“A Specimen Quarry in the Oolitic Limestone Region of Indiana”

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“In previous articles in this department of the Manufacturer and Builder, we have referred occasionally to the admirable qualities of the oolitic limestones of Indiana. These are so much superior to others of the class of stone to which they belong, that there is no question of rivalry on this score; while the enormous quantities of the stone that are accessible, and the fact that it can be obtained in blocks of any desired size—limited only by the power of the machinery available to handle it, lend to the industry of quarrying it a commercial value of the first importance. The quarrying of these oolitic limestones, which comprise the so-called ‘Warsaw beds’ of the State geologists, has of late years been steadily growing. The area embraced in the oolitic limestone region of Washington county is from 175 to 200 square miles, with an average thickness of 30 feet. The quarries at Salem, Bedford, Ellettsville, and other localities in this region, are well known to contractors and builders throughout the United States, and the stone they produce enjoys a high reputation not only throughout this country, but its fame has even extended to Europe, because of its beauty, durability, the evenness of its texture and uniformity of its color, the ease with which it permits of being worked into any desired shape and accepts the most elaborate decoration, the prodigious size of the blocks that may be obtained, and other desirable qualities.
Our illustrations represent views of the largest of the numerous quarries operated in this region – namely, that of the Salem Stone and Lime Company, of Louisville, Ky., which is located about one and a half miles West from Salem, on the line of the Louisville, New Albany & Chicago Railroad. In connection with its quarrying operations, the company is also engaged largely in the manufacture of lime, having in operation three large lime kilns, with a capacity of several car loads per day. The purity of the oolitic limestone of this region, and its unlimited supply favor the cheap production of lime of the very best quality.

We glean from the latest report of the State Geologist of Indiana, the following facts respecting the extent of the operations of the Salem Stone & Lime Company, whose quarries are depicted in our engravings. The company employs a force of about one hundred and fifty men, and the capacity of its works will be appreciated from the statement that the work of quarrying is done almost exclusively with the aid of machinery of the latest and most approved kind, steam channelers, steam drills, steam saws, steam planes and polishers, steam travelers – immense machines for transporting the huge blocks of stone from one point to another – and steam derricks or cranes, are all in use here, and the large force of men employed is occupied almost exclusively in operating the machinery. A geological section at the quarry where the principal operations are carried on is as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Depth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand and rubbish</td>
<td>8</td>
</tr>
<tr>
<td>Dark-blue bituminous limestone</td>
<td>6</td>
</tr>
<tr>
<td>Dark-gray oolitic quarry stone</td>
<td>30</td>
</tr>
<tr>
<td>Blue crystalline limestone</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>45</td>
</tr>
</tbody>
</table>
As to its quality, and the quantity accessible, the following facts will be of interest: The gray quarry stone above named is a solid structure, thirty feet in thickness, without seam or parting of any kind, and with only an occasional water-worn fissure. The color is uniformly a light gray, the only exception being an occasional slight bluish tinge to a small portion of the of the stone. The stone at this quarry is a fine sample of that embraced in an area of 200 square miles extending over nearly the whole of the western half of the county. It may be quarried in blocks of any dimension, and the color and texture are the same all the way through.

As the result of very thorough mechanical and chemical tests of the stone, made at the instance of the State House Commissioners of Georgia, it was pronounced to be ‘the cheapest, most beautiful, strongest, and best adapted in every particular to the work in hand,’ and it was accordingly selected for the new State House now in course of completion.

The stone has been used in Washington county, Indiana, for over fifty years, and it is affirmed that in no instance has it ever been known to crack, split, disintegrate, or break in any way after prolonged exposure. The strength of the oolitic limestone is given by General Gillmore at an average of 11,000 pounds power square inch, and its rate of absorption for water is 1 to 42, or 2.38 per cent. It is a nearly chemically pure limestone, containing 96.04 per cent of carbonate of lime.

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Visit these online links for photographs and further information on Indiana oolitic limestone:

The Indiana “Quarries” section of our web site, Stone Quarries and Beyond, which begins at the link below:
http://quarriesandbeyond.org/states/in/indiana.html

Indiana Limestone, on Wikipedia
http://en.wikipedia.org/wiki/Indiana_limestone

“Oolite,” on Wikipedia
http://en.wikipedia.org/wiki/Oolite

“Oolitic Limestone,” About Geology, presented by Andrew Alden
http://geology.about.com/od/more_sedrocks/ig/limestones/oolite.htm