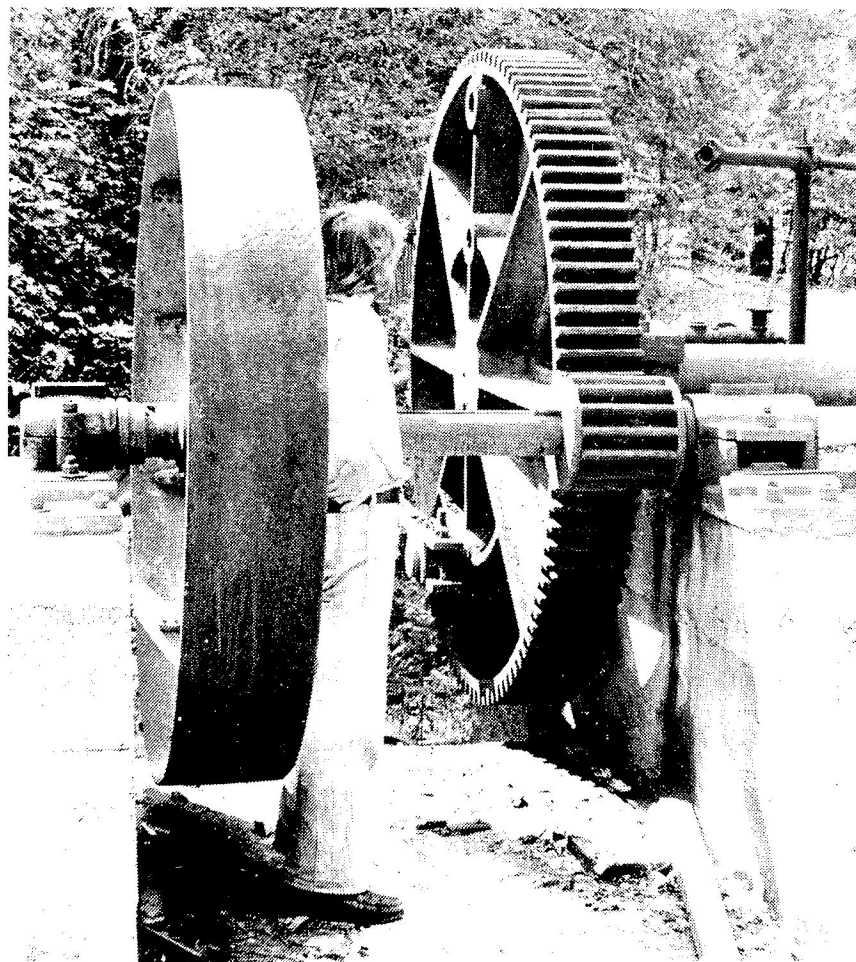
The next day, the demise of John Thomas was reported:

DEATH OF JOHN T. THOMAS.

"John T. Thomas, who was hurt at the North Star Mine, died from his injuries about 10 o'clock last night. Mr. Thomas was one of our best known miners and as a pump man had few equals. He was of a pleasant disposition and was held in the highest esteem by his fellow workmen and acquaintances. Mr. Thomas was born in England but came to this country many years ago and for a long time lived at Nevada City. Several years ago, he removed to Grass Valley and has made his home here since. He was aged 55 years, 4 months and 24 days. He leaves a wife, three daughters and a son to mourn his loss. The funeral will probably take place Monday."

Mary Foote told of the accident in a letter to her friend Helena DeKay Gilder, dated October 16:

"There was a tragedy in the mine the other day. John Thomas, an Englishman, who had been pump man at the North Star form many years, was killed in the shaft. The first I knew of it Clemmo, the gardener, came to the kitchen door asking for an umbrella: "Any old one will do." The he explained that the pump man had been hurt and he



A "spur wheel" such as the one which broke at the North Star Mine.

wanted the umbrella to hold over him as they were carrying him home. I made the useless enquiries that one makes, and the useless offers: then I saw them carrying the old man by the house, on a mattress, six men, and Clemmo holding the umbrella over the head. His arms were bare to the elbow and crossed on his breast, and white in the sun as bleached bones—His head was wrapped in something red and his profile was majestic in its endurance and its pallor—and its age. The age of toil.

