

**Modeling the O&W**  
**No. 43 in a Series**  
**The Wreck of No. 70 at Luzon**  
**March 13, 1907**

Well known to most O&W enthusiasts is the boiler explosion wreck of engine No. 70 on Train 3, then named in public timetables and the Delaware Valley Express (later named as the Mountain Express and then later and more universally known as the “Mountaineer”), which took place March 13, 1907. While approaching the Depot at Luzon, northbound just north of Red Rock Cut No. 70 suffered a catastrophic boiler failure and explosion. A lingering curiosity was re-kindled some while ago when, sorting through various O&W images collected over the years, I ran across a “Real Postcard” image of the wreck aftermath. After filing away this postcard, I was further reminded of this wreck after seeing yet other collected postcard images previously filed away. . . so, I went to perhaps a handiest single references on the O&W, due largely to its compactness. That easy single source is Bill Helmer’s 1959 history. . . “The Long Life and Slow Death of the New York Ontario & Western Ry.”

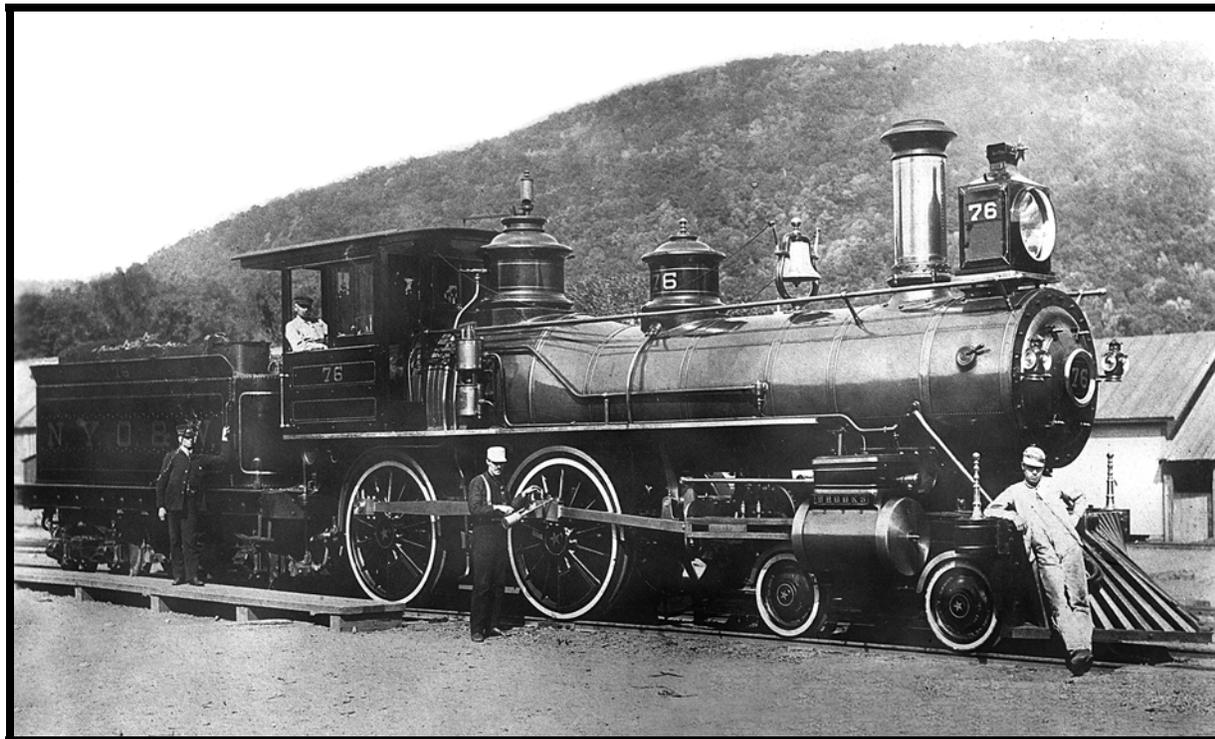
As I’ve written before I treasure immensely the OWRHS “Lost Tapes” since, as the accidental historian I’ve become, the distance in time from the O&W in the present is so great that I am deprived of the historians’ “primary source” . . . a present testimony of those who saw and worked on the O&W. The Lost Tapes are an archival source containing the unscripted testimony of old employees and, as one who has listened many times to each of the CD discs which comprise the series of four discs, the account of Homer House made in answer to the unscripted banter that are the Lost Tapes, my curiosity was further inspired.

In comparing the accounts of this accident there appear to be two differing explanations of boiler explosion of No. 70. In research for this column yet another [albeit speculative] possible explanation surfaced. Some effort to sort out the evident discrepancies has led to the preparation of this article. I will insert parentheticals, in italics, and in footnotes following, to highlight differences in both testimony and accounts of this accident.



*From the author’s collection this well-known Bob Harding image of Class G American Standard “Eight Wheeler” No. 70 in a pristine condition just out of the shops. The usual “Brooks” plate, from the build date of June 1886, on the side of the valve chest has been*

removed and a Dickson Machine Works builder plate has been affixed to the smokebox door in the customary Dickson fashion and location; --Dickson having rebuilt this engine with a new boiler in 1893. The original link and pin coupler has been replaced with a safety coupler and new pocket, with pilot beam braces. The coupler knuckle has a slot to accommodate the "link" in the use of link and pin couplings for such equipment as still retain that unwieldy equipment. Readers please notice the attention to detail; -- the raised "stars" proud of the cast "fields" on the hubs of the pilot wheels and the Davis round driving wheel counterweights, and then too striping on the cast iron Sheffield spoked lead truck wheels.



