now crop out mainly on the slopes of the gneiss hills but in a few cases extend to the summits. This is the most attractive building stone in the county and the one most generally used at the present time.

These sandstones have been quarried in several places in Lehigh County and in the adjoining counties of Berks and Northampton. They were long known to the building trade as the Potsdam sandstone under the mistaken idea that they were of the same age as the Potsdam formation of New York State.

Nearly all the sandstone quarries (Plate 44) of Lehigh County are on the north slope of the spur of South Mountain that extends from Fountain Hill to South Allentown. The Hardyston strata dip northward toward the Lehigh River. In places they dip at about the same angle as the slope of the mountain but generally the dip is greater so that individual beds crop out on the mountainside. A short distance northwest of Fountain Hill a quarry was opened near the summit of the mountain but in most places erosion has removed the Hardyston strata from the upper slopes. The quarries are small because the combined thickness of workable beds is seldom over 20 feet. Several quarries have been worked east of the Bethlehem municipal pumping station. Another quarry with westerly dipping beds has been opened on the west end of this mountain. Similar rock has been quarried on the mountain slope southeast of Emmaus and in small amounts in several other localities.

Local differences are so minor that it is not necessary to describe the individual quarries. The rock is a hard, compact stone composed of quartz sand grains with some quartz pebbles as much as one-fourth inch in diameter. A basal layer with pebbles up to two inches in diameter and with a dark-colored matrix is generally present but not used. When fresh, the rock is gray to bluish-white but a band of discoloration from one-eighth to one inch in depth has stained the stone to a ferruginous brown or red along bedding planes and joint cracks. This is due to the presence of numerous tiny cubes of pyrite that are almost invariably present in the unaltered stone. They may be seen with the naked eye but better with a hand lens. At one time builders sought the gray fresh stone but in recent years architects have expressed a decided preference for the discolored stone. The alteration has not weakened the stone to any appreciable extent. The beds vary in thickness from two to ten inches. The surfaces are fairly smooth and the joints regular, so that rectangular blocks of suitable size can readily be obtained. They are dressed easily.

Quarrying operations are not continuous as little of the product has been shipped and the local demand is only occasional. Nearly all the buildings on the Lehigh University campus have been constructed with this Hardyston sandstone. Moravian College has also used the stone and it is found in other public buildings in Bethlehem and Allentown. It is well suited for boundary and foundation walls and has been extensively used.

In the operation of the Hardyston sandstone quarries seldom have any quarry tools been used other than of the simplest kind. The crowbar and sledge are usually sufficient, although some hand drilling and blasting have been done in a few localities.