The North Star Mine Shaft is an incline shaft 2000 feet deep and more. There is a series of pumps worked by one pump rod and the pump man has a most important trust—on the pumps depends the life of the mine. They think that this man, for some time, has not been quite right in his head. He used to come out above ground, the men say, "between shifts" and seemed dazed and not sure of where he was. No one spoke of this, for fear it might lose him his place; and they were not certain of his symptoms: but now it is thought that he did not know what he was doing when he came out into the hoisting shaft, and an empty car struck him going down, and dragged him a hundred feet."

The notion that the pump man was

"not quite right in his head" is also found in the short story. The miners felt that way because John Thomas was often found on the job on Sundays and on shifts, other than his own. People often think that devotion to one's job and being aware of one's responsibility is strange behavior; normal people, they feel, never do more than strictly required.

The second event was the break down of the pump. This was reported in the *Daily Morning Union* for February 4, 1897, as follows:

A BAD BREAK.

"The large spur wheel, which is connected with the cog wheels, that drives the pump at the North Star Mine broke yesterday morning near the hub. The breakage was probably caused by the iron crystallizing. It will take several weeks to replace the wheel; as one will have to be manufactured in San Francisco.

W.M. Bourn, of the company, informed the *Union* reporter last night that in all probability the men, employed at the mine will be able to continue working, as it is thought the water will not rise higher than the 2000 foot level. The mine is not being worked

below that depth and the lower levels will be allowed to fill with water. In case the water should rise faster than anticipated, the steam pumps will be put into use."

Mary Foote wrote about this incident also to her friend Helena Gilder, in a letter, dated February 7, 1897:

"We have had a catastrophe at the North Star. The great spur wheel that drives the pump broke, three days ago, with a sound like the explosion of a magazine. The pump is old and the iron had crystallized. The pump rod is one half mile long! descending the incline

shaft (main shaft) and driving six or seven pumps at different stations, down to the 2000 foot level. All these pumps are stopped now, and the water is rising in the lower levels. Arthur (her husband) is in San Francisco, attending to the casting of a new wheel."

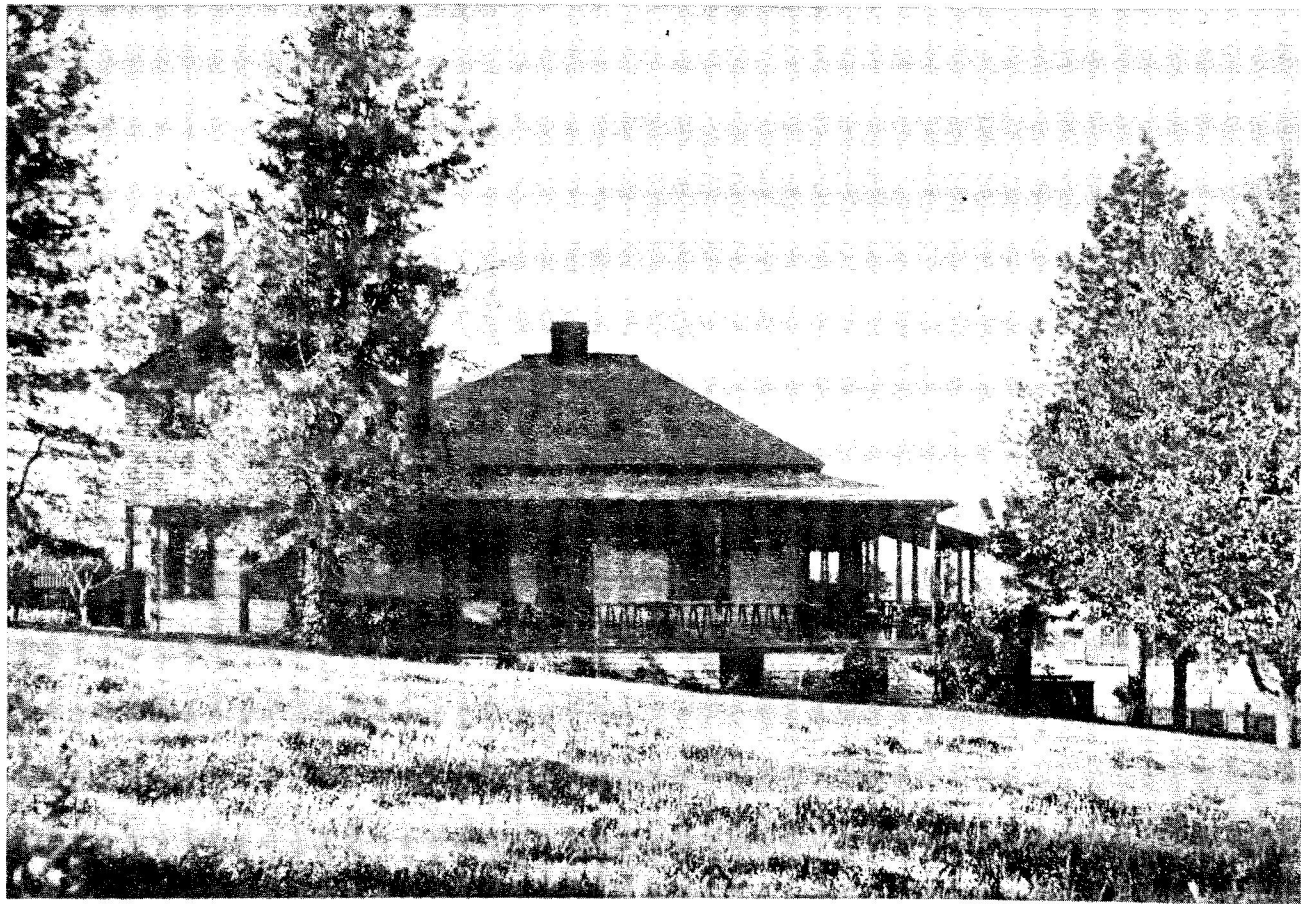
A "spur wheel" is nowadays called a gear wheel, it was probably very much like the one, illustrated on page 15 of the *Bulletin* for April 1979. The cause of the failure was, what is now called metal fatigue, which is indeed caused by recrystallization in the metal. Metal with small crystals is the strongest. Under the influence of