More closely resembling an "as built" view is sister Class G No. 76 posed here at Delhi, displaying both the Brooks plate of origin on the valve chest and a fully jacketed smokebox. A comparison of this photo image to the preceding will reveal a number of small differences of detail occasioned by the boiler replacement and rebuild applied to No. 70 by Dickson. One interesting detail in this image is that here No. 76 shows off its "fenders" over both driving wheels and lead truck wheels.

### **William F. Helmer's Written Account**

*(With editorial remarks)*

Recounted by Helmer, as virtually an aside and comment regarding the performance of the O&W passenger trains, on page 99, he begins: --

"And try as they might, O&W officials could never match the on-time records of the New York Central. Making up time on passenger runs required skill and daring on the part of the O&W enginemen. The constant twisting and turning, the incessant climbing and descending demanded firm hands on the throttle, judicious use of the brake valve. On February 13, 1907, Train No. 3 was sacrificed to this attempt to get back "On the card."

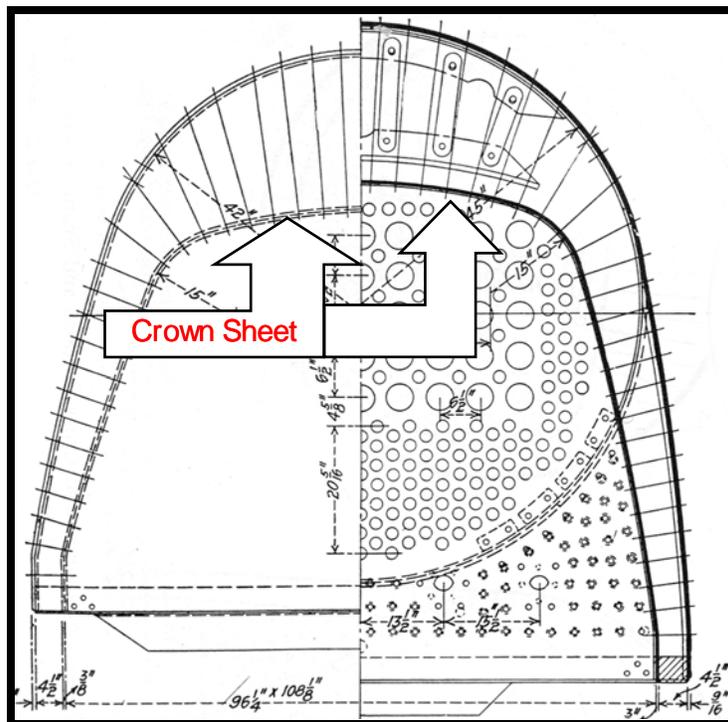
Engineer Will Gadwood of Walton, was pushing No. 70 hard as he could, for he was running late. Sharing the single cab was J.D. Valquette, a fellow engine runner (*who was riding along to familiarize himself with the line to allow for him to become qualified over that portion of the O&W; -- not an especially unusual practice on the O&W or any railroad. Here Valquette was qualified over a different portion of the O&W [as later recited in the newspaper account(s) of the*

accident] and was fulfilling the company requirement of a "familiarization" in order for certification over at least a portion of the O&W Southern Division ) and [Gadwood's] fireman Martin Mullen. . . "

and continuing. . .

"Although no one could reveal the cause of the explosion, the circumstantial evidence is that enginemmen often ran with boiler water dangerously low, creating greater steam pressure . . . "

(This very statement is what caught my attention. . .so far as I believe it to be manifestly inaccurate. Boiler water level is indeed very critical over the Crown Sheet, at the top of the firebox, and O&W operating procedures called for [generally, but with some variation from engine class to engine class] three inches of water over the Crown sheet. If the Crown Sheet is heated to as much as (as little as; -- given the combustion temperatures beneath) 400 degrees F then its strength is reduced to 20% of the strength it has when properly "cooled" by an adequate head of water above. The Crown Sheet is held in place by [double ended] stay bolts running through the Crown Sheet and the boiler carcass above. In this space, more accurately stated, is where most steam is actually "made," (that is, the location where liquid fluid water is converted to steam vapor). The pressure of steam in the boiler is regulated by the safety, or "pop" valves located either on the steam dome or aside an auxiliary steam dome and the release setting of those valves establishes the pressure within the boiler (not the "cover" of water over the Crown Sheet, nor any excess heat which might be imparted by a lesser cover of fluid water).



" . . . .but making cold water injection very hazardous."

Again, a considerably inaccurate statement; -- since "cold" water is first heated by the use of exhaust steam used at least in priming the injector which heats the considerable metal mass of the injector and ports through which the feed water must pass. Then the feed water is further heated in contribution with the steam used to impart the kinetic energy needed to open the boiler check valve against the boiler steam pressure within. Check valves are generally located just to the rear of the forward most flue sheet. . . a considerable distance from the Crown sheet. While the feed water is "cold" it is only relatively so with the pre-heating obtained in its journey from tender feed outlet to check valve. . . and then it is introduced into the boiler at a location so

*far forward of the Crown sheet as not to have much effect at all upon the Crown sheet. The "hazard" in running water too low, although true. . . is to "burn" the Crown sheet [heating it above the aforesaid recommended 400 degree temperature], and thereby weaken it and possibly contribute to catastrophic failure either contemporaneously or at some later date due to the compromise of strength of the resident steel. Running low water above the Crown sheet is not a practice which raises boiler pressure to a level beyond the capability of the boiler vessel to retain the steam nor does that produce an exceptionally larger "weight" of steam to allow faster running speed. . . . to make up lost time "on the card. . ."*

*and continuing: -*

“. . . Whether this hypothesis is correct or not, the indisputable fact is that No. 70 shattered herself into thousands of flying metal fragments, hurtling her three occupants into the air and throwing the train down a 20-foot embankment just south of Luzon. The engine was a total loss, and so, unfortunately, were the men who rode her. Gadwood lived but a few hours and died without uttering any word to explain the disaster. Although the passengers were badly shaken up, none of them was seriously injured.”

