

series, crystalline representatives of these rocks are found, occupying large areas, and the metals occur at numerous points. The character of the deposits of these metals is, however, characteristically difficult to determine, and they are often hidden, owing to the softness and easy weathering of the limestone. Hence there is reason to believe that many of these ore bodies are yet awaiting discovery. Zinc deposits have been worked in both the eastern and western parts of the province. Work on the Lake Superior deposits ceased a couple of years ago, but a mine in Frontenac county has been producing ore in small quantities for two or three years, and can apparently continue as a producer for years to come. This latter mine illustrates what I have said about the difficulty often experienced in discovering deposits of the metal. It is situated in a cleared field in a part of the country which had been prospected for years without the deposit being located. That metamorphic or Archean areas are not to be avoided by those in search of zinc is shown by the fact that the great deposits of New Jersey are in limestone similar in character to those of our Grenville series. And although the great Missouri zinc-bearing rocks are not of Archean age still they are rather closely connected with these rocks. In that state, isolated knobs, representing peaks of mountains which rose from the Archean surface, project through the later sedimentary formations.

The lead deposits of Ontario are similar to those of zinc, and what has just been said will apply to them. We have, in Hastings county, one working lead mine, with a small smelter, and it is not unreasonable to suppose that other deposits, both known and unknown, will be worked in the future.

Having made this rapid survey of our metallic resources, I shall now briefly review the other groups of economic minerals found in the province.

## 2. Minerals used for grinding and polishing.

I have shown that Ontario has unsurpassed resources in iron and nickel, which form an alloy which is to be the metal of the 20th century. In the manufacture of machinery, utensils, and other articles composed of metal, a substance is needed to