stresses, especially alternating stresses, some crystals grow at the expense of others, weakening the metal to the breaking point when they become large enough.

In her story, Mary Foote fused these two events into one. She suggests a union of some kind between the pump man and the pump he took care of and, at the moment of the pump man's death, the pump refuses to operate any longer.

The reader will notice several differences in detail between the reports of the actual events and the story.

—Editor



The Superintendent's residence at the North Star Mine.

HOW THE PUMP STOPPED AT THE MORNING WATCH

by Mary Hallock Foote

The main shaft of the Morning Watch is an incline, sunk on the vein to a depth below daylight of eighteen hundred feet; there are lower workings still, in the twenty-one hundred, for the mine is one of the patriarchs of the golden age in northern California and its famous vein, though small, has been richly persistent.

The shaft is a specimen of good early construction in deep mining; it has two compartments, answering to the two vital functions of pumping and hoisting. A man walking up the hoist

may step into the pump shaft between timbers to avoid a car, but he must then be wary of the pump rod.

The pump rod at the Morning Watch is half a mile long; with a measured movement, mighty, conclusive, slow, it crawls a little way up the shaft, waits a breath, then plunges down, and you hear subterranean sobs and gulplings where the twelve pumps at their stations are sucking water from the mine. These are the water guard which is never relieved. Nights and Sundays, frost or flood or dry, the pumps never rest. Each lifts its load to the brother above him, sweating cold sweat and smeared with grease and slime, fighting the climbing waters. The

stroke of the pump rod is the pulse of the mine. If the pulse should stop and the waters rise, the pumps as they go under are "drowned". In their bitter costliness, in the depths from which they rise, though born in sunlight, the waters of the "sump" might typify the encroaching power of evil in man's nature—a power that springs from good, that yet may be turned to good, but over which conscience, like the pumps, must keep unsleeping watch and ward.

Between the Cornish miner and the Cornish pump there is a constitutional affinity and an ancient hereditary understanding. Both are governed and driven by the power on

top; both have held their own underground from generation to generation without change or visible improvement. They do their work by virtue of main strength and dogged constancy, and neither one can be hurried.

On this last head, the pump-man will answer for his pump—speaking of it as of an old comrade, in the masculine singular, if you ask how many beats of the great connecting rod are normal:—

“E ’ave been as ’igh as seven and a quarter; ’e ’ave been, but it do strain ’im. Seven, about seven, is what ’e can bear.”

