

low visible, coupled with the fact that McDonough's road was used for hauling purposes and therefore a number of men and boys were constantly passing, it was decided to suggest to the company's officials that work along the road be discontinued, owing to the dangers already described. The officials took immediate steps to act on the suggestion. Their prompt action under the circumstances is worthy of commendation.

The remaining coal will be worked from the same company's adjoining colliery, the Leggitts Creek, in the First inspection district, and prepared for market at the breaker.

The Von Storch shaft will in the future as in the past, be used as the second opening to the Von Storch slope workings, and as a pumping station.

Lawrence Breaker.

During the latter part of 1897 the Connell Coal Company discontinued operating its Lawrence breaker. The mining operations will be continued as in the past, with some material changes in the transportation, and preparation of the coal. Instead of hoisting the coal mined in the Lawrence colliery to the breaker of the same name, it will in future be run through to the same company's "William A." colliery and then hoisted to and prepared at that breaker. The coal mined in the Lawrence drifts will be lowered through the Lawrence shaft and handled and prepared in the manner already described.

Bull's Head Colliery.

During the year 1897 one operation only has been re-started, namely the Bull's Head colliery, in the Second ward, Scranton city. The Rock vein is being worked in this mine. The company is also engaged in opening a small surface vein from a higher level on the slope. Some years ago this mine was owned and operated by the Providence Coal Company. The colliery does not promise to become very extensive.

Improvements During 1897.

The improvements for the year 1897 are such as the description given in some of the reports already printed would apply. They consist principally of various connections made either by sinking shafts of small depths from one vein to another, or tunnel or plane connections for the purpose of ventilation, or the development of parts of properties. In short, the improvements may be described as such as become necessary from year to year in order to keep up the out-

ness of the rock covers. These bore-holes are driven at intervals of 100 feet. Whether the rock cover will give out, or a pot hole or crevice be tapped between bore-holes, remains to be seen.

At the Twin shaft, the Clark 5th and 6th veins are being developed at Scovel Island, a substantial coal barrier being retained between the new and the old workings.

It was the 5th and 6th veins that collapsed at the time of the Twin shaft disaster, when there was a great loss of life, and the condition of these workings to-day is problematical. It is known, however, that they contain a large quantity of water, and it is the Company's intention to try to get it out with the pumps now being installed. It is also known that these old workings contain some gas, but how much is not known. A careful inspection, however, fails to show anything alarming. The action of gas and water in bore-holes, driven to caved territory in the 5th and 6th veins, prompted me to ask the Department of Mines to appoint some other inspectors to look over the ground, and report the result of their investigation to me in writing. This was done and the report filed in Harrisburg.

At the Babylon Colliery the robbing, which is about all that is being done, is progressing very well. A large percentage of coal is being won, and a fatal accident is a rare thing.

At the **Lawrence** the management has, in my opinion, persisted in risking life to rob the pillars, which in some instances are reduced to culm in the squeezed territory in which the men labor, contrary to my requests and instructions in the matter, the argument advanced being that the men are reasonably "safe" and the coal must be won. The territory that could now be robbed with some degree of safety is left to be destroyed by the cancerous growth of this squeeze, which must advance, as the resistance now retarding its development is reduced, by removing the crushed masses of coal that once did duty as pillars.

William A. Colliery.—This is a pillar problem, the solution of which has caused the most serious thought on the part of the officials in charge. The three splits of the Red Ash vein are mined, and the relative position of one to the other, with three pitches. (two to the basin, and one at right angles to it.) the Lawrence being above them at the highest elevation, and the only anchoring point being the pillar under the Lackawanna River, are the problems they must overcome to win the coal, preserve their property, and not sacrifice life. To my knowledge nothing definite has been decided upon.

HILLSIDE COAL AND IRON COMPANY

Consolidated Colliery.—There have been some new developments in the Red Ash vein, which will increase the tonnage and continue the life of this colliery.

CONNELL ANTHRACITE MINING COMPANY

Connells Colliery.—This company has increased their electrical equipment by the installation of motors, undercutters and dynamos. They have also constructed a large dynamo house and increased the horse power of their boiler plant.

The mines are in good condition.