

# Aggregate

by Lynne Belluscio

Hopefully, soon, there will be signs at the steam shovel on Gulf Road that will explain how it worked, why it was in LeRoy, and about the people who worked in the quarries. To understand the steam shovel, it's important to understand the need for such a massive piece of equipment. The shovel is the story of crushed stone - - "aggregate." When the early settlers came into the area, they didn't need crushed stone, but they were happy to discover deposits of Onondaga limestone that they could burn in limekilns to make slaked lime for mortar, paint, and fertilizer for fields. And LeRoy limestone was used to build churches, schools, bridges, and the County Courthouse in Batavia. Then in the 1850s, the railroad would change the American landscape and the American economy. The railroads needed crushed limestone for "ballast" - - lots of it. Every time a new track was laid, it was necessary to put down a bed of crushed stone. And after the track was in place, crushed stone was used to fill in around the ties. This was important for drainage. "Bank run gravel" - round stones - - couldn't be used for ballast. It had to be crushed stone. As the ballast compressed and filled with dirt, it had to be removed



and replaced, so there was a constant demand for crushed stone. Limestone was also needed as flux for making iron in blast furnaces in Buffalo and Pennsylvania. The quarries in LeRoy, which first had supplied architectural stone were now needed to supply tons of aggregate.

It's hard to imagine, but until the invention of the rock crusher, stone was broken apart by men with sledge hammers. It was a long laborious process, but in 1852 Eli Whitney Blake, the nephew of Eli Whitney (the creator of the cotton gin) was put in charge of building a road in Westville,

Connecticut. Blake designed a steam powered jaw crusher. Later, a gyratory crusher was introduced with a large cast iron chamber that is wide at the top. The crushing head gyrates as the rock passes from the top to the bottom. As these heavy-duty rock crushers became more efficient, it was necessary to supply more and more stone.

In 1902, the General Crushed Stone Company, based in Pennsylvania, took control of the limestone quarry in Limerock. The previous owners, had held a contract to produce all the railroad ballast for the Lehigh Railroad, but they could not fulfill the demand. Three years later, General Crushed Stone had razed the old facility and in 1906, boasted that it had "the largest crusher in the world." The new plant included a "Gyratory crusher" which could take rocks three-foot square and grind them into different grades of stone from dust to three inches in size. At the time, the quarry employed about 200 men.

At the same time, the automobile was replacing the horse and carriage, and the need for crushed stone for paved highways placed an even bigger demand on the quarries. The biggest crusher in the world needed tons of rock to fill the railroad cars and so General Crushed Stone purchased a

new #91 Marion steam shovel. Photographs indicate that there might have been as many as three huge shovels in operation in LeRoy. Two were the large #91 and another was probably a #50 or #60. One remains on display on Gulf Road. In notes in the files, it is written that when one of the quarries was transferred to the Dewitt Company, Mr. Heimlich ordered one of the shovels to be cut apart and scrapped, rather than have it turned over to Dewitt.

After the Marion shovels were taken out of service, General Crushed Stone continued to provide tons of crushed limestone. By now, much of the stone was being trucked instead of being transported by rail. One of the biggest projects began in 1948, when limestone from LeRoy was trucked to Mr. Morris to build the dam across the Genesee River. For three years, the cement was poured non-stop day and night, except during the winter. George Schaefer, who was the general manager at General Crushed Stone, reported to the Rochester Rotary Club, that 3,500 tons of limestone was being trucked to Mt. Morris each day - a distance of 52 miles round trip. By the time the dam was finished, it contained 330,000 tons of sand, 2,443,000 bags of cement and 1,087,500 tons of crushed limestone from LeRoy.

