tion from the action of surface waters, the sulphide oxidizing to sulphate and being completely removed in solution. Thus no calamine or smithsonite are formed and siliceous gangue rock remains, a cellular mass, showing casts of the dissolved blende crystals. In the center of the ore bed and surrounded on all sides by partially decomposed ore, is a flat opening three to four feet wide, six inches to a foot in height, and filled completely with the white zinc sulphide.

When taken from the mine this substance is soft, full of water, and resembles in appearance and consistency white lead ground in oil.

It has a very slight reddish cast, probably from a little ferric oxide. Some red tallow clays overlie the deposit.

In a shaft about 250 feet distant, near the same level, a much larger body has been exposed in the floor of the workings. This mass of sulphide of zinc has not been developed, but is at least four feet in thickness and extends for a distance of thirty feet.

Evidences point to quite an extensive body of this peculiar ore of zinc in this mine.

An analysis made by the St. Louis Sampling and Testing Works shows the following composition of the dried sample:

Insoluble matter	2.52
Zinc	63.70
Sulphur	30.77
Ferric Oxide	2.40
	99.39

The water which was contained in the original sample, bottled on the ground, showed a slight amount of sulphuric acid.

The sulphide was evidently formed since the deposition of the ore by the precipitation of the sulphate of zinc, resulting from the oxidation of ordinary blende by sulphureted hydrogen or an alkaline sulphide. No odor of sulphureted hydrogen was perceptible in the mine nor was any found in the water which saturated this sulphide of zinc. This mineral has never, it is believed, been met with before, the conditions which would thus imitate the reactions of the laboratory not being common in nature.—*American Journal of Science.*

CAUSE OF THE RAPID GROWTH OF THE UNITED STATES.

Truly can we say that the growth of the United States has been rapid. By going back but little more than a century we find this country comprising a collection of disunited provinces, having no government which they might call their own, but ruled by one of the greatest powers of Europe and possessing together a population of less than four millions of people.

After the Revolutionary War had closed and the vital question on which our liberties to-day so much depend was settled and the Constitution adopted, then the United States began a career of growth and prosperity which has never had a parallel on the pages of recorded history. The lands to the south and west were gradually taken up and settled, and the commercial and manufacturing industries began to be developed with wonderful energy.

This, however, is not the only direction in which this country made advancement. Rapid progress was also made in the arts and sciences and in the development of institutions of learning all over the land.

In the lapse of a hundred years the nation has increased from four to sixty-two millions of people, and has risen from a state of comparative insignificance to that of the grandest, most enlightened and prosperous nation on the face of the earth.

Our great internal resources have developed to such a degree that the whole country has been converted into one vast emporium, to which nearly all the nations of the earth have come to trade and carry on commercial intercourse. The cultivation of art, science and literature has been so assiduously maintained that their results have been clearly seen in many of the greatest inventions of the nineteenth century. Nowhere, perhaps, has it been more manifest than in the great Rebellion,