

**GREAT AMERICAN INDUSTRIES:
VOLUME I. COAL, PETROLEUM,
IRON, MARBLE, SLATE, GOLD
AND SILVER, COPPER AND ZINC**

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Copper and Zinc by William Francis Rocheleau

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WILLIAM FRANCIS ROCHELEAU

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GREAT
AMERICAN INDUSTRIES

VOLUME I.

COAL, PETROLEUM, IRON, MARBLE, SLATE
GOLD AND SILVER, COPPER AND ZINC.

BY

W. F. ROCHELEAU.

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PREFACE

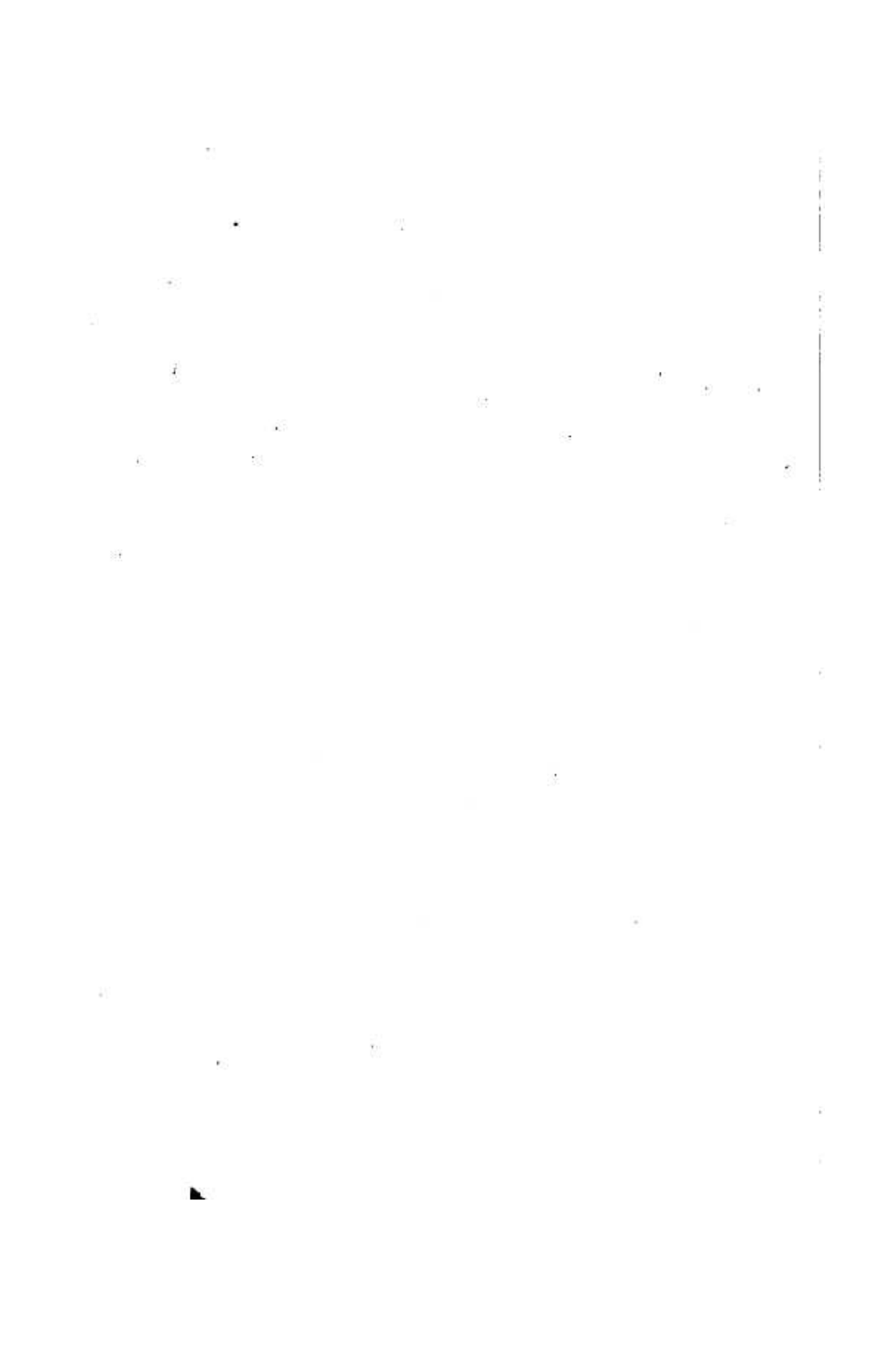
The subjects treated in this little volume are complete as far as it is thought the details will be of interest to pupils of grammar grades. In this, the work differs from its many competitors for public favor; it is a work of reference as well as a reader.

The facts have been gathered from the most recent and reliable sources, and are correct to date.

"Peace hath her victories no less than War." Special attention has been given to the history of these great industries which have wielded such a potent influence in giving our country its position among the nations of the world. This feature of the work makes it a valuable supplement to any school history.

Children are fond of writing, provided they have facts and thoughts to express. The author has found the subjects discussed in this volume of great interest to pupils for language exercises, and the suggestions appended to each topic are to assist the teacher in this feature of the work.

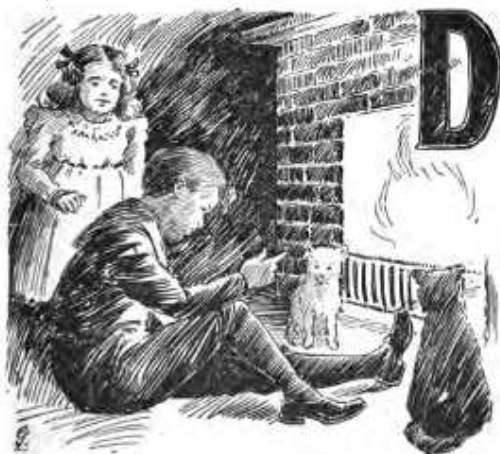
W. F. ROCHELRAU.



GREAT AMERICAN INDUSTRIES

COAL.

DISCOVERY AND LOCATION OF COAL.



DID you ever think what coal is and how it was formed, as you sat by your glowing grate or were whirled over the country by an express train? If

not, it may be of interest to you to learn something about this great source of wealth.

Wood was the only fuel known to our grandparents, and in some sections it is still the only

one in general use. The only coal known to them was charcoal, which was used in furnaces for melting iron and by blacksmiths in their forges. It was used because it made a much hotter fire than wood. Charcoal is made by burning large piles of wood under cover, so only a small supply of air can get to the fire; the wood burns very slowly, and only the smoke and gases pass off, leaving the pure coal. The old-fashioned coal-pit was made by covering a large pile of wood loosely thrown together with boughs and earth. The fire was then kindled in a small opening left at one end of the pit. After it was well started, the opening was closed, and the fire left to gradually burn through the pile. This would sometimes take two or three weeks if the pit was large. The covering was then taken off and a huge pile of charcoal was found ready for use.

While wood was plenty and but little coal needed, this answered all purposes; but when nearly all the wood had been cut off and more coal was needed every day, people began to wonder where it was to come from. They never dreamed that in the ground, and possibly under their own houses, was so great a supply that it would take hundreds of years to use it all, even if it were used for every purpose for which heat is needed.

Although mineral or stone coal has not been in