

L. Heben Cole, Sci., '06, who has been spending the past six weeks in Montreal, has returned to Rossland, B.C., where he holds a position with the Consolidated Mining Co., which operates the Centre Star and War Eagle mines. In the last year or two

Mr. Cole has gone in for hockey and last year was a member of the Rossland team which did excellent work and promises to give Edmonton a hard fight for the championship this season.

## Science Jottings

The Great Western Railway, England, is famous for its express trains. During the season of American travel, there are three expresses which run daily from London to Exeter, a distance of 173 2-3 miles, without a stop, in three hours, at an average speed of just under 58 miles an hour. A fourth express makes the same run at an average speed of 56 1-3 miles an hour. It is not unusual for the total load back of the tender and expresses to reach 400 tons.

In the suit of the United States Government against the anthracite coal-carrying railroads, Prof. Ritter, a mining expert and geologist, in testifying for the government, estimated that the supply of coal underground in the Pennsylvania fields was 2,230,000,000 tons. He gave it as his opinion that this supply, great as it was, would be exhausted in about eighty-four years' time.

The effect of electric current on concrete has recently been studied by U. James Nicholas. The conclusions at which he arrived, as recently published in the "Engineering News," are as follows:—1. That electrolytic corrosion of structural and reinforcing steel, imbedded in concrete, takes place at the anode. 2. That even neat cement is no protection against this corrosion. 3. That the cathode is not

affected by oxidation. 4. That cement and concrete in brine will crack when carrying an electric current to or from the imbedded steel and cannot, therefore, under these circumstances, be regarded as an insulator in any case. 5. That the concrete undergoes electrolytic, and not metallic conduction. 6. That as small a current as 0.1 ampere continuously flowing will accomplish the results indicated above. 7. That the resistance of concrete is an inverse function of the percentage of sand.

A gas producer for the use of pulverized fuel consists of a receiver, circular in plan, lined with refractory material. Near the bottom and almost tangential to the circumference of the lining is inserted the discharge pipe of a fan blower by means of which the pulverized fuel, together with the requisite quantity of air, is introduced. The producer is started by making a wood fire and then blowing in the coal dust by means of the fan. A very high temperature is produced which slags much of the ash, which is withdrawn every six or eight hours, this being the only cleaning required. Owing to the high temperature the tar is converted into gas. The largest plant at present using this system yields 600 horsepower continuously from an inferior quality of coal.