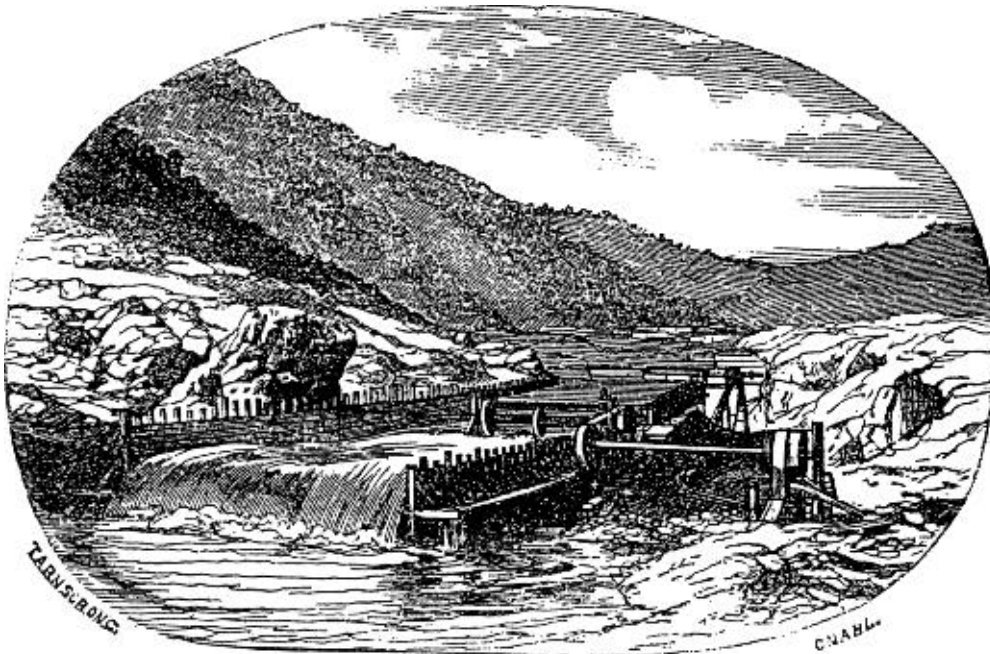


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RIVER MINING

[From a Photograph, by E.B. of D.H. Hendee]

RIVER MINING

At this season of the year, when every energy of the enterprising river miner is concentrated upon the great undertaking of his arduous work, it may not be amiss to describe the manner in which the plannings of his mind, perhaps for months, or even years, are carried out.

When it becomes desirable to chain the mountain torrent, which is heedlessly rushing past, and turning it out of its natural channel, that the glittering gold, lying in the river's bed, may be transferred from thence to the buckskin purse of the miner; he talks the matter over with some confidential and trustworthy and herd-working

companions, when they mutually agree that "there is gold there—sure," if they can only get it.

The ways and means are accordingly devised; sometimes making up a company of eight, or ten, or twenty, or any other desirable number; and as the cost will be about so much, each member of the company has to contribute his share of the amount agreed upon, as the work progresses. Should it cost less or more—generally it is the latter—the proportion is diminished, or increased by assessments according to the number of shares. At other times, a number of men who live together on the same bar, and who, being well acquainted

with each other, and tolerably well informed of what the other possesses, will raise whatever timber or tools may be required, from among themselves, and "get along as well as they can, for the balance"—which often is but very indifferently—and go to work with a will to accomplish their object.

To do this, sometimes, a race has to be dug; at others a flume has to be built, requiring to be of sufficient capacity to take in the whole amount of water running in the river. This being done, a dam has to be constructed across the river, that shall be water-tight, or nearly so. To build this dam, very often requires that men work in the water, which is generally very cold, for, as it comes from the melting snows, it cannot be expected to be very warm; at least, before the river is very low, and men seldom wait for that—they therefore enter the river; and by rolling up large boulders into a line for building a wall, they turn the water from the one side towards the flume on the other, and when one wall is thus rudely but substantially constructed, another is built behind it; when all the light floating sand is cleaned out, that it may not be in the way of making the space water-tight between the walls; a clayey soil is then filled in and well tramped, until the dam is tight; and the water is running through the race or flume. Sometimes a tree or log is felled across the stream (if one can be found long enough to reach, and in the right place) when slabs or split timbers are put in, in an inclined position, and either nailed or pinned to the log, when the whole space in front is filled up with clayey soil and fine boughs of trees until it is made water-tight.

The river now being turned into the race, wheels are erected across it; and pumps are attached by which the water still remaining in the river's bed is pumped out. Now river mining is commenced in real earnest; men begin to remove boulders, wheel out rocks, fix toms, or sluices, and

take out the precious metal—if there is any. (The writer has seen as high as five thousand two hundred and twenty-seven dollars, taken out from behind a boulder, in a single pan of dirt.)

