

supply of fresh air is 12,400 cubic feet per minute; the air is circulated to the face of the workings by the aid of check doors; the main doors are hung so as to close of their own accord; they have attendants at main doors.

The amount of ventilation has been measured and reported according to law. Ventilation is generally good.

Machinery.—There is no machinery connected with this mine except two hand pumps.

Remarks.—They have furnished a map of mine; they have no house for men to wash or change their clothes in; there is no inflammable gas evolved in this mine; the mining boss seems to be a practical and competent man; there are no boys working in the mine under 12 years of age; the parties having charge know their duty in case of death or serious accident.

DAWSON SHAFT—BROWN'S COLLIERY.

This shaft is located in Pleasant Valley borough, about one and one-half miles south of the Lackawanna river; it is 147 feet deep to the Powder Mill vein; it is 12 feet wide by 16½ feet long; it is operated by the Pennsylvania coal company. William Law is general mine superintendent, James Young is mining boss, and G. M. Snyder is outside foreman.

Description.—There is a double breaker connected to the shaft by a trestling 100 feet long; all the coal mined at Brown's colliery tunnel and at this shaft is cleaned and prepared here; they mine about 300 tons of coal per day; they employ 46 miners, 46 laborers, 10 drivers, 4 door boys and 5 company men in the mine; 22 slate pickers, 4 head and plate men, 2 drivers, 2 mechanics and one boss outside; in all 142 men and boys; they are working the Powder Mill vein of coal, average thickness 7 feet; they work headings 10, air-ways 15, and chambers 30 feet wide; they leave pillars from 15 to 21 feet wide to sustain the roof; they leave cross-entrances from 18 to 30 feet apart for the purpose of ventilation; the roof is of very good sandstone rock; the mine is in a good working condition.

Ventilation.—Ventilation is produced by the action of the atmosphere; the intake is located in main shaft in summer and the out-cast in Stark shaft, and in winter the in-take is located in Stark shaft and Powder Mill tunnel and the out-cast in Dawson shaft; the area of Dawson shaft equals 192 feet and the area of Stark shaft equals 192 feet and that of Powder Mill tunnel equals 80 feet; the amount of fresh air is 16,800 cubic feet per minute; they have no noxious or poisonous gases evolved in the mine; the main doors are hung so that they will close of their own accord; they have attendants at main doors; the air is circulated to the face of the workings in 2 splits; the amount of ventilation has been measured and reported according to law; ventilation is good.

Machinery.—They use 2 hoisting engines of 40-horse power each, and 1 breaker engine of 30-horse power at Dawson shaft; they have a metal speaking-tube in the shaft; they have a safety-carriage with all the modern improvements on it; they have flanges of sufficient strength and dimensions for safety and an adequate brake attached to the hoisting drums; the ropes, links, chains and connections are in good condition; the boilers have been cleaned and examined and reported in good condition according to law; they have a steam gauge to indicate the pressure of steam.

Remarks.—They have furnished a map of the mine; they are connected with Stark shaft which can be used as a second opening; they have no house for men to wash or change their clothes in; the mining boss seems to be a practical and competent man; they have no boys working in the mine under 12 years of age; the engineers seem to be experienced, competent and sober men; they do not allow any person to ride on loaded carriages in the shaft; they do not allow more than 10 men to ride on the safety-carriage at one time; the parties having charge know their duty in case of death or serious accident; the shaft-landings are protected by safety-gates; the breaker machinery is fenced and boxed off so that operatives are safe.

STARK'S COLLIERY.

This colliery is located in Lackawanna township; it is one-half of a mile south of the Lackawanna river; the opening to the coal is a shaft; it is 108 feet deep to what is called the Powder Mill vein; it is 12 feet wide by 16½ feet long; it is operated by the Pennsylvania coal company. William Law is general mine superintendent, Alexander Laird is mining boss, and F. J. Boone is outside foreman.

Description.—There is a double breaker connected to the shaft by a trestling 100 feet long; they mine and prepare about 350 tons of coal per day; they employ 64 miners, 33 laborers, 13 drivers, 5 door-boys and 8 company men in the mine; 29 slate packers, 3 head and plate men, 1 driver, 17 company men, 5 mechanics and 1 boss outside, in all 179 men and boys; this mine is operated inside by a plane 500 feet long and a slope 1,000 feet long; they are working the Powder Mill vein; average thickness, 8 feet; they work headings 10, air-ways 15 and chambers 30 feet wide; they leave pillars from 18 to 25 feet wide to sustain the roof; they leave cross-entrances from 18 to 30 feet apart for the purpose of ventilation; the roof is slate and rock; the mine is in a good working condition.

Ventilation.—Ventilation is produced by the action of the atmosphere, and assisted by steam when necessary; the intakes are located in the main shaft and Powder Mill tunnel in winter, and in the Dawson shaft in summer; the main shaft contains an area of 192 feet, Powder Mill tunnel 80 feet and Dawson shaft 192 feet; the mines are ventilated right the reverse in summer from what they are in winter; the amount of fresh air is 31,200 cubic feet per minute; the main doors on headings and air-ways are hung so that they will close of their own accord; they have attendants at main doors; the air is circulated to the face of the workings in two splits; the amount of ventilation has been measured and reported according to law; ventilation is good.

Machinery.—They use 3 steam engines for hoisting and pumping, 80-horse power, and 1 breaker engine, 300-horse power; they have a metal speaking tube in the shaft; they have a safety carriage, with all the modern improvements. They have flanges of sufficient strength and dimensions for safety, and an adequate brake on the hoisting drums; the ropes, links, chains and connections are in good condition; the boilers have been cleaned and examined and reported in good condition, according to law; they have a steam gauge to indicate the pressure of steam.

Remarks.—They have furnished a map of mine; they are connected with the Dawson shaft, which can be used as a second opening; they have no house for men to wash or change their clothes in; the mining boss seems to be a practical and competent man; there are no boys working in the mine under 12 years of age; the engineers seem to be experienced, competent and sober men; they do not allow any persons to ride on loaded cars on the slope or in the shaft; they do not allow more than 10 men to ride on the safety carriage at one time; the parties having charge know their duty in case of death or serious accident; the shaft landings are protected by safety gates; the breaker machinery is fenced and boxed off so that operatives are safe.

SPRING BROOK COLLIERY.

This colliery is located in Lackawanna township and situated on Spring Brook creek, 1,500 feet south of the Lackawanna river; it was operated by the Glenwood coal company, now in bankruptcy. George Filer is general mine superintendent, John Micklow is mining boss and Josiah Carryl is outside foreman.

Description.—The opening to the coal consists of two tunnels, namely, Nos. 1 and 2; No. 1 is located close to the breaker and on the north side of Spring Brook creek, and No. 2 is located one-half of a mile south-east of breaker and on the south side of Spring Brook creek; they mine and prepare 300 tons of coal per day when working; they employ 45 miners, 40 laborers, 8 drivers, 8 door-boys and 5 company men in the mines; 30 slate pickers, 6 head and plate men, 3 drivers, 5 company men, 4 mechanics and 2 bosses outside; in all 151 men and boys; they are working the Spring Brook vein of coal; average thickness six feet. They work headings and air-ways 15 and chambers 25 feet wide; they leave pil-