**The Period Newspaper Accounts  
With further editorial remarks of this author; --**

The diligent Jeff Otto answered my inquiry for information about this accident resident in the OWRHS Archives by providing a transcription of several newspaper accounts from the Middletown Daily Argus. Within the journalistic tenor and style of the era, some of the descriptions in this article, especially those describing injuries to the trainmen are somewhat florid and gruesome. Those dated transcripts of the newspaper accounts are as follows: --

"Thursday 2/14/07

## AWFUL DISASTER ON O&W

Locomotive of Passenger Train 3 Blown Up, Near Luzon  
Killing Two and Injuring Many. Two Passengers Cars Into Ditch.  
Fireman Martin Mullen and Engineer Valquette, of Cadosia, A Chance Passenger, Dead.  
Regular Engineer Gadwood of Walton Fatally Hurt  
Eleven Passengers More or Less Seriously Injured  
Identity of Victims Only Partially Disclosed

**Dead:**

Fireman Martin Mullen, of Middletown, skull crushed in.  
Engineer Valquette, of Cadosia, skull crushed, body badly mutilated.

**Fatally Injured:**

Engineer William Gadwood, of Walton, fractures of skull.

**Slightly Injured:**

Conductor Charles Doell, of Middletown, contusion right shoulder, spine

**Injured:**

Peter Riley, Union Hill, N.J., back sprained and bruised.  
John M. Temple, Roscoe, N.Y., passenger, severe scalp wound right side head.  
John Finnegan, Passenger, bad cut right side of head.

Eight other passengers, whose names could not be learned, suffered severe cuts and bruises.

The above is the record of dead and injured as the result of the explosion of the boiler of an O&W locomotive drawing a passenger train near Luzon, late Wednesday afternoon. The locomotive was No. 70, one of the old type passenger engines. It was drawing train 3, one of the finest trains on the O&W.

Train No. 3 left this city (AV - ed. Note) on time at 3:05 Wednesday afternoon with less than 50 passengers on board. The train was in charge of Conductor Doell, of this city and Engineer William Gadwood, of Walton, and Fireman Martin Mullen, of this city. Trainman William Halligan and a colored porter (*"politically correct" for the era(?) - ed. Note*) completed the train crew.

The train made good time. It was due to arrive at Luzon at 4:22 and would have done so had not the accident occurred. At South Fallsburgh the train stopped and water was taken to the tank of the engine. (*this is a correct statement of what is done when a steam engine stops to replenish its supply of water;-- that the water cistern of the tender is filled, and it somewhat compromises the opinion of engineer Homer House which follows - ed. Note*) The train was composed of a baggage car and two coaches.

The train was approaching Luzon and had just entered upon the straight stretch about an eighth of a mile long down which the Luzon station could be seen..."



*This "Real Postcard" view looking Northbound is that of the Luzon Depot as it existed on the March 13, 1907 date of the accident involving the Delaware Valley Express and engine No. 70. It is of a design of combination Depot classified by the Interstate Commerce Commission as Type W 103 as required by the Valuation Act of 1913. However it did not actually survive to the mandatory 1917 date of inclusion in the O&W Valuation, since it was replaced during 1911- 1912 by the fine brick Depot (still extant - 2011) designed by D. H. Canfield and erected by favored O&W builder - contractor Homer Underwood of Edmeston, N.Y., at a cost of \$8,655.00.*

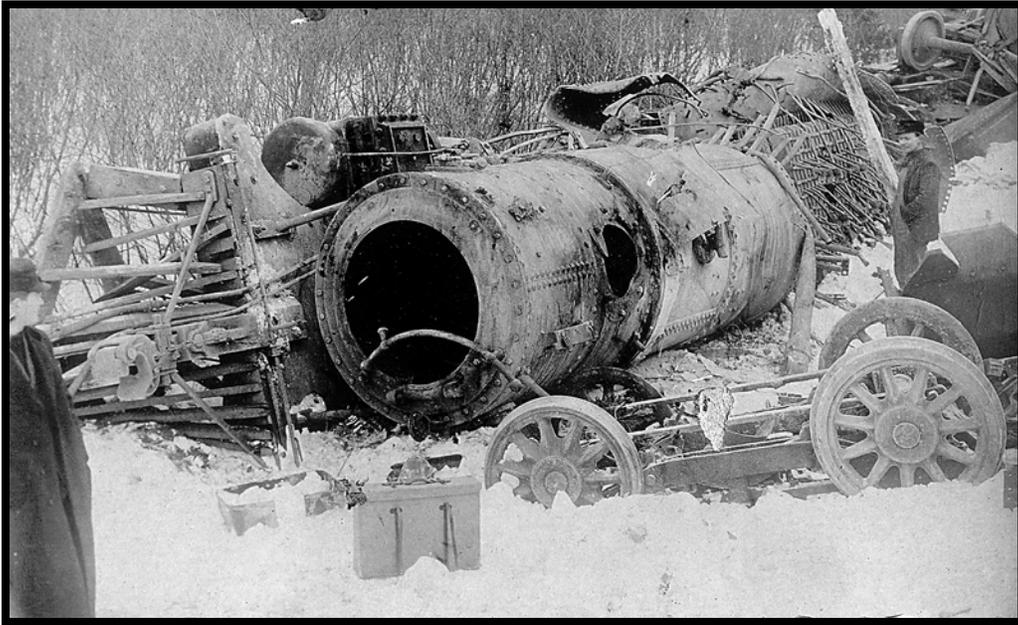
*And continuing. . . .*

"There was not the slightest intimation of any danger. Engineer Gadwood was leaning out his cab and looking ahead and was about to slacken speed at the Luzon depot when suddenly everything seemed to go to pieces and in the instant two would had been hurled into eternity and the direst confusion reigned."

