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GLOSSARY OF TECHNICAL MINING TERMS.

BY ANDREW ROY.

The following glossary of mining terms was read before the Columbus meeting of the Ohio Institute of Mining Engineers held in Columbus. The object of the glossary is to prepare a standard of mining terms for the use of mining engineers and mining experts in the State of Ohio:

A.

Air-box.—A wooden box used for taking air forward to the workings.

Air-course.—A gallery or other passage way used for the time for a passage of a current of air.

Air-Crossing.—A bridge or overcast where one current of air passes another without coming in contact with it.

Airway.—(See air-course.)

After-damp.—Gas formed from the products of an explosion of fire-damp, composed mainly of carbonic acid and free nitrogen gas.

Air-shaft.—A shaft used for ventilating mines; it may either receive or discharge the circulating current.

Air-split.—The division of the main current of air into two or more streams.

Tuemoneter—An instrument for measuring the speed with which air moves in mines.

Anticlinal—An arch in the strata from which the dip in opposite directions.

Air-stalk—The chimney on top of the upcast shaft.

Basin—A low place or hollow in the strata, from which the coal rises in opposite directions. A coal field.

Bad air—Air contaminated with the noxious or poisonous gases of mines.

Bank—A coal mine.

Black damp—Carbonic acid gas.

Blackband—Carbonaceous shale iron ore of a dark brown color.

Blower—A jet of fire-damp escaping from coal or its associate strata, which produces a hissing sound.

Bucket—A wooden box for raising rock in a shaft in course of sinking. The clack of a lifting pump.

Bell mound—The cast of a tree found in the roof shale of a coal bed.

Bank boss—Inside foreman of a mine.

Boss miner— “ “

Brasses—Iron pyrites found in coal.

Black Coal—A coal seam that mines in rectangular blocks without the use of gunpowder.

Butts—The end slips of the coal.

Blast—A discharge of gunpowder to break down coal.

Bearing In—Cutting under—undermining in the coal.

Billy Fairplay—A machine placed under a coal screen to receive and weigh the slack which falls through the screen bars.

Breakthrough—A narrow passage cut through a coal pillar for ventilation.

Butt Entry—An entry driven at right angles with the end slips of the coal.

Bone Coal—Hard, slaty coal, unfitted for commercial purposes. It is often met at the bottom of the seam.

Blossom—The black coal stain found in the alluvial cover of a coal seam, indicating the existence of the seam.

Boundary Pillar—A pillar left between adjoining properties in mines.

Bear In—To undermine.

Bonnet—The cover of a cage.

Bottom—The floor of the coal—the bottom of the shaft or slope

Brettice—A partition made of plank to force air forward or prevent it from returning by the shortest route to the upcast.

Brettice-cloth—Canvas or other heavy cloth for brettice.

Breeding Fires—Fires formed in the gob by spontaneous combustion.

Buntons—The cross-timbers of a shaft which support the guides.

C.

Cage—That part of the elevator of a coal shaft for raising or lowering the miners.

Catches—The fans or traps or levers placed on top of a pit upon which the cages rest.

Coal bed—An extended deposit of coal.

Coal Seam—(See coal bed).

Coal Field—A region of country in which coal is known to exist.

Coal Measures—The strata associated with coal beds.

Coal Cutter—A machine used for cutting coal.

Coal Miner—One who digs coal.

Coal Digger—(See coal miner).

Crop Coal—Coal of inferior quality near the surface.

Cartridge—A paper or other tube filled with blasting powder.

Crib—A pillar formed of wooden props laid horizontally.

Crush—The breaking or giving way of the superincumbent strata of a mine.

Creep—The heaving of the floor of mines.

Crab—An iron rod forked at one end, attached to loaded coal cars coming up out of a slope.

Cross-cut—(See breakthrough).

Choke-damp—The gases formed by an explosion of fire-damp.
After-damp.

Colliery—Two or more mines operated by one company.

Coal-pipe—(See bell-mound).

Circulation—The movements of the air-currents of a mine.

Check-weighman—A person employed by the miners to see their coal weighed.

Current—The moving stream of air of a mine.

Cross-entry—An entry running at an angle with the main entry.

Chain-pillar—The pillar between double entries.

Check—(See ticket).

Cap—The crown piece of a prop—the elongation of a light brought in contact with fire-damp.

Car—Mine car.

Cave-in—A fall underground reaching up to the surface.

Charge—(See shot).

D.

Davy Lamp—Lamp for examining mines which give off fire-damp.

Dead-work—The expense of operating a mine, less the cost of digging the coal and royalty.

Dip—The inclination of the strata.

Dip-entry—The gallery of a mine following the line of greatest dip.

Draw-slate—A thin stratum of roof shale, which falls with the coal or soon afterward in some mines.

Down-throw—A slip in the coal strata which throws the coal strata downward

Drain—A ditch cut in the coal floor

Drift—A level free mine, driven in a hill.

Dry-burning Coal—Non-coking coal.

Drill—An iron rod several feet in length, having a sharp chisel at one end for boring in rock or coal.

Double Entry—Two entries driven on parallel lines, separated by a pillar of coal a few feet in thickness.

