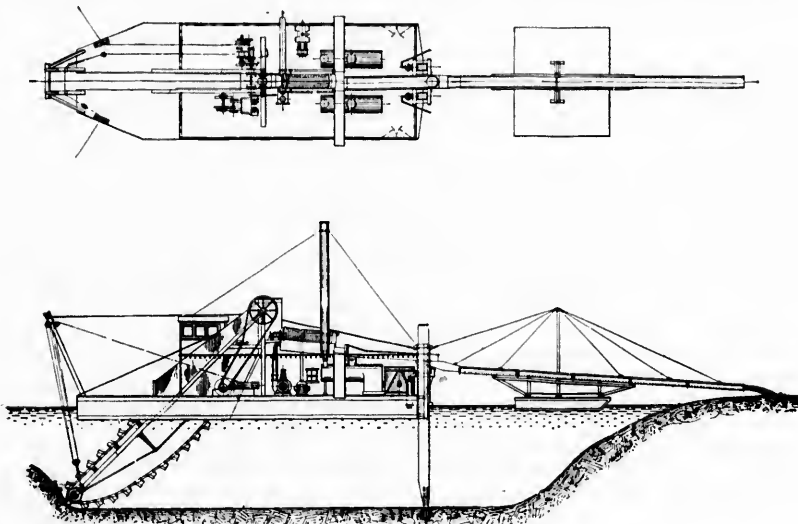


number of "colours" to a pan is often used to indicate values. A "colour" is a particle of gold apparent to the eye, and as the visible particles vary in size from a pin's point upward, they can have no definite value.

Next following the "pan" is the "rocker." This is the panning operation performed continuously in a wooden box mounted on rockers, and fitted with a sieve and shelves below which serve as sluice-boxes for catching the gold. The miner, as shown on page 35, shovels the gravel into the rocker, then rocks it with one hand, and dips water into it with the other. Many wandering miners make a living by "rocking" out the surface gravel in selected spots along river bars and in favourite points in valley-bottoms.

type of dredge was evolved and perfected.

Almost every known type of dredge has been tried for gold dredging. One of the most attractive types is the suction, or hydraulic dredge, which sucks up the sand and gravel with a large quantity of water. The water, thus pumped up, thereafter serves the purpose of sluicing, being practically one operation. There is a difference of opinion concerning the utility of using a centrifugal pump, or suction dredge, for handling gold-bearing gravel. It is claimed by some that grains of gold can be elevated and carried through the discharge pipe of the pump, because the velocity of flow is so much greater than the velocity at which grains of gold will fall through the



PLAN AND SECTION OF A GOLD DREDGER

From these primitive methods came the suggestion of the larger and more wholesale methods of dredging. It was only necessary to combine a dredging machine and a sluicing and washing apparatus in order to reach at once these precious deposits. The problem proved, however, much less simple than it seemed, and many experiments were tried before the final

water. This is true, and if the grains of gold could be introduced into the mouth of the suction pipe they would assuredly be elevated and passed through the pump into the riffles, and would there be caught.

But this is not the difficulty with this form of dredge. The difficulty is that the force of the suction, being intense close to the suction pipe and rapidly