to ten and sometimes twenty pounds, and are imbedded in courses in either shale or fireclay. The bands are interposed between beds of shale, and are called *clay bands* and *black band.*

These ores usually contain from thirty to thirty-six per cent. of iron, but there are some bands containing only twenty-five per cent., which will be available because of the low price for which they may be mined and delivered to furnaces.

Among the clay bands may be mentioned a thick stratum, which I examined on Laurel Run, three miles from Lonaconing, in the George's Creek region. It is six feet thick, and was found to contain twenty-five per cent of iron, and rests upon a bed of shale six feet thick, which, although highly ferruginous, does not contain a sufficient proportion of iron to constitute a workable ore. Numerous other bands of ore of lesser thickness, but richer in iron, exist in this coal field, which need not be particularly described at this time.

There is, however, one of the variety called *black band*, of sufficient importance to require an especial notice. This name was first applied by Mr. Mushett to an ore discovered by him in the year 1801, and it is very remarkable that it did not come extensively into use until the year 1825. This is owing to the fact that it differed so very materially in appearance from the ores formerly used in coal regions, that iron masters were slow to believe it to be an iron ore.

At its outcrops, the *black band*, owing to the action of atmospheric agents, crumbles down and becomes mixed up with the adjacent earthy matters, so as to give slight indications of its presence. The nodules and clay bands at their outcrops present themselves in larger pieces, which often resemble the earthy varieties of hematite, and indicate the proximity of the ores in their regular strata.

The most important black band in the George's Creek coal field lies about 177 feet below the main or fourteen foot coal bed, which was opened at several points during the progress of explorations under my direction, which I have before referred to. It was ascertained that this valuable ore occupied an area of many square miles.

At one point on Mill Run, which flows into George's Creek, it was penetrated by a drift to a distance of forty-five feet, by which the unaltered ore was reached, and its characters fully investigated. The thickness of the ore proved to be eighteen inches, and owing to its being underlaid by a seam of coal four inches thick, it was ascertained that it could be mined at a cost not exceeding seventy-five cents per ton. Iron of good quality can be produced from it, with the superior smelting coal of that region, at a very low price.

In order to determine accurately the proportion of iron, a sample was taken from the whole thickness of the bed, which was found to contain thirty-one per cent. of iron.