John Trenberth of Penzance, spoken of familiarly as “old Joh,” was pump-man first and last at the Morning Watch. He was there when the first pump-station was put in and the rod was but four hundred feet long. He saw that mighty member grow, section by section, pump added to pump, as the shaft went down. Each new pump was as a child born to him; there was room in his pride always for one more. If one had a failing more than another, he made a study of its individual crankiness and learned to spare the fault he could not remedy nor hide. To the mining captain, to whom he was forced to go for supplies, he might confess that “No. 5, ’e do chaw up more packin’ than all the pumps in the mine”; but in general it was like touching upon delicate family matters with old John to question the conduct of his pumps.

He was a just man, Trenberth, but not perfect; he had his temporal bonds. It went hard with him on the Lord’s day to choose between the public duty of worship in the miners’ church above ground and his private leaning towards his pumps below. Can a man do his work in this world too well? Excessive devotion to the interests of the mine was not a common fault with its employees. The boys at the Morning Watch made friendly sport of the old enthusiast, declaring that he took his pumps to bed with him and dreamed at night of their kicking and bucking. It is true that the thought of Sammy Trebilcox, and what he might be doing or not doing as his substitute underground, took the heart out of his Sabbath observances and made his day of rest, when he gave himself one, the longest of the seven. Wherefore his little wife—“a good bit older nor ’e”—and a woman of grave disposition saddened by the want of children—sat mournful in church without her man, and thought of his clean shirts folded in the drawer at home and of him in his week day livery of mud, earning unblest wages underground. She knew it was not the extra day’s pay that ensnared him; her prayer was that he be delivered from pride in carnal labors, and that he make not unto himself a graven image and an idol of “they pumps”.

A pump-man has his regular shifts; but so well known was the quality of John’s service that not a man about the mine, from the oldest tributer to the new superintendent, would have questioned his appearance above ground at any irregular hour of the day or night. He looked, when he came on top, like some old piece of mining machinery that has been soaked underground for half a century—plastered with pallid mud of the deepest levels, coated with grease and stained with rust from fondlings of his pumps,—the recognizably human parts of him, his unsunned face and hands, pitted and drawn with steam.

The day’s pay men were lively in the stopes; the car-boys romped with the landing men, and chalked the names of one another’s sweethearts on the sides of the refractory cars; every tributer in the old workings had his partner to help him hammer out a “crushin’”; the contractors tunneled and drifted and argued in gangs; but old John, in the bowels of the mine, with death within a foot of him on either side, kept his one man watch alone. In his work there was no variety, no change of surroundings or of seasons, no irrelevant object to rest his fixed attention; solitude, monotony, and ceaseless nagging vigilance, imprisoned in a tube of darkness between the crashing of the cars on the one hand and the squeeze of the rod on the other.

Iron will crystallize after years of such use, lose its elasticity and cohesive strength. Ol John had ceased to find pleasure in society or sunlight. He chose the darkest paths going home through the woods, the old roads deep in pine needles undisturbed by passing feet. The sound of a boy’s whoop or a man’s hearty halloo drove him deeper into the shade. If spoken to, he had no answer ready but would whisper one to himself, later, with his eyes on the ground.

Once the night shift, going down, saw the old man bare headed in the hoist-shaft, standing motionless on the track, his hand up as if listening. He appeared not to hear the noise of the car, or to have heard it from some imaginary direction. They waved, they roared to him, and he vanished in the pump-shaft. Afterward they remembered his stare of bewilderment as if he had come awake suddenly in a strange place, uncertain how he had got there. Sometimes he would pop up like a stage ghost in the hoisting works, haggard and panting, as if in urgent haste. Greeted with jocular questioning, he would gaze about him vaguely, turn, and plunge down again without a word.

The wife began to hear from relatives and neighbors disquieting comments on her husband’s looks.

‘It’s more than a whole month ’e ’aven’t ’ad a Sunday off,” said the buxom wife of one of the shift bosses.

“Whatever is the sense of ’im workin’ so ’ard, and you only two in family? A rest is what ’e need.”

