

Roofing Felt for Brattices.—An exchange states that for forming the brattices of air conduits in headings, roofing felt is an excellent, and at the same time cheap, material, as it can be very easily put on, and yield to any thrust of the measures without its air-tightness being impaired. For putting up the felt a narrow board is fastened, in the direction of the centre line of heading or cross-cut, at the floor and also at the roof, to the props that form the partition of the air compartment, to which boards the roofing felt is nailed; and, for increasing the tightness, a coat of cement is given at the roof, and also, it may be presumed, at the floor. If the heading should happen to be unusually high, a third board must also be nailed, for the sake of strength, in the middle of the height. Experience has shown, observes *Gluckauf*, of Essen-an-der-Ruhr, that if a firedamp explosion should occur an air partition made with roofing felt will remain absolutely intact at some little distance from the seat of explosion, whereas one consisting of boards would be completely destroyed. If, when the air conduit is no longer required, the felt be carefully removed from the boards with a flat fork-shaped tool, it can be used again two or three times over. Air conduits may also be formed of impregnated flax cloth, nailed inside wood frames, that may have any desired dimensions, and fitting telescopically one inside the other, being fastened by screws.

Cariboo Mining, Milling and Smelting Co.—The noted Cariboo mine at Camp McKinney is still doing well, as the following statements indicate, which were made at a recent meeting of the Cariboo Mining Company, held in Spokane. Manager Monahan then made the following statement regarding the operations of the company during the past year: During the past twelve months there have been 6,742 tons of ore milled, producing 8,035 ounces of bullion and 170 tons of concentrates; the ore milled has averaged \$17.45 per ton. There have been 855 feet of drifting on ore, and 100 feet of raising on ore; 200 feet development cross cutting; 175 feet development shafting; 50 feet development winze sinking, making 425 feet of developing. The company has recently put in a lot of new machinery, and the mine is now thoroughly equipped in every respect. Since operations were first commenced \$156,963.76 have been paid in dividends.

Briquettes without Pitch.—In a recent issue we took notice of a new hardening composition called "Petrifite," which has the property of binding an solidifying without pressure almost any ordinary substance with which it is combined. In order to test thoroughly its suitability for briquette making, Mr. H. S. Fearon has been advised to make certain tests, which have accordingly been carried out, and the results are altogether favourable to the use of petrifite instead of pitch for solidifying small coal. He found that with about 3½ per cent. of petrifite the briquettes burnt well in an open grate, and with less smoke than is usual with briquettes made with pitch.

Moreover, the blocks are not hygroscopic to any extent worth mentioning, for on immersing in water for 24 hours they had only taken up 6 per cent. of their weight of water, and after 48 hours only 6¼ per cent. in all, nor were they softened in the least by the immersion. Mr. Fearon estimates that the cost of turning out 120 tons of fuel per day, exclusive of the cost of the coal dust, would be as follows:—Labor, 7d. per ton, fuel used in manufacture 8½d., petrifite, 110 lbs., 2s. 6d., repairs and maintenance, 7½d., stores and supplies, 2¾d., or about 4s. 7d. per ton. To arrive at the cost of a ton of briquettes, there must be added to this the cost of 2,130 lbs. of coal dust, which varies from a merely nominal price up to 10s. per ton, according to locality and quality.

The Deepest Bore-Hole—The deepest bore-hole in the world, says Mr. C. Zundel, is one of 6,751 feet below the surface of the soil, made at Paruschowitz, Upper Silesia. The previous record for depth was the hole drilled some years ago at Schladebach, near Leipsig. The latter bore-hole was made in a search for coal measures; and 83 separate seams, some of considerable thickness, were penetrated. The hole was 12 inches in diameter at the beginning, and this was lined with a tube about 0.4 inch thick; at a depth of 230 feet the bore was reduced to 8¼ inches in diameter, and this continued for 351 feet. At this point the blue marl encountered became so compact that the diamond drill had to be used, and, under the action of the water, the marl swelled to such a degree that the diameter of the pipe had to be again reduced. The greatest difficulty encountered was the great weight of the boring rods, as the depth increased. Though steel was used, at a depth of 6,560 feet the total weight of the rods reached 30,155 lbs. Under this weight ruptures of the rods were frequent, and an accident of this nature finally stopped the work; about 4,500 feet of rods fell to the bottom, and, being jammed under a part of the tubing, it was impossible to withdraw it. The diameter of the well at the bottom was 2¾ inches. Temperature observations made showed 12 deg. C., or 15 deg. F., at the surface, and at a depth of 6,571 feet the temperature reached 69.3 deg. C., or 157 deg. F. This is equivalent to an average augmentation of heat of 1 deg. C. for every 34.14 metres of depth, or 1 deg. F. for every 63 feet. The boring at Paruschowitz was commenced on March 26th, 1892, and it reached its maximum depth in 399 working days.

Some of the gentlemen who have started for Alaska insufficiently grubstaked will live to appreciate the following translation from the Klondyke classics:

"Nothing ventured, nothing gained,"
He caroled as he started.
When he returned, he sighed: "A fool
And his money soon are parted."

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