## Blown to Pieces

The locomotive literally went into a thousand pieces and the three cars behind it, ploughed over the fragments and rolled down the bank.

The accident came with such suddenness that it was all over before any could realize what had happened and the passengers in the cars were for the moment stupefied. The one man seemed to realize this danger and started to leave the car by a window and his movement was a signal for everyone to make a rush to get out of the windows and doors (*this is more than a little hard to believe in the case of a boiler explosion ahead for which there would have been no warning to passengers in cars behind the locomotive-ed. Note*). Cries and screams sounded on the air and the first ones out of the cars believed that a large number had been killed and seriously injured. The baggage car had been partially wrecked by the explosion and this wreck was completed by the roll down the bank. The first passenger coach had also rolled on its side down the bank and the second and last coach had slid endways down the bank with the other end resting up where the track had been.



*The above image is one of several well publicized views taken from at or near identical photographer locations. The firebox is to the rear of the engine hulk (in the upper tight quadrant of this image) and the wreckage is of the boiler carcass peeled away exposing the flue ends at the rear flue sheet, and the many smaller water tubes above the Crown sheet and the remnants of staybolts which formerly supported the Crown sheet from the boiler carcass above the firebox. While many copies of this image are extant, this particular copy came from the collection of Bob Harding and now resides in the author's collection.*

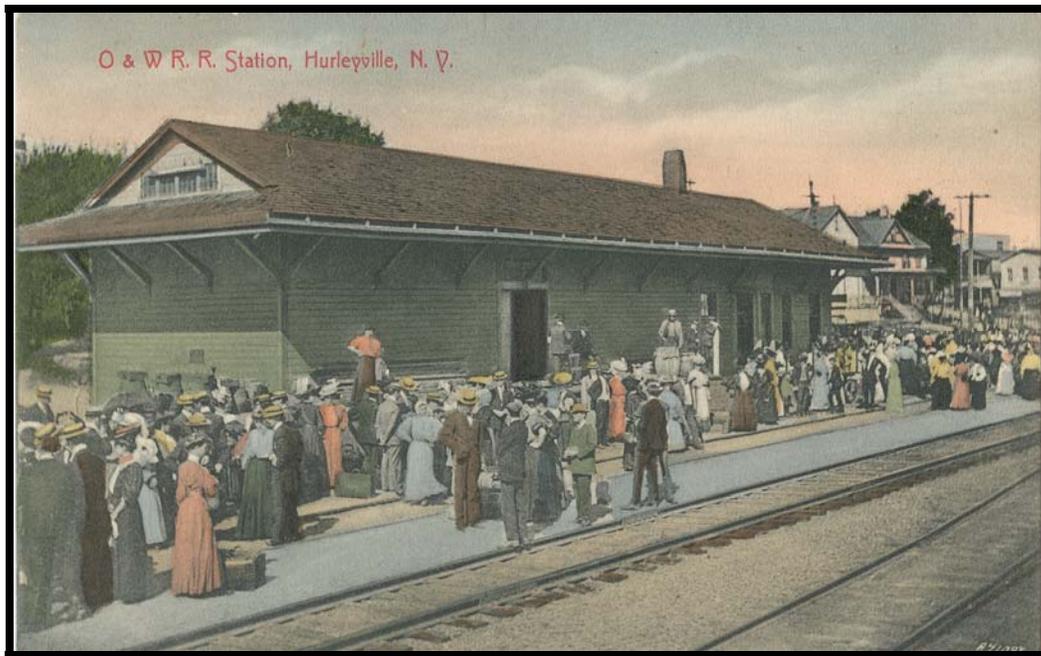
One of the first to get out of the wrecked cars was Trainman William Halligan, of this city. His first thought was his duty and seizing a flag from the rear car, he started down the track to signal any train which might be following.

One of the first passengers to release himself from the wreck was Dr. Percy Deady, who conducts a sanitarium at Liberty. Dr. Deady was uninjured and quickly assisted several of the male passengers to get out of the cars and then all turned in to relieve those who could not get out.

Several of the passengers, among them two ladies and a child, were fast between the seats and were cut and bruised. These were quickly released. When all of the passengers were out of the cars, Dr. Deady and the other rescuer breathed a sigh of relief as it had been feared that the wrecked cars would take fire and that some of the passengers might be burned to death (*a not uncommon fear for the time, since cars were often heated by means of coal stoves within and illumination was provided by oil*

*lamps. Fires often resulted in passenger cars from an upset and displacement of coal stove embers, and spilled lamp oil caused by as little as a simple derailment of a car wheel(!).*

In the meantime a number of people were waiting at the Luzon station. Some wished to take train 3 for points north and there was the usual crowd that always gathers at a small town to see the trains roll in. They were all on the platform of the station and heard the whistle of engine 70 as it came out of the cut and entered the straight stretch toward the station.