“Rest, dear! ’Aven’t I telled ’im so, scores and scores of times! An’ ’e just like a fish out o’ water when ’e’s parted from they pumps. ’E talk of ’em the same as they were humans—made of the same piece wi’ ’is own flesh and blood.”

“Eh! It’s a bad lookout when a man can’t leave his work behind ’im when the day is done. We belongs to ’ave our rest sometime. Why don’t ’e coax ’im out more? ’Twould do him good to see the folks.”

“E never was one to be coaxed. What ’e think right, that ’e’ll do; man nor woman can’t make ’im do other,” Mrs. Trenberth would boast, proud of a husband’s will unbroken after forty years of marriage.

One morning there was summons from the mistress at the kitchen door of the superintendent’s house.

“Clen’ want see you—kitch’,” was the Chinese cook’s sketchy way of transmitting the message.

Clemmo was there, the gardener and general utility man. The two do not go together unless the man is good natured, as Clemmo was. He stood, hat in hand, in his deferential way, perspiring and quite noticeably pale. There was a catch in his breath from running. He had come to borrow an umbrella.

The mistress looked at him in surprise. It was cloudless summer weather, the hot valley steaming up in the face of the foothills, dust on the cloaking pine woods, red dust inches deep on all the roads and trails, dust like a steamer’s smoke in the wake of ore teams miles away. The shadows of the mine buildings were short and black where a group of men had gathered, though the twelve bell had not yet struck. A sun umbrella did he mean?

“Any kind, ma’am; any old one will do,” Clemmo repeated apologetically. “It’s just to hold over Mr. Trenberth when they’re carryin’ him home. Yes, Ma’am, he was hurt in the shaft just now—an hour ago. Oh, yes, the doctor’s seen him. He’s pretty bad. It was an empty car struck him; dragged him quite a ways before the shaft men heard him scream. They can’t tell just how it happened; he hasn’t spoken since they brought him up. Yes, Ma’am, one of the boys has gone to tell the wife. They’ve got an old mattress to carry him on; they have brandy. No, Ma’am, there ain’t anything, thank you—only the umbrella. Any old one will do.”

When the umbrella was brought and it proved to be a silk one, Clemmo took it reluctantly, protesting that “any old one—”, but the mistress cut him short. He went off with it finally, assuring her over his shoulder that he would carry it himself and see that it “came right back.”

The Chinaman looked on calmly. "I think he pletty ole—he die pletty soon," he remarked.

Three little children were frolicking in the swing under the pine trees. Their mother quieted them out of respect for what was soon to pass the house; but she could not moderate the morning's display of pink faced roses, nor suggest to the sun to go under a brief cloud. All was heartless radiance and peace as the forlorn little procession came down the road—the workers carrying him home whose work was done; three men on a side, and between their stout backs and faces red with exertion, a broken shape stretched out and a stark white profile crowned with a bloody cloth.

What had the old man been doing in the hoist? "Fixin' up the bell rope," the mining captain said; "but it didn't look like any of John's work," he added meaningly. "He wasn't all there when he rigged up that thing. He'd slipped a cog, somehow.—Yes sir, you bet! A man in a shaft he's got to keep his eye out. He can watch for forty years, and the minute he forgets himself, that minute he's gone."

About the turn of the night, when the old man was nearing his end, he gave a loud cry and sprang up in bed, where he had lain speechless and helpless three days. The startled watchers flew to his side.

"Take you 'ands off me, woman!" he panted. "I must up. Th' pump 'e's stopped!"

"Don't 'ee, deary!" The wife trembled at the look in his pinched gray face. "Don't 'ee be thinkin' o' they pumps no more. 'Owever could 'ee hear 'em, two miles away? Hark, now! 'Tis all as still as still."

It was so still, that windless summer night, they could hear the clock

tick across the passage, and the hoarse straining of the dying man's breath as they struggled to hold him down. His weakness, not their strength, prevailed. He fell back on his pillows, and a passive, awe-struck stare succeeded the energy of horror and resistance. His eyes were fixed, as one who watches spellbound the oncoming of a great disaster. They touched his still face; it was damp and cold. His chest pumped hard and slow.

"Two thousan' gone under! Drowned, drowned!" he whispered.

"'Tis all nothin' but they pumps!" the old wife grieved distractedly. She knew his time was short. "Oh, dear Savior, don't mind it of 'im! 'E were a hard worker, and a good man to me."