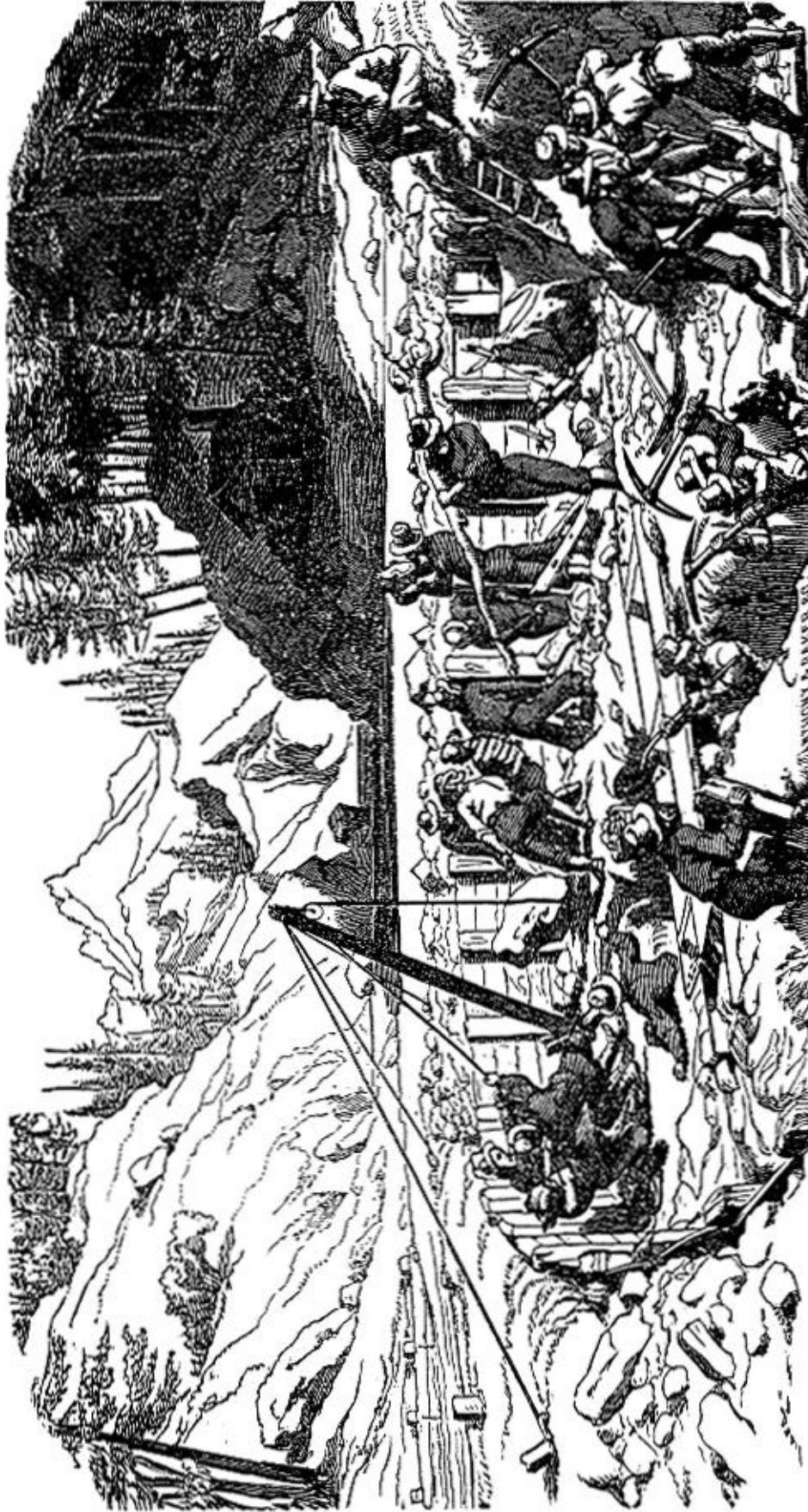
Should the fall rains be late before commencing, every opportunity is given to work out the river claims to advantage or at least to test them sufficiently either to work or abandon them. If on the contrary—as frequently occurs—the rains should come early, the whole of the summer's labor and expense are swept away before a dollar can be taken out. Many men are thus left penniless, after the toil and hope of a long and scorching summer. Taking the losses with the gain, it is very questionable if more gold has not actually been invested in river mining, than has ever been taken out.