*Another "Real Postcard" view of the wooden combination Luzon Depot is shown here; -- depicted from a vantage point looking south. . .towards the location of the Delaware Valley Express accident. The community of Hurleyville is very near the epicenter of what was once the robust Borscht Belt vacation – resort area of Sullivan County. At one time the Hurleyville Hotelmen's' Association counted over 65 members, and so a vacation time gathering of patrons, vacationers and travelers as depicted in this postcard is not likely very much out of the ordinary. The far more substantial and expansive 1911-1912 brick Depot was needed to accommodate the mushrooming vacation – resort business by larger passenger waiting areas and an immense baggage room needed to store "ship ahead" baggage from those vacationers intending a summer long stay in the mountains.*

All eyes were turned on the train when suddenly it seemed to crumble; there was a cloud of steam and a dull report followed. The people on the station platform did not realize what had taken place before their eyes. As the steam cloud rolled away, however, a mass of wreckage was seen at one side of the track, and the train that had been coming toward them so swiftly a moment before was nowhere to be seen.

With one accord the men, women and children, who had been standing on the platform started on a wild run toward the sound of the wreck, expecting to witness untold horrors, but hoping to be in time to assist the injured.

### **Dead Bodies Discovered**

By the time the residents of Luzon arrived, the passengers had all been released from the cars. Search was immediately taken up for engineer Gadwood and fireman Mullen. There was no hope that they would be found alive. Both sides of the track were gone over and suddenly the searchers on the right side were heard to cry out, and the crowd rushed to the spot 100 feet from the

track, where the body of Fireman Mullen lay. The head had been crushed in and he had apparently died instantly, never knowing what struck him.



*In 1907, a time before the electronic information – communications means and methods we now nearly take for granted, a primary means to impart information was the photographic image. . . . and so virtually any sort of "news" was a suitable subject for photography and distribution in multiple copies (no different from today via 24 hour television news stations and the Internet). Postcards were a common and simple means of mail contact and quite unbelievably the Luzon wreck was a temporal and suitable postcard image subject! Although this card contains an image from the 1907 wreck it appears that its preparation was in accord with the pre-1900 US Postal regulations which forbade writing anything but a delivery address on the reverse of the card; -- and for the compliance of which senders' messages were inscribed upon the postcard fronts and often over the images of the card.*

A few paces farther on, the mangled remains of another man was found. It was supposed that it was Engineer Gadwood until one of the searchers saw a mass lying in the snow a little to the south, and on approaching found Engineer Gadwood, who was unconscious but still breathing.

By this time that Dr. W. H. DeKay, who is the coroner for the district, living at Luzon appeared on the scene and took charge of the dead. Dr. Frank W. Laidlaw, of Luzon, also arrived opportunely. The physicians examined Engineer Gadwood and found that he had a severe fracture of the skull and he was quickly taken to Lawrence's Casino in Luzon. The two dead bodies and all of the injured were also taken to Luzon. The most of the injured had their wounds dressed at the drugstore of L. F. Sherwood. Eight of the passengers were fixed up there. Their injuries consisted of cuts, sprains and bruises, but all were able to walk, and later on in the evening continued on to their homes.

Conductor Charles Doell and Baggage master Peter Riley, who were apparently the most seriously injured, were also taken to Lawrence's hotel.

Conductor Doell's injuries consisted of a contusion of the right shoulder and injury to the spine. He is not able to be about today. Baggage master Riley's injury was to his back, but he was able to be around and assist the passengers. Today, however, he is so stiff and lame as to be almost unable to move.

### Relief Trains From Here

As soon as the extent of the disaster was ascertained, Station Agent Topping, of Luzon, telegraphed to the O&W officials at this city. The wrecking train was

quickly made ready and a special train of passenger coaches was made up. Dr. J. B. Hulett and Dr. T. R. Mills were called and on their arrival at the Wickham avenue station the special train started, closely following the wrecking train. The official's engine, No. 26, with Gen. Supt. Edward Canfield, Claim Agent George Marsden and Supt. of M.P.G.W. (? - ed.) were on board, followed the special train closely.

These trains arrived at the scene of the accident about 6:45. While the north bound track was badly torn up and the rails for a long distance bent and twisted, the south bound track is not badly damaged and in two hours it was cleared and the special train passed on taking the place of train 3, and carrying many of the passengers of that train to their destinations.

A great hole was torn in the track at the spot where the boiler of engine 70 exploded, and the rails were twisted into such shapes that it would seem as though some mighty hand had been at work.

The officials made such examination of the wreck as they could in the darkness. They returned to this city at midnight and went to the scene again this morning. Division Supt. C. H. Hopkins also accompanied them today.



*Another view of the wreck is shown in this Real Postcard image, rendered by noted Liberty photographer Otto Hillig. Many O&W images were captured by different photographers to chronicle events locally deemed to be newsworthy, and this particular accident was among the more notable!*

Train No. 6, (In various public timetables carried as the "Twilight" – a Parlor Car train southbound from Roscoe to Weehawken) due in this city at 6:44 p.m., was behind the wreck and was held until after the south bound track was cleared when it was allowed to come to this city. The remains of Fireman Mullen were brought to this city on No. 6, and Doctors Hulett and Mills also returned on that train after having done all that was needed. On arrival of train 6, the remains of Fireman Mullen were taken in charge by Undertaker P. J. Reilly.

### Stranger's Body Identified

For some time after Engineer Gadwood and Fireman Mullen had been found there was much speculation as to the identity of the remains of the third person who had at first been mistaken for Engineer Gadwood. These remains were quite badly mutilated. Word reached this city of the finding of the stranger's body. It was certain that the man had been riding on the engine and inquiry was at once

started at the Wickham avenue station as to whether anyone had seen such a man get on the engine in this city before the train left here. In a short time a railroad man was found who stated that the dead man must be Engineer J. D. Valquette, who ran the pusher engine at Cadosia. The railroad man stated that about three minutes before Train 3 left the Wickham avenue station he saw Engineer Valquette climb into the engine. As Engineer Valquette had several fingers off of one hand, he could be easily identified. Word was telegraphed to Luzon, and the word came back that the dead man was undoubtedly Valquette. A telegram was sent to Cadosia and it was learned that Engineer Valquette had left that place that morning on train 4, to come to Middletown, and was expected to return to Cadosia on train 3, his purpose being to learn the road. Valquette is survived by his wife and five children.