At that same hour, the night of John's release, when he had given his loud cry, the watchman at the mine heard above the roar of forty stamp heads a sound like a cannon smothered within walls. He rushed across to the hoisting works. There lay the great crown wheel of the pump, in pieces on the floor. The pump rod, settled on its chocks, had stopped with its last stroke.

One little cog, worn out, had dropped from its place; then two cogs came together, tooth to tooth, and the ten-ton wheel burst with a groan that had arrested the passing soul of the pump-man, duty bound to the last.

An old mine, or an old man, that is nearly worked out may run for years at small expense if no essential part gives way; but the cost of heavy repairs is too great a strain upon halting faith and an exhausted treasury. Even so small a thing as the dropping out of one little cog, in a system worth thousands to rebuild, may decide the question whether to give up or keep on.

In that moment of ultimate consciousness, the mystery of which is

with the dead, it may be that old John beheld the whole sequence of disaster that was to follow the breaking of the pump. If he did foresee it all, as his ghostly eyes seemed to say, he accepted it as well; and that look of awe-struck, appealing submission in the face of immeasurable calamity he carried to the grave. Perhaps he had seen beyond the work of this world to some place of larger recompense where the unpaid increment of such service as his is waiting on the books. Perhaps he heard already the Master's patient "Well done."

While they were preaching the funeral sermon, his old enemy, the water of the black deeps, was creeping up, regaining ground which he and the pumps had fought for and defended, inch by inch and year by year.

"Two thousan' gone under!" The lowest pump is lost. Leave it where it drowned, at its post. Now there is hurry and rush of tearing up tracks before the levels are flooded; the order to shut down has come late. Pull out the pumps; the fight is over! They have taken up the track in the main incline; the water has reached the nine hundred, like the chill creeping up the limbs of a dying man. The old tributers take down their muddy mine suits from the change house walls; families will live poorer this winter for all that water in the mine. They go trooping home, boots and bundles over shoulder, by the paths their own feet have made. They meet no night shift coming on. Another year and those paths of labor will be deep in hushing pine needles; shadows of morning and evening will be the only change of shifts. The payrolls are closed; the last crushing has gone to the mill. The grave of ten millions is for sale cheap, with a thousand feet of water in it.

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Book Reviews

Lee Ann Johnson: *Mary Hallock Foote*. Boston, Twayne Publishers (a Division of C.K. Hall & Co.), 1980.

When I announced to my friends in Southern California that I was moving to Grass Valley, several of them recommended reading Wallace Stegner's *Angle of Repose* because it plays in that city. I did, and found it an interesting and well written book. The significance of a notice in the beginning of the book: "My thanks to J.M. and her sister for the loan of their ancestors. Though I have used many details of their lives and characters, I have not hesitated to warp both personalities and events to fictional needs. This is a novel which utilizes selected facts from their real lives. It is in no sense a family history", however eluded me and it was only after living in Grass Valley for some time that I discovered that the heroine of the book was modeled after Mary Hallock Foote, who actually lived in Grass Valley. Since this fact is only thinly disguised, the book is often considered a historical novel. Works of fiction have little value as works of history or biography. Too often the author invents episodes to further the interest of the story or introduces dialog which reflects thoughts, moods or opinions which the subject might have had, but of which we actually know nothing.

It is however possible to learn to know the real Mary Foote, because she wrote an autobiography which was edited by Rodman W. Paul and published as: *A Victorian Gentlewoman in the Far West; the Reminiscences of Mary Hallock Foote*. For the benefit of those who do not know about Mary Foote, here are some pertinent data. She was born in 1847 near Milton in the State of New York and named Mary Anna Hallock. At the age of seventeen, she enrolled at the Cooper Institute School of Design for Women, located in New York City. Soon after completing her studies, she was asked to illustrate a book and rapidly gained renown as a professional illustrator and, at a later date, made her debut as a short story writer.

In 1876, she married Arthur De Wint Foote, a young civil and mining engineer. With him, although often separated from him and staying at Milton, she started an itinerant life which brought them to New Almaden (Calif.), Santa Cruz (Calif.), Leadville (Col.), Mexico, Boise (Idaho), Grass Valley, where she lived from 1895 until 1932 and finally to Hingham (Mass.) where she died in 1938.

