

7,861, and 4,960 heat units respectively. The heat utilized were 60.23 per cent., 59.10 per cent., and 59.66 per cent respectively. The temperature of the chimney gases and the percentage of carbonic acid were observed at intervals. The average temperatures during the three trials were 530° C., 522° C., and 478° C., respectively. The chimney losses were 19.92 per cent., 18.66 per cent., and 22.01 per cent., respectively, of the total heat of the fuel; the radiation losses were 19.88 per cent., 22.25 per cent., and 18.33 respectively." The author gives the advantage of coaldust fuel as: the most perfect combustion, smokelessness, little labor required, independence as to kind of fuel, adaptability, preservation of boiler and ease in removing fire; the disadvantages are grinding the coal into dust, necessity of mechanical feed, ashes in tubes of boilers, and dust in boiler house.

The professional mining expert is often unjustly and unmercifully assailed by people who cannot be made to believe that there is any such thing as scientific mining. The grizzled, hoary prospector of the old school still refuses to be guided by the conclusions of those who rely to an extent upon books and college professors. Sometimes the prospector is right and sometimes he is wrong; it altogether depends on whether the expert is what he claims to be. But whether right or wrong, the sentiments of many prospectors were amusingly expressed in a few verses recently printed by the *Denver Times*. Two of them are given below:

I am jes' an ol' prospector, tramp the mountains every day,
An it isn't very often that I make a preaching pay,
But I've heerd these minin' experts slingin' scientific stuff
Till I'm gettin' sort o' weary o' their hifalutin' bluff.
I hold that books an' science never hit upon a lead,
Never built two modern wonders, sich as Cripple Creek an' Creede;
But that every payin' prospect in the hilly west was struck
By common sense an' judgement, an by
gol darned luck.

As I said at the beginnin', it is seldom that I preach,
An' I never fool with language out o' ordinary reach
But when science gets a-trampin' on the toes o' common sense,
Then its time to show your hand against the scientific gents.
I may never make a winnin' with the shovel and the pick,
But you'll always find me tryin' an' a-keeping up my lick,
An' if I should happen on the purty yellow truck,
I will give the bulk o' credit to my
gol darned luck.

The largest nugget of gold found in the Victoria gold field N. S. W weighed 669 oz. and in shape resembled a leg of mutton. An amusing incident occurred in connection with its discovery. The men were at work in the face, when a truck load of wash fell to the floor of a drive in one of the blocking strips. The nugget looked like a boulder and it was not until one of the men endeavoured to put a shovelful of wash into the truck that his attention was attracted to the weight. It was on the night shaft—the manager was in his bed at Ballarat. A messenger breathless with excitement aroused him, with: "Come at once, sir! come at once!" and bolted off again to the mine. Of course the manager concluded that some serious accident had occurred, galloped the four miles to the mine, and was met at the shaft by the recent messenger still laboring under excitement. "Is any one killed?" enquired the manager. "No, sir, but he would 'a bin if it had struck 'im on the head." "If what had struck him?" "Why the nugget, sir, sure we've got one as big as a — cartwheel." The nugget was bought by Mr. Bryant, of the well-known firm of Bryant & May in London, and exhibited there for some time.

A Colorado boomer died (no matter what the day or date) and when he reached the portals spied St. Peter sitting at the gate. From out be-

neath his shaggy brows the good saint eyed the coming guest, who, with true Chesterfieldian bows, his honor of the saint expressed. He said he had grown tired below, his brain was worried with its cares, the struggle was a hard one, so he thought he'd climb the golden stairs.

St. Peter asked the man his name, his occupation down below, his church, his creed, from whence he came, and what credentials he could show, and then, with indiscretion rank, ne'er dreaming of the fruit' twould bear, he asked the disembodied crank how things in Colorado were.

This question never yet has failed to start the Coloradan tongue, and saintly ears were soon assailed with wildest anthems ever sung. He talked of leads and shafts and veins, of tunnels, stopes and fissures true, of mammoth strikes and golden grains, until the heavenly air was blue. With glowing eloquence he sped along the oratoric track, with gestures of both hands and head and frequent bowing of the back, till Peter's ears began to acie and "that tired feeling" came to him; yet still the Coloradan spake his little piece with added vim.

At last forbearance ceased to be a virtue and the saint arose, believing that his guest would see the interview was at a close. Then grabbed he Peter by the robe and talked and talked again until the patience of a Job would not have stood the trying strain.

In desperation Peter threw the golden gateway wide ajar and said unto him: "If you'd view the heavenly glories, there they are."

The Coloradan stepped inside, gazed on the street of shining gold and in a business manner eyed the buildings of unequal mould. The dazzling beauties one and all he studied: then, with shake of head and concentrated western gall, turned to the waiting saint and said: "Just as described in Holy Writ; and I confess it's mighty sleek; but I just want to say that it ain't in it, sir, with Cripple Creek."

Then Peter seized him by the neck and near the bottom of the spine, gave him one vigorous saintly kick and shot him down the dark incline, and as the body downward sped old Peter gave his ears a rub, and, with most touching pathos said: "I pity poor old Beelzebub."

A correspondent of the *Pioneer*, West Australia, perpetrates the following:

"Sir:—I have a valuable mine for sale. I know it is valuable, because I found it myself. I pegged it out in a blinding willy willy, and its location is therefore north-west by east-southnor and by west. To speak officially: 'The datum line runs from the peg to a blue spot in the universe, thence 10 chains 2 links and a tape measure to a point beneath the star Arcturus, thence at right angles to the Milky Way to the point of commencement.' I have a shaft sunk upon it to the depth of 67 feet 2½ inches precisely. At fair contract rates this shaft is alone worth the price of admission. The formation is ignatius, forenesic and erroneous, and the lode is friable, though I do not guarantee it eatable after it is fried. It also contains oxide, greenhide, and plays hide-and-seek. I have had several assays made of the ore, and the more I get it assayed the more I am convinced that it is rightly named. The last certificate runs as follows: Description of sample—Old red brimstone and saltosite, lbs. 4. Assay: Gold, nil; silver, worse; copper, conspicuously absent; tincture of road metal, 90; stove polish, 5; bromide of butterine, 2½; chloride of sawdust, 2½. Total—100. I also sent an expert out to examine the property. He was a first-class expert, and wore 14 prismatic compasses, 2 sheath knives, 48 pouches, (more or less), and one pair of aggressive looking leggings. He also had a magnificent glass, guaranteed not only to magnify things in existence, but to make things visible which have no existence at all. The glass was slap up, O. V. G., gilt-edged and silver-plated bell-metal and no mistake. In a burst of confidence, caused by an overdose of Christmas chloral, he told me that he swapped a paper collar for it at Arthur Leever's before that gentleman lost confidence in the human race, and refused to take in boarders. Following is a piece of his report: The formation consists of a glucose and schistose strata, dipping at an angle of 45 degrees from the northwest corner of Sommers' public house. It laminated, contaminated, vitreous, lamentable and vicious. Large quantities of sulphides of hydroprobia, trilobites and dog bites are visible in the stone, which is liable to cleavage, fracture of the os fronti, and cerebral meningitis. There is a fine outcrop of first-class blue road metal, highly suitable for electioneering purposes, and there is a true contact zone with oleomargarine walls denoting a transverse lode of axle-grease. A vein of rich water has been struck in the mine, and after calcination, condensation, conflagration and clarification, it should, with a little whisky added, be very suitable for drinking purposes. Throughout the lease there are a number of dips, spurs, angles, veins, lode formations, variations, slides, sinuosities, throws, breaks, faults,