The iron manufactured by the new process has been subjected to the severest test, such as making into horse-shoe nails, nuts, &c., and proves to be of as good quality as the best of blooms brought to the Cincinnati market.

The greatest advantages claimed in this process are the cheapness with which the iron is made, the cost estimated is but \$22 to \$23, where the ore and coal is near at hand—the use exclusively of the common bituminous coal—and the uniform good quality of the iron.

MANUFACTURE OF WROUGHT-IRON DIRECT FROM THE ORE.

A brief report was made in the last number of the *Mining Magazine* respecting the establishment of Messrs. Davis of Cineinnati, for the manufacture of wrought iron direct from the ore. The process adopted is that of James Renton, of Newark, New Jerscy. The ore is taken in its raw state, and after being stamped, and prepared by an admixture of carbon, it is put in a series of close tubes, placed in a chamber, the outer surface of the tubes being exposed to the waste heat of the furnace for several hours, when it is sufficiently deoxydized. It is then discharged, as required, into the furnace, where it is readily worked up into balls weighing about one hundred pounds, and taken to the hammer, averaging two balls every hour. The process is continuous and uniform.

A company with a large capital has been successfully carrying on this process at Newark for a considerable time. Their iron has been introduced for manufactures, and with high commendation. We have seen their works in operation.

The cheapness of the process is worthy of attention. The following is a statement of the cost of a ton of blooms at Newark, with one furnace :—

| From two to two and a half tons of ore, at \$4, | | | | | \$10 00 | |
|---|-------------------|----------|---|--|---------|------|
| One and a half tons | of coal, at \$4 9 | 5, | | | | 6 38 |
| Puddling and weld | ing, per ton, | <i>.</i> | | | | 5.00 |
| Hammering, | | | | | | 1 50 |
| Labor, | | | | | | 3 00 |
| Coal for carbon, | | | • | | | 1 25 |
| Half ton of coal for | engine, at \$4, | • | | | • | 200 |

Making the cost of a ton of blooms about

Any description of fuel—wood or coal, both anthracite and bituminous, can be employed for heating the furnace, and with nearly equal advantage.

\$29.63

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