Until her arrival in Grass Valley, where her husband had been appointed



Mary Hallock Foote

Superintendent of the North Star Mine, she had led a difficult life in the various mining camps. Difficult, because there were little or even none of the amenities of life, so necessary to a woman, brought up as a genteel eastern lady. In spite of these difficulties, Mary continued to draw and write, borrowing her subjects mainly from her surroundings and her personal experiences and this way became a well known illustrator, short story writer and novelist.

While her life story is told in Rodman Paul's *Reminiscences*, this book however says very little about her work, particularly about her writing. Indeed, one can hardly expect an analysis of someone's own work in an autobiography.

This shortcoming has lately been admirably overcome by Lee Ann Johnson in her *Mary Hallock Foote*. With biographical data of Mary Foote's life as a backdrop, Johnson discusses and analyses Foote's art work and writing. In the preface she writes: "My purpose in writing this critical biography is to place Foote within her milieu, to bring to light the hidden excellence of her work, and to provide a starting point for contemporary appraisals of her contributions to American letters".

One motive which runs in several of Foote's earlier novels is, that an

Eastern woman could not be happy in the West. As she herself expressed it: "When an Eastern woman goes West, she parts at one wrench with family, clan, traditions, clique, cult and all that has hitherto enabled her to merge her outlines—the support, the explanation, the excuse,—should she need one, for her personality". Although it is hard to believe that every Eastern woman, transplanted to the West, felt unhappy, it is credible that Mary Foote felt that way. Her situation as the wife of the top executive at each of the locations where she found herself and the isolation of these locations, severely limited her social contacts in more than one way and prevented her from benefitting from the cultural climate which started to develop (at any rate in California) not long after the discovery of gold. In fact, Mary H. Foote herself was part of this developing cultural climate.

Another motive is signalled by Johnson several times. It is the motive of "marriage by default", which, in one case she defines as follows: "Born in the East but living in the West, the hero and heroine seem ideally suited because of shared interests and sympathies, yet there is always a complication which prevents them from achieving a satisfying relationship—a previous commitment, an obstacle presented by profession or family. It is only when the

circumstances are suddenly altered through natural disaster, illness, death or repudiation that they recognize the saving alternative each represents. Their resulting union is one of marriage by default". Mary Foote's own marriage however was not a marriage by default. While she dreaded going West: "No girl ever wanted less to 'go West' with any man, or paid a man a greater compliment by doing so", there is no indication that she was not perfectly happy with her husband.

Mary Foote's career as an artist started in about 1860 and lasted until her arrival in Grass Valley in 1895. Of her graphic work, Lee Ann Johnson remarks: "her work was considered on a par with that of the best practitioners of the day—persons like Howard Pyle, Frederic Remington, Joseph Pennell and Thomas Moran, whose fame as illustrators continues to the present day. One suspects that had Foote not been a woman in a man's profession, and had she not retired early from the field, her credentials as a leading nineteenth-century illustrator would need no introduction". Rodman Paul and Lee Ann Johnson present us with only a few examples of Foote's art. Considering the avalanche of Norman Rockwell books, now glutting the market, would it not be desirable to devote an album to Foote's art, especially the art which illustrates the West? Her womanhood should not be a handicap any more these days!

After her arrival in Grass Valley in 1895, a place where she would live for almost forty years, Mary Foote appears to have become reconciled with life in the West. Although she did not draw for publication any more, her literary activity continued; seven of the twelve full length novels she wrote were written in Grass Valley. Unfortunately for Nevada County, only one of these novels, *The Valley Road* (1915) is set in this county. It is a fictionalized account of the relations between the Foote and the Hague families; James D. Hague being an old friend, a mining expert and financier from San Francisco. In addition, there is a short story *How the Pump stopped at Morning Watch*, which has its setting in Grass Valley. Among the other Grass Valley novels there are two with historical plots and one plays at the California coast.

Lee Ann Johnson ends her discussion of Mary Hallock Foote's work with an "assessment" which is not totally favorable: "Her early tales of heroines sacrificed needlessly to the demands of the West (and) were too closely intertwined with her own personal dissatisfactions to be good art. The better work came later, once she had accepted her residency in the West as permanent", and "For the modern reader the deficiencies of Foote's writing lie primarily in the excessively idealized characters, romantic situations, and moral tone of her early fiction. Her frequent reliance upon coincidence and melodrama, her

pointedly symbolic naming of many characters and her excessive dependence upon two or three formalized plots are further shortcomings".

