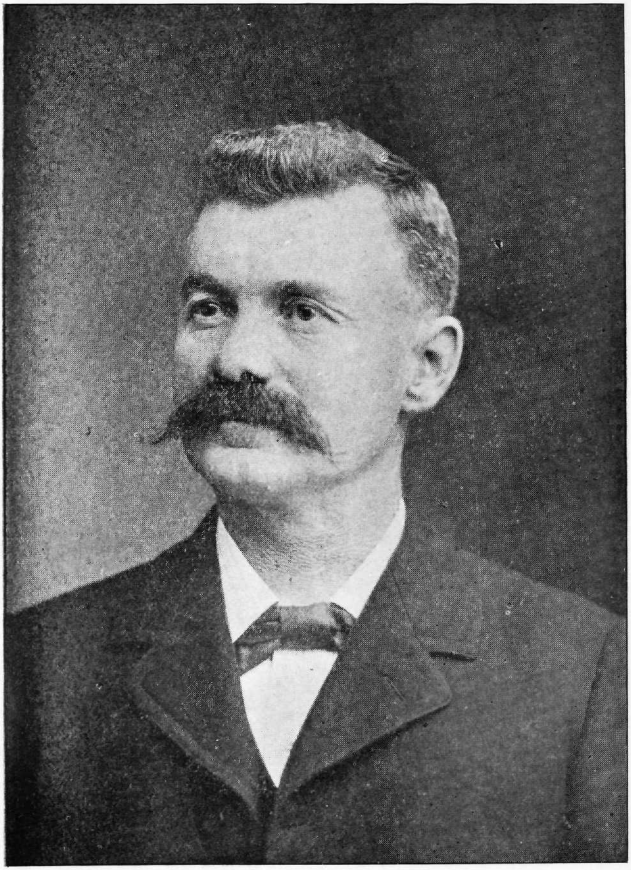

JAMES P. DAVIS.

EXTRAVAGANT MINING.

BY JAMES P. DAVIS, DELL ROY, O.

Gentlemen of the Institute of Mining Egineers:

My reason for addressing you on this subject of the extravagant methods of mining coal, is not for the purpose of bringing before you a deluded idea, or without knowledge of my own of the facts which this subject embraces, or to advance a theory which would be of no benefit to those who are interested in the great industry of coal production in our State. I am fully aware that much has been said, and pages written, on the subject that I bring before you to-day, but a closer observation from time to time, has brought to many of us a greater knowledge of the fact that at least 50% of the mineral wealth of this, and other states, is being destroyed for all time to come.

I cannot deal with this subject in a practical way, without involving other perplexing questions, such as competition, labor difficulties, and the violation of nature's laws. A just and wise Creator has given to man vast fields of mineral wealth, over which he has dominion, the same as that of the forest and the meadow; but the latter being exposed to view, man prides in it's care and beauty, but the former being hid from the glorious rays of the sunlight, it's care and preservation is in the hands of a few, consequently it is the duty of those who have a practical knowledge of the destruction of nature's great store house, to criticise, in a wise way, without offending any person whom these words may chance to fall upon. I do not care to take the responsibility of saying that was it consigned to my care, that I would be able to remove all the coal in the various seams in Ohio, without some loss, but I am confident that a much greater per cent. can be reclaimed with even a greater profit to the mine owner, with justice to our commonwealth, and a greater protection to life and health.

For instance the work be planned, for a Long Wall retreating system, in which there is no waste of yardage, track, or timber, the water and gases, are confined to less space, and thus are more easily handled, and a decrease in their accumulation, all of the coal is removed, and while so doing the air currents are always

at the working faces. But to these ideas many objections have been raised, viz., that the overlaying strata would be broken, and the mine would be filled with surface water, or, that they do not care to take the responsibility of warranting any degree of safety to the life of the miner. It has also been said, that a hard top and soft bottom, such as over and underlay our No. 6 seam of coal, the shale and lime stone that overlay No. 8, could not be dealt with in this manner, to all of which I will say, for the reason of the uneven surface to be seen over many of our coal fields, the bringing in of streams and surface water, is largely due to the double and single entry system of mining, and that there is no reason why the employes would be in greater danger by taking all the coal out, providing it is intelligently done, as by the double entry system, which will be shown by statistics, as I have previously stated, and I assure you that since this matter has been advocated by members of this Institute tests have been made of both advancing and retreating Long Wall with excellent success. I desire to call your attention to a test made in the Allen shaft, at Dell Roy, O. The seam of coal worked is that of No. 6, and those of you who are familiar with this seam will bear me out in saying, that while the material immediately above the coal is very hard, the bottom is of a soft, plastic nature; the mine was opened on the double entry system, and before it was thoroughly opened out, the large pillars which were left to support the main and cross-heading, were being sunk into the fire clay. The lamented Thomas West, a skilled miner, upon taking charge of the mine, attempted a section of Long Wall advancing. The pack walls on the main roadway were made of slate blasted from the top, and were built 10 feet wide on each side. Gateways were left on each side, which were supported by an 8 foot wall, and after sufficient excavation was made, the top began to break, the timbers were removed from the portion of the rooms that was unsupported by pack walls and permitted to close. The experiment was a successful one, but great difficulty was met with in educating the miners to this system, consequently the system was abandoned, although Mr. West claimed that the coal from this section was produced with a less cost than that of the double entry.

I will now call your attention to the McFayden mine in Jefferson county, which is opened in the No. 8 seam, over which is a soft shale, ranging in thickness from 3 to 7 feet, and over this a layer of hard lime rock, which is very difficult to break, and has been the means of bringing on very disastrous creeps, in some of our best mines. In the mine above referred to the coal is all taken out by leaving large pillars to support the headings,

and driving the rooms up 18 feet wide a pillar is left 15 feet wide, which is brought back in sections, and thus all the coal is saved.

I approve of this method of mining, so far as it pertains to reclaiming all the coal, and great credit is due to those in charge of the mine for the effort made in this direction, but it occurs to me that there is unnecessary yardage, and a lack of ventilation, that could be avoided by a section being brought back in wide work, as explained by Mr. Love in a paper brought before this Institute, at one of its former sessions. I desire to conclude by congratulating the Institute of Ohio Mining Engineers for the interest they have thus far taken in the preservation of our coal fields, and may their influence in this direction continue to grow, until a reformation be brought about that will be approved by future generations.

I also desire to congratulate the Department of Mines and Mining for a revised system of surveys and mapping, which has been the means of shedding much light on the subject of this paper, and brought to view the fact that the wasteful systems were previously unknown to many who have their capital invested in mines.

While we are rapidly advancing in modern methods of coal production, let us more wisely consider the preservation of our mineral fields.

The next paper, entitled "The Wastage of Our Coal Fields," by Dr. Edward Orton, was announced, and as he stepped to the platform Dr. Orton was greeted with hearty applause. He addressed the Institute as follows: