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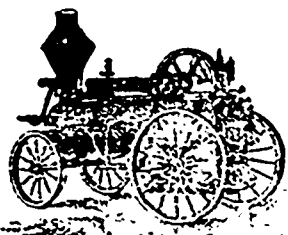
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MINING.

EARLY MINING OPERATIONS ON THE COMSTOCK.

Written for the Engineering and Mining Journal by Dan de Quille.

At first the prospectors who invaded the silver region from the California side of the Sierras set to work upon the quartz veins they "located" in a very primitive way. Few of the first comers were men of means, and the majority were adventurers who had hardly enough money to "keep the devil out of their pockets." They desired to ascertain the metallic contents of the veins on which they had "taken up" claims as soon as possible, and at the very smallest cost of money and muscle. Generally the first movement made was to start an open cut a short distance below their vein (if it were on a hill side, as was the case nine times out of ten), and, running it on a level, drive it to and through the quartz croppings. This open cut would cross the vein at a depth of from 5 to 20 ft., according to the pitch of the hill, showing the character of the quartz below the surface and both walls. This was called "defining the vein."

The next move was either to set to work upon the vein where exposed in the cut and follow it down with an incline (run on the dip of the vein) or to go down the side of the hill to a certain distance and start a tunnel to cut the lode at depth. Many ambitious men, in their anxiety to secure great depth, started their tunnels at such a distance from their claims that they never reached their veins; they fell by the way, dead broke.

In case of a vein dipping toward ground so flat that a tunnel—even a long one—would tap the lode at an insignificant depth, then a shaft would be sunk. By taking the dip of the vein where exposed in the open cut the prospector could easily calculate where to sink a shaft in order to reach it at a depth of 100 ft. or 200 ft., or any depth to which he might elect to go upon it. Or he might start his shaft at such a distance from the croppings that it would cut through his vein at a depth of 500 ft., then from this shaft he might drift to his vein at a depth of 100 or 200 feet and cut across and examine it, when, if he wished to explore it to a greater depth, he need only return to his shaft, sink it deeper, and again drift to his vein. As the vein would be constantly approaching the shaft as sinking progressed the exploring drifts would continually grow shorter. At the depth of 500 ft. the shaft itself would cut through and prospect the lode. If the indications were favorable for finding ore the miner could still continue sinking his shaft, but now his exploring drifts would be sent in the opposite direction, if he had been drifting west above when this shaft passed through the vein; below that point he would drift east to reach the lode.

At first the shafts sunk in the silver belt were mere round holes—like an ordinary well—for such were the prospecting shafts everywhere seen in California, whence came the men who were swarming all the canons, valleys and mountains. These first round shafts were small, and had exceedingly ragged and jagged walls. Being sunk in hard rock—the shell of the country—these circular shafts stood well without timbering. All hoisting of rock, ore or water, however, had to be done in a bucket, and either by hand, with an ordinary windlass, or with a horse winch—hoisting cages could not well be used in such a shaft, and, indeed, were not then thought of by common miners.

As a newspaper reporter it was my duty to explore these "holes in the ground," and inspect alleged ore strikes or "indications" about which owners were lubbing over with excitement, therefore I early got a surfeit of them. In descending the shafts one had choice of two means of support—might either stand in the tub or place one's foot in a loop formed at the end of the windlass rope. The man new to this kind of navigation is astonished at and disgusted with the efforts his body seem making to assume a horizontal position; by holding too hard upon the rope where grasping it above his head with his hands he causes his feet to "scot" hither and thither in a very uncertain way, and he feels as helpless as one who for the first time mounts roller skates. Often, too, the windlasses were rickety, swaying make-shifts. A light temporary windlass set up to serve to sink 25 or 30 feet would frequently be used to go down 80 or 100, the owners always looking upon it as being as good for the next foot as for the last.

I once descended a round shaft 300 feet in depth with my foot in a loop at the end of a rope. It was a new grass rope just put on, and as it stretched under my weight the extra twist began to come out, causing me to spin round like a top. In trying to check this sickening motion I thrust my hand against the wall so forcibly as to set my body swinging from side to side, pendulum fashion, striking first one side then the other of the shaft. The men above at the windlass knew nothing of my trouble and sent me right along down. Each time that I collided with a jagged point of rock the downward motion gave me a rake of a foot or more before I swung to the opposite side to receive a rake in a fresh place. Once this pendulum motion begins with one at the end of 150 or 200 ft. of rope it is not easy to check it. After receiving two or three severe rakes a man is sure to try to fend off from the rocks, and is almost sure to miscalculate and use too much force, for even the slightest push sends him back against the opposite wall. I was almost skinned alive before I got out of my deep shaft, and never again made such a trip on a rope that had not been long enough in use to have the twist taken out of it. There is nothing worse than such an experience except to be climbing four or five hundred feet of vertical ladders.

Hundreds of these round shafts were sunk everywhere in the neighborhood of the Comstock and for miles about in the surrounding mountains and flats. They ranged in depth from 20 to 100 or 200 ft. and as the prospectors who sunk them never troubled themselves with covering or fencing them in, they in after years (when hidden by growths of weeds and brush), became so many death-traps. The list of accidents resulting from these old shafts would be a long one; they have, first and last, cost scores of lives,