Yet, the reader might desire to judge for him- or herself. The Grass Valley Public Library owns eight of Foote's books; unfortunately there is only one of the Grass Valley novels among them, *The Ground Swell* (1919), which was her last one. It seems that at present she is almost totally forgotten. The prestigious, 1511 page *Literary History of the United States* devotes exactly five lines to her: "Mary Hallock Foote brought readers back to the mining camps of Idaho and Colorado and to some of the materials first publicized by Bret Harte. Though there are fine passages and fine single stories among these writers, especially in the work of Miss French and Mrs. Foote, their reputations are likely to dwindle further rather than revive".

At this time, I have not yet read any of Foote's novels and hence cannot judge. But, if one considers the works of authors, considered great, for example of fellow Quaker, Nathaniel Hawthorne, one cannot imagine that her writing could be as tedious or her plots as unexcitable as his. Hence, even with her shortcomings, Mary Hallock Foote's writings perhaps deserve another chance and I hope that Lee Ann Johnson's book will help achieve this.



Marian F. Conway: *A History of the North Star Mines, Grass Valley, California, 1851-1929*. No place or publisher, 1981.

Among the topics of Nevada County history, mining should take first place. After all, mining was the chief source of income in the county for more than a century. However, due to various reasons, mining lags behind other topics. Mining history tends to require technical knowledge which not many historians (and readers) have and it seems that the archives of most mines are no more available.

A history of the Empire Mine, written by C.A. Bohakel, was published by the Nevada County Historical Society in 1968 and was later reprinted. This was the only monograph on a mine until recently, when Mrs. Conway's book was published. This is an excellent history. Mrs. Conway has taken advantage of the fact that her grandfather Arthur De Wint Foote and her father Arthur Burling Foote were superintendents and chief engineers at the mine, which gave her access to their papers, letters and diaries.

The *History of the North Star Mines* is a remarkable achievement. Although the book is not long (37 pages text), it is very complete, covering all aspects of running a mine, not only from a

technical or social, but also from a strategic point of view. For example, we read of the striking of a rich vein. One would expect reading about large dividends to the stockholders, and perhaps these were increased or resumed. However, a large portion of the extra income went to buying new claims, it being necessary to have a future supply of ore to keep operating.

One interesting topic is the miner-management relationship. In the early eighteen fifties wages, also in the mines, were very high. They gradually dropped until, in the sixties, they leveled off to three dollars per day. We find that, in 1907, they still were three dollars per day. This may seem low, but these wages were still favorable compared to those in the East. A miner's family could live comfortably, although not luxuriously on this income. This stability of wages indicates that there apparently was no inflation during this half century. Labor problems became apparent around this time and it is interesting to read that, initially, they were solved in terms of working hours rather than wages.

If we may believe some historians, all gold mining techniques were invented in the California gold fields. This however is not so. Stamp mills, recovery of gold by means of mercury, classification of ore by means of shaking tables, recovery of gold dust in the slurry of a stamp mill by means of blankets, all these were known already in the late Middle Ages or perhaps even earlier. More modern recovery techniques, such as chlorination or cyanidation did not originate in California either; they originated in Germany and Scotland respectively. Yet, solutions to the day by day problems of the mines sometimes blossomed into inventions with world wide acceptance. For example, the Oliver filter, widely used in industry, was invented at the North Star Mine by Edwin Letts Oliver (1878-1955). He is also credited with improvements of the cyanidation process.

A system to warn the underground miners of impending danger and to instruct them to leave the mine was another interesting invention. In order to keep the air in the mine fresh and breathable, air was continuously pumped into the mine. The idea was to inject a "foul smelling" chemical into the air stream as a warning sign. That this chemical was amyl acetate, as stated. I doubt Amyl acetate was once (and perhaps still is) used as a flavoring agent for candy.

I have touched upon a few topics from *The History of the North Star Mines*. The reader will find many more and will improve his understanding of the operation of a mine by doing so. May this booklet come into many hands.