sable, maps need not be elaborate, nor crowded with symbols that need much time to learn. It should show as simply as possible the necessary features of a district and give the information, actually needed and no more. While neatness of execution is necessary to distinctness it is not as important as usefulness. (See Chapter XIII.)

Panning is a very necessary part of prospecting where lines of gold bearing quartz is not well defined. Only the utmost care and much practice makes a good workman in this line. Class work would therefore consist chiefly in teaching a system of recording results which is very important in large tests. A test of good work in panning would consist of putting say 50 colors of gold in 5 or 6 lbs ot sand and allow the student to pan them noting how many are recovered. See Chapter XIV.)

System in prospecting. Compare the old and new methods, as in Chapter XVII,—drift tracing as opposed to bottoming. Economy in work, illustrated by diagrams. Recording work and costs. The dominant idea in this branch is "Never prospect in ground containing no gold except under expert advice." Also this "Never sink your pits or trenches below the gold bearing layer unless you have good reason to think there is another like layer or lead below or the surface is shallow.

Timbering, as illustrated in Chapter XIX. A system of removable lagging. The economy of the system. The strength of timber. Comparison of the the woods common in Eastern Canada. Crushing load. Working load. Lasting qualities dry and greeu. Weight.

Core Drill work. Its advantages and disadvantages. As an aid to the prospector. See chapter XXI. Comparison of the Calyx and diamond drill, in speed, costs and usefulness of the work done. Care of the drill and its equipment and knowledge of its construction. How to start a hole. How to run a drill. How to record the results.

Steel working and tempering. (See Chapter XXV.) A forge is indispensable in this branch. Pick sharpening. Form of point and temper for earth work. Drills. The different forms ot point for hard, soft, and tough rock with the temper for each. Heating and working. Welding. To renew burnt steel. Melting point ot metals. Weight of steel and iron bars per foot of different sizes.

Care of Explosives. Instructions ou those in common use in Eastern Canada. Composition. Care required in thawing and handling. Fuses, ordinary. Safety fuses. Electric fuses. Use and care of battery.