Some more comprehensive plan of operations than the present is much needed before the streams can be thoroughly worked to profit and advantage. We propose a plan, to be accepted or modified, according to circumstances, which would in our opinion, accomplish the object in question.

Water is the great want of all kinds of surface mining. To supply this want let *the whole* of the water in a river during the summer season, be conveyed in one or more flumes on one or both sides of the river, as may be most desirable, to mining ground; and let the dams be so constructed that the highest stage of water during the winter or spring season cannot in the least damage, much less destroy them, as at the present time.

There will be no less than eight hundred thousand dollars expended in flumes and dams on Feather river, above and within ten miles of Oroville, this present season.

Now had even twice that amount of money been invested in constructing one or more substantial flumes, above high water mark, it would have been an investment of



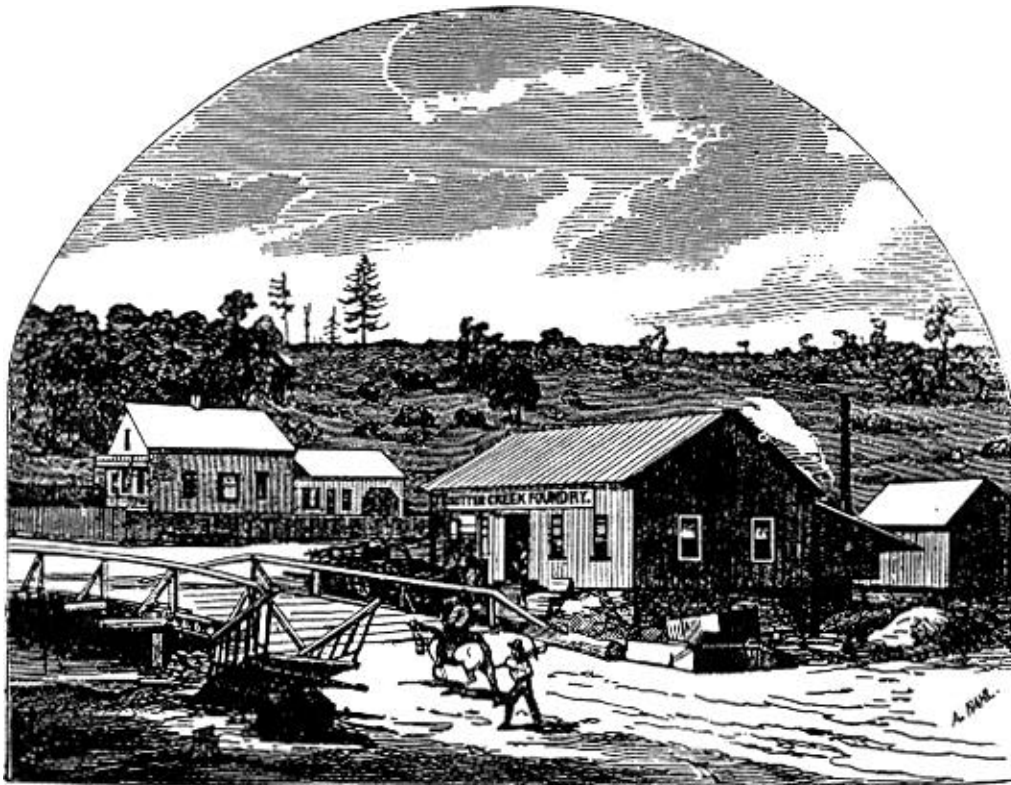
MEN ENGAGED IN WORKING OUT THE RIVER'S BED AFTER TURNING THE STREAM INTO THE FLUME

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profit, as well as permanency, from the amount of water sold for mining purposes, besides accomplishing the work of turning the river, not only for the present but for many summers to come.

Supposing that a dam be constructed to each mile of river turned (as at present); each dam will cost, upon an average, about eight thousand dollars; in the ten miles mentioned of course there would be ten in number, making eighty thousand dollars; now should that sum be used to construct one permanent dam that should last not only for one, but for many seasons—besides

the advantages it would offer to other claim owners by not backing the water upon them, as now—it would be a piece of economy that must commend itself to the thoughtful consideration of all persons interested in river mining. Should all the companies on a single stream unite for this purpose, even though the claims in the river should fail, they would have an important and profitable interest in a flume; which, while it drained the river, would also supply the dry mining districts with water. We ask you to think the matter over and let us hear from you.



THE SUTTER CREEK FOUNDRY
[From an Ambrotype by Woods & Michaels]

The above works are situated in the town of Sutter, Amador county, and with similar ones at Grass Valley, Nevada county, are the only works in the mining dis-

tricts where all kinds of machinery, in brass and iron, are cast for quartz mining, and without the delay and expense of sending to the larger cities, as formerly.