first box contains the coarsest particle and the last one (36 in. wide) the finest which will readily set-The water which overflows from the last box tle. goes into a settling tank. The discharge from the first spigot of the classifiers goes to 3 two compartment Hartz jigs; the discharge from the spigot goes to two Overstrom tables and one Wilfley table; the discharge from the third spigot to three Overstrom tables, while the discharges from the fourth, fifth and sixth spigots go to Overstrom tables as do also the slimes from the settling tank. The middlings from the Overstrom tables drop to the floor beneath and are treated again on Overstrom tables. The heads from the first and second jigs drop down to the roll floor and are reground by a set of 6x30 inch high-speed Colorado rolls; the heads from the coarse concentrating tables are also reground. These rolls grind the concentrates sufficiently fine to pass through a 2 mm. hole, whence they pass



View of Classifiers Designed by Prof. Richards.

to elevator No 3 and are clevated 35 feet to another trommel of 2 mm hole, the undersize dropping into storage bins while the oversize falls back into the rolls to be recrushed. There are five V-shaped storage bins, each of which have 25 tons holding capacity.

Concentration is now complete in the crushing section of the mill, and the material is taken from the grader room, by means of a conveyor belt, to a double-decked, steam-pipe dryer, where it is dried and dropped to another conveyor belt in the basement of the grader room, and conveyed to two elevators. No. I elevator carries up the concentrates as they come from the crushing mill, while No. 2 handles the concentrates after they have been rewashed on the Wilfley tables, while the material which is being treated on the Hooper jigs, of which there are three, also goes to the elevator. The unwashed (uncleaned) concentrates are conveyed by No. 1 elevator to the top of the building where the magnetic iron contained therein is extracted by magnetic separators. The concentrates generally



Detail of Interior Grader Building.

carry from 10 to 15 per cent. of this iron. After going through this process of magnetic separation the concentrates are carried down to the splitters and graders. The iron from the magnetic separators is meanwhile dumped outside for future treatment, as it still contains a percentage of corundum. The concentrates, having passed through the splitters and graders, go to small bins beneath the graders, and are then treated on the rewashing tables and Hooper jigs, dried, and conveyed to No. 2 elevator together with concentrates from the Hooper jigs. This product is carried over two fin ishing magnetic separators, again passed through the splitters and graders and falls into bins below, having been graded into twenty different sizes of from 8 to 200 mesh. It is then sacked ready for shipment.



Interior of Grader Building-A Nearer View.

The Company's power plant consists of three return tubular boilers (in a separate building), and two Corliss engines. Rope transmission is em-