



A modern sluicing claim. The large pipe-line in the foreground is carrying water up to the cliff face. In the bottom right-hand corner can be seen the race down which the water and the gold-bearing wash travel.

and if you drop a twig into that yellow roaring torrent it is gone in a flash. Put your hand in and you realize that things are moving. Large stones threatening to block the race are broken by hammer.

As the gold-bearing wash and rubble are washed into the sluice-box the gold, being nineteen times heavier than water, sinks to the box-floor where it is caught in "ripples." These ripples are flat, perforated, steel plates, covering the bottom of the box, and set at a slight angle to the floor. The water boils over the raised edges of these plates, dropping the concentrates containing the gold. The plates extend some way down the race, but most of the gold is collected in the first few yards of the sluice-box. Below the plates is a carpet of coconut matting, to which the concentrates adhere. In the old days, and still in some claims, wooden blocks instead of iron ripples were used.

The sluice is kept going day and night for a month and then turned off to allow the wash to be collected. Sufficient water is used to build up the wash against a dam in the race after the plates have been lifted. The heavy concentrates

fall to the floor of the box, and the waste sand and gravel is allowed to flow over the top of the dam, which is gradually lowered until only the concentrates remain. These, after a month's sluicing, may only fill half a bucket, but they are literally almost worth their weight in gold. Mercury is added to them to form an amalgam with the gold, and this is heated in a crucible, driving off the quicksilver which is re-collected in a condenser and leaving the cone of pure gold.

Sometimes the tail-race carrying the rubble down into the valley is blocked with large stones, and the man at the foot of the race signals to his mates at the sluice-head in an ingenious, if primitive, manner. An overhead wire runs up through the bush and is slung over a cross-wire, and attached to a piece of wood below a kerosene-tin. On pulling the wire, the man at the tail race attracts his mates' attention above the roar of the sluice by the noise of the wood on the tin. If they are away and find the wood pulled over the cross-wire on their return, they know that there is a blockage farther down. A man stationed halfway up the race signals in similar manner.