

Collecting Mine Hoist Level Indicators and their Markers

by Ted Bobrink

Mines with shafts used a mine hoist run on steam, gas or electricity to move men, ore and equipment in and out of the shafts. They used a unique system to run this process called a Mine Bell Signal System and I know you are all familiar with or have seen Mine Bell Signs. When a signal was given underground for the hoist man to lower or raise a cage, ore bucket or skip car to a certain level. He used a Level Indicator to tell him when the cage was at or near the level of the mine he was sending it to. Small mines used small indicators attached to the small hoist. As the mine evolved into a deeper and larger mine, the small hoist was replaced with a larger one, and these larger hoist used larger indicators and markers.

While you can collect the smaller indicators the larger ones are too large and heavy. One thing you can collect from the large indicators are the Level Markers. These are attached to the main dial and show the hoist man where to stop the cage at each level of the mine. On the small indicators the dial with the markers move with a fixed arrow, whereas with the larger indicators the dial with the markers are fixed and the arrow turns. The larger markers are stamped or embossed with a number that usually matches the foot level of the mine. A number 7 would be used to identify the 700' level and the number 37 would be used to indicate the 3,700 level and so on. I even have some marked "TOP" and this indicates the surface where the miners and equipment usually entered the cage.



Over the years I have had the chance to personally collect or buy these unique mining items and some are from some pretty famous mines.

Here is one of my favorite Level Markers and it is from the famous Junction Mine in Bisbee, Arizona. It is number 31 and marked the 3100' level of the mine. It is 4" across and painted green with a white face and black number. All of the hoisting equipment in Bisbee was painted green. I was on the 2200' level of this mine just before it shut down in the early 1980s. It's all flooded now and gone forever.



This is a mine hoist "Level Indicator" I collected at the Noonday-Grant Mine in Tocopca, California. It was attached to the hoist run by a 15 H.P Fairbanks & Morse hit and miss engine. The large bottom gears were run by a large gear on the hoist cable drum, and the small gears ran the indicator dial at a very low speed. The large arrow was fixed and the dial moved with the brass marker. This marker was set at the 400' level but could be adjusted to any level up to 1000'. If the mine was being worked at different levels they would put on more markers as needed. This whole indicator weighs about 35 lb. and stands 15" high. The dial is 9" across and has numbers stamped into it

starting from 100 to 1000. In front of each number there is a threaded hole for attaching the brass markers. The brass arrow attached to the dial is the level marker. The Grant Mine was only working the 400 level at a time it shut down and used only the one marker. Larger hoist use larger dials with much larger level markers. Every mine with shafts used them and I have collected quite a few from other mines.



This is a close up photo showing the Level Indicator Dial. Note the hash marks scratched into the dial to let the hoist man know the exact location to stop the hoist. They are in the middle of the 100' level and just passed the 200' level.



Left is another photo of the level indicator. It stands 15" high and the dial is 9" across. This side view shows how it was attached. I had to carry this thing down a 900' gully and through a 1,800' tunnel. I wouldn't do it today. Hmmm... well maybe ???

Right, is a photo of the mine made signal bell I found at the Grant mine. It is longer than I first stated, just shy of 4' and very heavy. It doesn't look very impressive leaning against the ore bucket, but does look cool hanging up. I assure you that it is very noisy when struck with a metal bar, and my kids could hear it from blocks away. I think I will hang it up today in my mining room that is right next to my teenage boys bed room. I can't wait to have to wake them for for school in the morning...





These are my very favorite level markers. They are from the famous Argonaut Gold Mine in Jackson, California. This is probably the most most famous mine in the California mother lode and rightly so. Not only was it one of the largest producers, but it had an event that was heard around the world. On August 27th 1922 47 miners were trapped deep underground by a mine fire. It made the news around the world while rescue workers dug for 22 days. They found 46 bodies on the 3900 level of the mine and didn't find the 47th body for another year.

I have all of the level markers for the Argonaut mine and I am showing you my favorite three. The one on the left is number 12 and that's my lucky number. The one in the middle says "top" and that indicated the surface where the miners entered the skip cages. The marker on the right is number 39 and that is the 3900 level where the dead miners were found in that mining historical event. They are 5" across and cast iron with the numbers and letters embossed. These markers as well as the engine and hoist were manufactured by the famous Knight Foundry in Sutter Creek California.



This is the original Knight Foundry cast iron name plate that was mounted on the Argonaut Hoist Indicator. It was part of the dial that the markers are mounted on. It is 23" across and 1/2" thick. It weighs around 40 lb. and painted gray the same color as the hoist.