

THE INDIANA OOLITIC LIMESTONE INDUSTRY IN 1900.

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The Indiana oolitic limestone is one of the best known building stones of the United States and, in more than thirty States, has an enviable reputation as a handsome, easily-worked freestone of great durability.

OCCURRENCE.—It occurs as a massive stratum, varying from a few feet to nearly a hundred in thickness, intercalated near the middle of the subcarboniferous limestones of Indiana. Its dendritic outcrop has been traced in detail for a distance in a direct line of nearly 110 miles through Owen, Monroe, Lawrence, Washington, Harrison and Crawford counties. Whatever be the thickness of the oolitic stratum, it is, with rare exceptions, massive, and the size of the blocks which may be quarried is limited only by the capacity of the quarry machinery and transportation facilities.

PHYSICAL CHARACTERISTICS.—In texture the Indiana oolitic limestone is essentially a freestone inasmuch as it works nearly equally well in all directions. This quality is due to its massive and semi-clastic character. In places the true oolitic structure discloses its organic origin, while in other places the absence of oolite and the presence of local cross-bedding betrays its clastic origin. Occurrences of oolite are very local, by far the greater part of the stone being oolitic, but not oolite. The size of the grain varies in different parts of the area, and in different horizons at any one locality. The preference of the markets is for the finer grained, and the first grade stone is very fine grained and homogeneous. The coarser grained variety works quite as well, and when once erected can not be distinguished from the other.

The original color of the oolitic limestone varies from light to rather dark blue. On the outcrop and along the vertical clay seams, where the stone has been exposed to the leaching action of terrestrial waters impregnated with the acids of organic decomposition, the color has been changed to a buff; and the bluer the stone was

originally, the more pronounced the buff color of the altered part. The buff stone has the preference in the markets now, although a few years ago the reverse was true, and in a few years is likely to be so again. While the buff stone is necessarily restricted to that zone which has been restricted to leaching, and is limited in quantity, the blue stone, on the contrary, when once reached, extends back as far as the ledge reaches, and is practically unlimited in quantity. It is to be presumed that the blue stone, not having been subjected to leaching and weathering, is the stronger and more durable stone, though it is possible that the leaching process may result in a firmer cementation of the stone, and thus make it more durable.

RECENT DEVELOPMENTS.—In the Stinesville district the production of Bedford stone has been at a standstill for several years, but with the resumption of operations by the *Indiana Oolitic Limestone Company* and others and the opening of a new quarry by the *Stinesville and Bloomington Stone Company* things promise to resume their wonted activity in this oldest of the stone districts.

The Indiana Stone Railway is the name of a short railway line in Monroe County, finished in 1899, which has made possible the development of one of the best quarry districts in the whole oolitic field. Leaving the Chicago, Indianapolis and Louisville Railway at Clear Creek Station, it follows the tortuous valley of Clear Creek, dodging from side to side to escape the bluffs, crossing it a dozen times, and rejoins the main line at Harrodsburg Station, some nine miles from the point of departure. The quarry ledge outcrops back in the hills on each side of the main valley and of each valley branching off from it. The road will thus open up a linear extent of fifty miles of the ledge which has hitherto been inaccessible. Over this entire distance the ledge varies from forty to fifty feet in thickness and is of first quality in point of texture and color. This remarkable uniformity in thickness offers great promise that this district will in time be the greatest producer of Bedford stone in the whole belt, and already a number of quarries have been opened.

The *Clear Creek Stone Co.* took out a large quantity of stone from its two quarries during the current season. The company will at once proceed to the erection of a large and well appointed mill.

The *Crafton Stone Co.* and the *Buff and Blue Oolitic Stone Co.* have made three openings and laid plans for the erection of a mill, but prolonged litigation has embarrassed operations very much.

The *Acme-Bedford Stone Co.* is erecting a large mill at their quarry two miles south of Clear Creek Station.

In the Bedford region the last two or three years have been marked by the abandonment of several unsuccessful quarries, and by improvements in the plants of the more successful companies, notably by the erection of the largest mill in the district by the *Bedford Quarries Co.* at Oolitic, Lawrence County.

Attention has heretofore been called to the wonderful promise of the Fishing Creek district of Lawrence County, and the prediction made that suitable development awaited it at no distant date. That prediction seems in a fair way to be verified. The *Cleveland Stone Co.* of Ohio, notwithstanding their unfortunate venture in the field in 1886, have determined to re-enter the field under the name of the American Quarries Co. This company has acquired interests in the Fishing Creek district. The Bedford Stone Railroad Company has been organized and is building from Rivervale on the Baltimore and Ohio Southwestern Railway to Leipsic on the Chicago, Indianapolis and Louisville Railway, a distance of eight miles. The road will traverse Fishing Creek valley from foot to head and open up about six miles of the ledge not now accessible.

PRODUCTION AND PRICES.—In the table appended below the price per cubic foot is the average price for the whole product including the sawed stone. Inasmuch as the amount of the sawed stone varies in its proportion to the whole amount quarried, the average is vitiated to that extent, but not enough to seriously affect it for purposes of comparison. The *Indiana Oolitic Limestone* association was formed in 1895, disbanding the same year, but not without leaving its impress on the prices for that year. The low prices which prevailed thereafter had the effect of closing down many of the smaller quarries, the number in operation running down from 95 per cent. in 1895 to 46 per cent. in 1898 and 47 per cent. in 1899. While prices have not recovered to any great extent, yet the prospects for the trade are so much better that the smaller quarries are encouraged to start up, as is shown by the 66 per cent. in operation in 1900. That the production for that year shows a slight falling off from that of 1899 is due entirely to labor troubles in Chicago which paralyzed the building trades throughout the season of 1900.

STATISTICS OF THE INDIANA OOLITIC LIMESTONE INDUSTRY FROM 1894 TO 1900, INCLUSIVE.

| YEAR. | Cubic Feet Quarried. | Cubic Feet Sawed. | Value. | Average Price per Cubic Foot. | Total Number of Quarries. | Number of Quarries in Operation. | Percentage. | Total Number of Mills. | Number of Mills in Operation. | Percentage. |
|------------|----------------------|----------------------------|-------------|-------------------------------|---------------------------|----------------------------------|-------------|------------------------|-------------------------------|-------------|
| 1894..... | 4,580,418 | } Statistics not collected | \$1,154,246 | \$0.252 | 35 | 30 | 86 | 28 | 24 | 86 |
| 1895..... | 5,368,307 | | 1,523,260 | .284 | 38 | 36 | 95 | 29 | 26 | 90 |
| 1896..... | 5,455,582 | | 1,209,632 | .222 | 39 | 31 | 79 | 31 | 27 | 87 |
| 1897..... | 5,382,589 | 2,600,794 | 1,344,158 | .250 | 39 | 26 | 67 | 31 | 24 | 77 |
| 1898..... | 5,630,046 | 2,520,158 | 1,389,204 | .247 | 39 | 18 | 46 | 31 | 23 | 74 |
| 1899..... | 7,128,121 | 2,972,977 | 1,646,501 | .231 | 38 | 18 | 47 | 32 | 25 | 78 |
| 1900..... | 7,035,000 | 3,046,000 | 1,699,649 | .242 | 38 | 25 | 66 | 30 | 25 | 83 |
| Total..... | 40,580,063 | | \$9,966,650 | | | | | | | |