Drum—A large cylinder, around which the shaft rope is wound.

Driver—A person who drives a horse or mule in a mine.

Downcast—The shaft, or shaft compartment through which fresh air is sent into the workings of a mine.

Danger Signal—A signal consisting of a board, shovel, or other material placed in the front of a room or entry containing an explosive mixture of fire-damp.

Day Shift—Miners who work during the day in a mine or portion of a mine which runs day and night.

Dump—(See tipple).

Dump-house—The building where the loaded mine cars are emptied into the chutes.

Dumb-furnace—A ventilating furnace, where the return current

of air is delivered into the air-shaft without passing over the furnace fire.

Dumb-drift—The passage-way into the upcast shaft for a return current of air.

Dip-heading—(See dip-entry).

Deputy—Under mine boss.

E.

Engine-pit—A shaft through which water is pumped.

Entry—A narrow gallery or heading driven forward to open up the mine.

Explosion—The ignition of a dangerous volume of fire-damp.

F.

Fall—A mass of shale or rock fallen from the roof.

Face—A place in a mine where the coal is dug out—the end of a mine or other working place.

Face Slip—The front slip of a coal seam.

Face Entry—The gallery of a mine driven at right angles with the face slips of the coal.

Fan—A machine for blowing air into or exhausting air out of a mine.

Fault—The disturbed condition of a coal bed.

Feeder—A stream of water or gas issuing from the coal or incumbent strata.

Fire-damp—The explosive gas of coal mines—light combustible hydrogen gas.

Fire-viewer—A person who examines the workings of a mine with a safety-lamp.

Floor—The bottom of a coal seam.

Flue—(See furnace).

Furnace—A brick fire-place erected at or near the bottom of the upcast shaft for the purpose of creating a current of air.

Fresh Air—Air free from the presence of deleterious gases.

Fine Coal—(See slack).

Foreman—Mine boss.

G.

Gases—The deleterious air of mines.

Gob—The rubbish left in the mine.

Gauge—To work a mine without plan or system.

Guides—The rods placed in a shaft for guiding the cages in their ascent and descent.

H.

Half-course—Working at half angle across the slips of the coal or dip of the strata.

Half-pitch—Dipping or rising 18 inches to the yard.

Hauler—A driver.

Heading—(See entry).

Heave—The creeping or rising of the coal floor.

Hitcher-on—The person employed at the bottom of a shaft or slope to put on loaded cars and take off empty cars.

Holing—Undermining the coal.

Hill—An arch or high place in a mine.

Horse-gin—A large drum fitted upon an upright axle, and having a wooden arm, used in raising the debris of shafts in course of sinking, operated by a horse.

Horseback—A saddle-like roll which rises in the floor of mines for two or three feet in height. This fault is now indiscriminately applied to every mining trouble or fault by American miners.

I.

Incline Plain—A tram-road having sufficient pitch for the loaded cars to pull up the empty ones by gravitation.

Indicator—A signal operated by the hoisting engine of a coal shaft, which warns the hoisting engineer of the position of the ascending cage in the shaft.

Intake—The current of air of mines moving toward the working places of the miners.

Ingoing Current—(See intake).

Iron Pyrites—Thin layers of sulphur combined with iron, frequently found in coal.

L.

Lease—The right to mine coal or other minerals in consideration of certain royalties.

Level—The line of stake of the strata.

Level-free—A mine that discharges water by gravitation.

Legs—The props of a bent of timbers.

Loaded Track—The track on which the full cars run.

Long-wall—The system of working away all the coal of a mine without leaving any pillars.

Long Work—(See long-wall).

Loose End—One side of a room having no pillar.

Landing—The top of a shaft or slope where the cars are taken off.

Lump Coal—Coal that has been screened ; it is also called screened coal.

M.

Manager—The officer having charge of the superintendence of mines outside and inside.

Mainway—A passage-way at the bottom of a shaft so that persons can pass from one side to the other without passing under the cages.

Measuring-day—The day of the month on which the mine boss measures the work of miners employed by the yard.

Mine—A subterraneous excavation from which coal or other minerals is extracted.

Miner—A digger of coal or other minerals.

Mining Engineer—A person skilled in the management and engineering of mines.

Mother Coal—Mineral charcoal.

Main Entry—An entry driven at right angles with the face slips of the coal.

Mitchell Tipple—An ingenious tipple for dumping mine cars.

Mouth—The opening or entrance of a mine, whether shaft, slope or drift.

N.

Narrow Work—All working places driven narrower than rooms. Narrow work is generally confined to entries and air-courses.

Needle—A long, small rod, used by miners in blasting.

Night Shift—Miners who work at night.

Nigger-head—A hard, round piece of rock, sometimes met in coal seams.

Nut Coal—Small coal which passes through screen bars as the coal is being discharged from the mine cars into the railroad cars or hoppers.

O.

Overwind—To pull the cage up to the pulley wheels of the head frame.

Outcrop—The coal bed near the surface.

Operator—A party working a mine.

Outlet—The opening of a mine.

P.

Pit—(See shaft).

Pit Boss—(See bank boss).

Pitch—The dip or rise of the strata.

