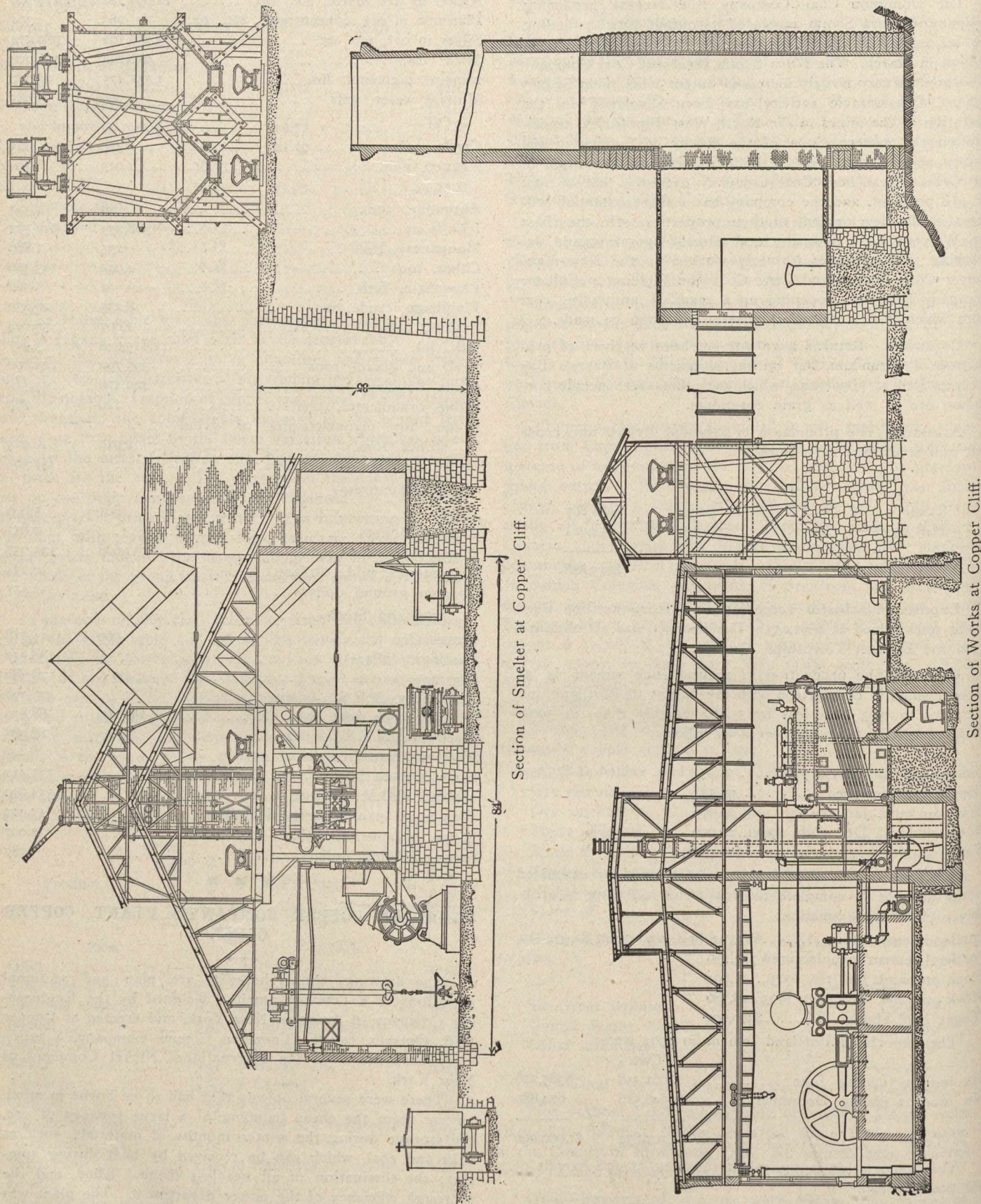


The problem was to take the roasted pyrrhotite from roast heaps and convert it into 80 per cent. matte, the presence of nickel precluding the advisability of a higher concentration. On the upper edge of the cliff a system of bins has been constructed for storage purposes. The smelter building proper is situated parallel to these bins with the power-house at the eastern end. A trestle was built on the grade level of the bottom of the bins, which is also the grade level of the charging floor, connecting the charging floor

and drawn up to the top of the bins. The track leading to the top of the trestle is on an easy grade all the way, and is also connected with the main track leading to the Canadian Pacific Railway. All ore, flux, coke, coal, etc., is handled on these tracks and dumped directly into the bins. Running on the circular track underneath the bins and into the smelter building and past the power-house is an electric railroad, with side-dumping cars drawn by electric locomotives. The ore, coke, etc., is loaded into these cars, weighed on the end



with the bins and also with the power-house, making a circular track, without switches, running on both sides of the furnaces and passing the coal chute in front of the power-house, which leads directly into the boiler room. The scheme of operation is as follows: Three miles from the plant is the largest mine. The ore is taken from this mine to the roasting-beds, which are about one-half mile from the smelter. After roasting, the ore is loaded into hopper-bottom cars

of the trestle and dumped into the coal chute next to the power-house. All trains are kept moving in one direction, and there is no switching or cross-over.

As shown by the sectional elevations, the site consists of two levels with a difference of 35 ft. in elevation. The upper elevation is in the same elevation as the feed-floor, and is occupied by a double-track pocket trestle 32 by 34 by 600 feet. The storage pockets were made to hold enough coal