Engineer Gadwood lives at Walton and has a wife and three children. He was operated upon at 9 o'clock Wednesday evening and pieces of his skull were removed. He is now under the care of Dr. Deady and has not recovered consciousness at noon today. He is in a very critical condition.

Conductor Doell and Baggage master Riley are resting comfortably today.

### Fireman Martin Mullen

Fireman Martin Mullen was twenty-seven years old - - was a genial, good-natured, whole-souled person whom everyone liked. He had a smile and a good word for everyone. His death comes as a shock to his many friends. He was full of life and had no thought of death as was shown by the fact that he had an appointment to meet a man on business in this city tonight.

### Still Unconscious

Engineer Gadwood had not recovered consciousness up to 3 o'clock this afternoon. The others injured are getting along nicely

Friday 2/15/07

### Two More Deaths.

Engineer Gadwood Never Recovered Consciousness.

Unknown Man Killed - Sightseer at Wreck Run Down By Milk Train

Dynamite Believed to Have Caused Explosion.

One more death has occurred as a direct result of the wrecking of O&W train No. 3, at Luzon, Wednesday afternoon when the boiler of engine 70 exploded, and another death has resulted indirectly, making a total of four deaths that can be laid to the accident.

Engineer William Gadwood, who was blown one hundred and fifty feet into a field by the force of the explosion of the boiler, sustained a severe fracture of the skull. He was operated on late Wednesday evening after the accident but did not regain consciousness. Several pieces of broken bone were removed from his skull and the pressure was taken from the brain, but it is believed that the brain must have been injured. He was under the care of Dr. Deady, of Liberty, who was constantly at his side and did everything in his power to save his life, but all was in vain and he passed away at 1:50 o'clock this morning without regaining consciousness.

### Unidentified Man Killed

when train No. 10, one of the milk trains, struck and instantly killed a man .

The wrecking crew from this city worked at the wreck all day Thursday, and by night had it practically all cleaned up. The baggage car which was badly

wrecked and the two passenger coaches which went down the bank will be brought to this city for repairs.

The locomotive, No. 70, will be brought to this city and consigned to the scrap iron heap, as soon as it is found. Pieces of the engine were found two hundred feet from the track and are being gathered up by degrees.

The officials of the O&W stated again this morning that there is no known cause for the boiler exploding and particularly for the explosion being such a shattering one. It is practically certain that there was plenty of water in the boiler as water was taken at Fallsburgh, three miles this side of where the accident occurred. . ."

*Exactly what "original" sources Helmer used in his account is unknown to this author, but it is clear that he did not mention a lack of boiler water aboard the engine – tender, nor does other testimony of long time engineer Homer House. ... as later transcribed in this article. However, having stopped at Fallsburgh for water has absolutely nothing to do with water in the boiler! A locomotive water stop does NOT replenish boiler water but rather serves only to fill the water cistern of the tender. Among the several duties of on board engineer and fireman are included a watchful attention to boiler water level and then the corresponding duty to keep the level safely over the Crown sheet by operating, as needed, the injectors. Possible trouble can arise if either of the injectors malfunction either by failing to prime properly or to operate at all. The escaping exhaust steam from an injector is a clear indication that the device is functioning properly; -- either in prime or in "fill" but in the cold weather and with snow covered ground at the time of this accident, possibly with cylinder relief valves open in anticipation of the upcoming Luzon Depot stop after passing through Red Rock Cut it could very well have been that there was enough steam and vapor about that neither engineer nor fireman realized that perhaps one or both injectors were malfunctioning. . . if that indeed were the case. While it is most desirable for both left and right side injectors to be in good operating condition, the inclusion of two injectors is but a prudent redundancy of design. A single injector can keep a boiler adequately replenished, although steam consumption and therefore over the road speed may have to be reduced until the engine can reach a terminal and service facility. Clearly, if tender water is low that can represent a danger so far as the enginemen may not have enough feed water to keep the boiler safely filled, but that obviously seems not to be the case in this accident.*

And continuing with the newspaper account. . .

". . . It [No. 70] was fitted with a new boiler by the Brooks Locomotive Works about five years ago, and as a boiler is good for ten years of life at the very least, it is certain that this could not have been worn out. Then again there were two experienced engineers and a fireman on the engine and if there had been anything wrong that gave a warning, one or the other of the engineers would surely have noticed it. It is not believed the cause of the explosion will ever be known.

### May Have Been Dynamite.

In talking with a railroad man this morning regarding the explosion the man stated it as his belief that the explosion was caused by dynamite or other explosive. He cited several instances where dynamite has been found in coal just in time to prevent a serious accident. Such an instance occurred on the Erie in this city a year or so ago. A fireman was about of throwing a shovel full of coal into the firebox of an engine when he noticed a stick of dynamite. This had probably been in the coal from the time it left the mines. It is stated that dynamite would have caused the terrible shattering effect of the explosion more than the exploding of the boiler would have done.

It is stated that the body of Fireman Martin Mullen was thrown into the air in the explosion and passed between the telegraph wires, coming down one hundred feet distant to a field. Parts of his clothing still clung to the wires Thursday. His head and that of Engineer Valquette were crushed like an egg shell.