Pay-day—The day on which miners are paid—usually the 15th of each month.

Parting—A switch or short double track in the mine to allow loaded and empty cars to pass each other.

Pillar—A column of coal left in the mine for the support of the superincumbent strata.

Pillar and Room—Working away a coal seam by leaving pillars between each room.

Post—A wooden prop for keeping up the roof of a mine.

Prop—(See post).

Pick—The iron tool, with steel points, used by the miner in cutting the coal seam. It is 12 to 15 inches in length, sharpened at both ends, and has a handle 28 to 30 inches long.

Pumper—A person employed to pump water in a mine by hand-power.

Pully Wheels—The wheels on top of the pit-head frame, over which the winding rope passes.

Powder—Blasting powder.

R.

Regulator—A sliding door for the purpose of regulating the quantity of air passing to certain divisions of a mine.

Return—The air of a mine moving between the working places and the upcast shaft.

Roadman—A person whose duty it is to keep the roads of a mine in order.

Roll—A local depression in the roof of mine.

Roof—The strata lying immediately above the coal bed.

Royalty—The rate per ton charged by the owner of coal or other minerals to the lessee of the mine.

Rib—A thin pillar of coal left between rooms.

Room—A working place in the mine.

Rib-shot—A shot on the rib-side or pillar of a room.

Range—A lift or square of workings.

Road—The mine track.

S.

Safety-lamp—A miner's lamp covered with iron wire gauze, having 784 apertures to the square inch, for the purpose of examining the workings of a mine discharging fire-damp.

Scraper—A long piece of iron flattened at one end and turned up for the purpose of cleaning out the debris of a bore-hole.

Screen—A wooden frame, built at an angle of 25 to 30 degrees, having iron bars securely fixed in the frame, from $\frac{3}{8}$ of an inch to 2 inches apart, over which the coal as it comes from the mine is passed, for the purpose of separating the nut and slack from the lump coal.

Shaft—A hole sunk in the ground to coal or other mineral beds or veins.

Shift—A day's work when miners are working by the day.

Shot—The discharge of powder. A blast.

Sinker—A miner who works in a shaft while it is in course of sinking.

Slack—Small or refuse coal which is unmerchantable.

Slip—A fault in the coal strata—the face and butt joints of the coal seam.

Slope—An angling shaft.

Strike—The cessation of work by miners or other laborers for the redress of some grievance, real or imaginary.

Sump—A reservoir or pond, formed at the bottom of the pumping shaft of a mine for holding water.

Syphon—Pipes placed in a mine to discharge water over a hill.

Shutes—The slanting passage frame way from the tippie to the railroad hoppers, in which the screen bars are placed.

Synclinal—A hollow or basin in the floor of the mine, from which the coal rises in opposite directions.

Safety-gates—Automatic gates placed on top of a shaft to guard the entrance.

Safety-catches—Spring catches, attached to a cage to prevent it from falling to the bottom in case the winding rope should break.

Swamp—A sinuous trough-shaped basin found in mines.

Squeeze—(See crush).

Shearing—Cutting a perpendicular groove in a coal seam.

T.

Tip—(See tippie).

Tippie—The table from which the mine cars are dumped into the chutes.

Tram-road—The railroad from the dump to the mouth of the mine.

Tubing—Hollow cast-iron segments placed in a shaft to dam back water or sink through quicksand.

Turn—The order in which empty cars are placed in the rooms of miners.

Timbers—The wooden structures planted in a shaft, slope or drift until solid ground is reached.

Track—The railroad for hauling coal.

Track-layer—One who lays railway track in a mine.

Tunnel—An entry driven through rock in a mine.

Trimmer—The person who sorts the coal in the railway cars after it is dumped into them.

Trap-door—A door to guide and direct the current of air in a mine.

Trapper—A boy employed to open and shut a trap-door.

Tub—A box used for raising rock in sinking for coal or other minerals.

Trough—(See swamp).

Ticket—The numbered check which the miner puts on his loaded car to inform the weigh-master to whom the coal belongs.

U.

Upthrow—A slip in a strata which throws a coal seam upward.

Upcast—The shaft or compartment through which the return air of a mine is delivered into space.

Undermining—Cutting a groove in the bottom of the coal bed.

V.

Vein—A bed or seam of coal. This word is misapplied, but it

has become so general a term for a bed or seam of coal that it is here inserted with its accepted meaning.

Ventilator—(See fan).

Ventilation—The renewing of the circulating streams of air of mines.

W.

Water-gauge—An instrument used by superintendents of mines for ascertaining the resistance or pressure that is spent in friction between two adjoining parts of an air-way. It is a glass tube bent like the letter U, with a scale of inches and parts of inches.

Washing-machine—A machine employed at mines for washing the slack or nut coal, in order to separate the impurities from the coal.

Water-level—A passage-way for the discharge of water.

Wind-way—A narrow air-way.

Workings—The excavations of a mine.

Working-face—The place where the miner digs out the coal.

Working-place—(See working-face).

Weigh-master—The person who weighs the coal.

White-damp—Carbonic oxide gas.

Waste—Abandoned workings.

Water-lodgment—(See sump).