*Coal "pickers" at both soft coal and hard coal processing plants were charged with the responsibility of "picking" out slate, sandstone and other non-combustible impurities in the mine run coal. Beyond the obvious stone and mine timber fragments they had to look for, and remove "tramp iron" (mule shoes, roof bolts and other metal shards), but then especially blasting caps, fuse remnants and unexploded dynamite sticks. It would not be at all beyond the realm of possibility that some sort of explosive left over from mining operations escaped the several loading, re-loading and processing steps imparted to mine run coal; -- through picking, sorting and grading and then into the railroad's coal supply and thence to the tender supply with the obvious consequences!*

### Some Questions

The questions that are being asked by many today are: Was engine No. 70 blown up with dynamite? Was the dynamite left in the coal by accident or was it placed there by some person for the purpose of blowing up the engine and killing one or all upon it? What kind of a person would take the chances of killing several persons to get revenge upon one man he hated? Did Fireman Mullen have an altercation several months ago with an Italian and cut his head open with a shovel? Did the Italian threaten to be revenged sooner or later? The questions are very interesting and cannot be answered at present, *(surely not, and clearly speculation perhaps engendered by a contemporary mistrust of immigrants and immigrant labor [sound currently familiar(?)])* but an investigation along these lines is being conducted.

2/21/07

### The Exploded Boiler to Be Examined By the State Boiler Inspectors.

The remains of engine No. 70, of the O&W, which was blown up at Luzon, Feb. 13, killing three and injuring a dozen, has been brought to the O&W shops in this city and is housed in the boiler shop. It is said to await a visit from the State boiler inspectors who are expected in a few days. The inspectors wish to look over the boiler with the object of ascertaining; if possible, what caused the explosion. After the inspection the mass of broken iron will be consigned to the scrap heap.

In a postscript to the accident Jeff Otto found some further information in the OWRHS Archives from a book of accidents maintained by the O&W. According to this record settlements were made as follows:

- Mullin from AV - the O&W settlement was \$4,500 on Feb 20.
- Valquette, from HD, settlement of \$2,000 on Sep 7.
- Gadwood from WN, settlement of \$4,000 on Jul 24.

There is then another possible source of this accident, in the aforementioned OWRHS "Lost Tapes" account of Homer House. Roughly transcribed, that is:

Eric Fagle: "Say Homer whatever happened about that engine that blew up at Fallsburgh. Was that Ed Callender runnin's that?"

Bill: "That was at Luzon"

House: "Now, that was never determined, that I ever know of, do you know Eric? You know what I think? Engine 70 was an awful nice, beautiful good steaming' engine. . . .you couldn't knock the steam off her. He came up there. He stopped for water at Fallsburgh and she was full of water.....real full.....he pulled out up to this Red Rock cut and shut off.....the steam right up to the limit.....and she couldn't take it."

Eric: "Do you think she went dry?"

House: "Oh no.....! You know that could happen. That can be Eric, and I took warning from it and tried to avoid shuttin' off sudden. Bein' so full of water and he tried to shut off and she couldn't take it. . . . and went over in the pasture."

So, here are two conflicting reports and accounts of the boiler explosion of No. 70, but then with the newspaper accounts injecting yet another possibility; -- that of an explosive remnant and contaminant in the coal. As experienced an engineer as was Homer House (54 years in total, and within contained from 1902 to the end of steam operations on the O&W in 1948 on steam engines) I tend to doubt his explanation. Yes, there can be operating troubles if unevaporated liquid water is pulled through the "dry pipe" to cylinders, but (so far as water does not compress(!)) that generally would result in the hydraulic pressure blowing off a cylinder head. . . and not necessarily a catastrophic boiler explosion. In fact, Homer House, in another portion of the "Lost Tapes" describes one such an event with a "Bullmoose" where the cylinder head was blown off and fractured into small bits and pieces.

In beginning to write this column I wished upon myself a concluding satisfaction to be able to define the cause of the Luzon accident; -- but alas that hope remains unfulfilled. As a reader can determine from my comments regarding the Helmer account, I discount that entirely; -- at least to the extent that a regular and practiced operation with low water over the Crown Sheet added some performance capability to O&W engines such that it was a deliberate and usual practice amongst O&W engineers. I also tend to discount the explanation of Homer House, though indeed I wished it to be true as I commenced to put this column together.

The Middletown Argus explanation of dynamite, either as a coal contaminant missed by the "pickers" or as an act of retribution and sabotage, and then missed too by the fireman bailing coal into the firebox is certainly a possibility, but one that I find unlikely if for other reason than it would be exceedingly rare. To impart a current metaphor . . . one has equal probabilities of winning a lottery by either buying a ticket or not buying a ticket! -- So long are the odds. Equally and exceedingly rare would be a steam engine boiler explosion caused by dynamite or a blasting cap given the path from mine pitch to firebox that an explosive would have to travel undetected in order to be the cause of such an explosion.

Steam engine boiler explosions, while not commonplace nor expected, were not completely unheard of and the inherent dangers of steam boiler operations were the reasons for government regulations regarding inspections and replacements of (aging) boilers. I suggest that, as with any disaster, no one single factor is a cause; -- but several factors may combine and converge to a damaging result. Without disparaging the skill and experience of those who perished, and recognizing also that the enginemen who perished would not have deliberately put themselves in harms way, a more likely cause of the explosion was, as stated, an unfortunate convergence of circumstances.

Train No. 3 was "off the card" and so attention may have been directed to making up time as the train approached Luzon. With more run time lost by the Fallsburgh water stop could it be that malfunctioning injectors went unnoticed to the extent that boiler water was in fact dangerously low? Could the steam, mist, the melt water of snow in Red Rock Cut, along with operation of cylinder relief valves in anticipation of the Depot stop at Luzon have created (to borrow a military term) a "fog [literally] of war" so that low boiler water was, and malfunctioning injectors, all things considered, went without notice? Was Engineer Gadwood distracted by conversation with Engineer Valquette in his efforts to familiarize a fellow engineer with road operations in approach to Luzon Depot so that a dangerous low water condition was not addressed? Was No. 70 in a poor condition to begin with defective or broken stay bolts, or with a "burned" Crown Sheet not noted or noticed by a shop inspection in a haste to return the engine to revenue service?

These questions arise from the introspection involved in researching this column article, and more questions arise than I originally sought to answer. All must go without a definitive conclusion, I recognize that railroad employment in this era was considered generally as being among the more dangerous of occupations in terms of potential injury, property damage and loss of life: -- along with easily recognized contemporary

hazardous occupations of mining, lumbering and stevedoring. Boiler explosions went “with the territory” for railroad men and great care was taken to avoid them, but no action or activity was neither foolproof nor 100% suitable to avoid explosions in all instances. The cause of the tragedy, loss of life and unfortunate chapter in the history of the O&W that the Luzon explosion of No. 70 represents must go unsolved and unresolved at this great distance in time; -- and is yet another of the intriguing mysteries of the O&W.



*Although rare, as above stated to emphasis and repetition, boiler explosions did occur on the O&W from time to time (one such additional accident being shown in an image published on Page 79 of the 2010 Observer "Center Cabs and Kitchens"). This image is of yet another unfortunate Eight Wheeler at an unidentified location (believed to be on the Scranton Branch). . . but of approximately the same era as the explosion of No. 70 as witnessed by the Class A Eight Wheeler Double Cab engine dispatched to duties of wreck clean up. The ferocity of the explosion can be inferred from the attitude of the boiler carcass as completely upside down "in the pasture!" The large circular casting in the smokebox is the "thimble" for the cylinder exhaust nozzle(s) running upward from the exhaust passages into the smokebox.*

*Photo Image from Bob Harding collection – now Author's collection*

### **Modeling the O&W Class G Eight Wheeler "American Standard" Class G Locomotives**

So far as this irregular Website column is devoted to “Modeling the O&W” (and despite that one or more editions has not actually addressed model building) a brief conclusion here shall be my thoughts regarding these attractive locomotives. To begin, Eight Wheelers are somewhat difficult to model due o the fact that they must “balance” on the two driver axles at the very rear of the frame. Any (HO Scale) models of Eight Wheelers that are at all successful runners have the largest part of the superstructure weight in the cab or cab roof. The recent Bachmann Richmond Locomotive Works (Alco) Eight Wheelers successfully addressed this feature by fabricating the entire cab of soft metal castings. Unfortunately, the Bachmann example does not represent a semi-wagon top boiler which is the “spotting” feature and signature of the O&W Class G Eight Wheelers. Another source must be found to reasonably depict and model these engines.

Among my train show acquisitions, languishing in a project bin for years is an old Ken Kidder Buchanan style of Eight Wheeler 4-4-0 American Standard. It's perhaps from the late 1950's or as late as the

mid-1960's in origin, and so, employs an open frame (relatively high current drawing; -- by the standards of today) motor and a traditional worm and worm gear drive. . . . without benefit of a gearbox. Nearly all of the superstructure weight and weighting is in a heavy lead cast weight mounted hard up against the roof top of the cab. Nearly all of the add-on details are screw machine produced brass parts of only passing resemblance to prototype details and appliances; -- in conformity with the then prevailing practice of the Asian model builders. All in all, this old Ken Kidder engine with its semi-wagon top boiler and apparent correct proportions will be a more than suitable starting point for a model of an O&W Class Eight Wheeler. The most obvious and singular departure from O&W Class G is the use of 78" drivers on this model.

Running gear shall be updated with 68-69" drivers, a gearbox and a 16 X 30 mm **enclosed cylindrical motor** (just a matter of the lexicon, I quite consistently object to the description of these motor types as "can motors"; -- a nomenclature derived from a Model Railroader product review, oh, so many, and more than thirty, years ago, when one of these motors showed up in a sample locomotive for review and the author of the review article knew not what really to call it or how to describe it! To me a "can" {without further implication or innuendo} is simply an empty metal vessel – maybe once containing processed vegetables or carbonated adult beverages sold by the six-pack! Enough already with this silly aside. . . .); -- enclosed cylindrical motors they shall be!

The few and spare number of external details will be replaced with Precision Scale, Cal-Scale, or Trackside Specialties lost wax cast detail parts. . . all to bring the model reasonably up to current standards of detail and appearance.

A rebuild of this model to an O&W Class G merits further description for the benefit of those readers so inclined to model a Class G engine, however, this column must now come to a close. The proposed project, just outlined, to build up an O&W Class G Eight Wheeler is no further along than the "eyeball" and examination stage. . . and so must wait until tackled, completed and then written up. . . all for another edition of this column; -- all to come. Until then.....More later.....

Mal Houck



*And then as a postscript here, upon the author's cluttered and busy hobby workbench (and sharp eyed readers will notice liquor shot glasses on the bench;- but those are not for libation; -- I regularly use cheap "Dollar Store" shot glasses for paint mixing and as parts holders) is the old Ken Kidder Buchanan Eight Wheeler that will be rebuilt and reborn as an NYO&W Class G Eight Wheeler American Standard. The only question for this "engine builder" is. . . . should it be lettered as No. 70 when finished? To be announced. . .*