CONTENTS.

CHAPTER I.

History of the Electric Furnace.

	age.
The electric arc	1
W. Siemens' electric furnaces	3
Cowles brothers' electric furnaces	5
Hall and Heroult aluminium processes	6
H. Moissan's researches	7
Production of the diamond	9
Willson's carbide furnace Carborundum	9
Ferro-alloys	10
Iron and steel	12
	1.
CHAPTER II.	
Description and Classification of Electric Furnaces.	
Definition of plantain forman	
Definition of electric furnace	15
Essential parts of electric furnace	17
Classification of electric furnaces	18
Arc furnaces	10
Resistance furnaces	21
with special resistor	21
without special resistor	26
electrolytic	30
CHAPTER III.	
Efficiency of Electric and other Furnaces, and Relative Cost Electrical and Fuel Heat.	of
Electrical and Fuel Heat.	
	Page
Cost of electrical energy	3.
Efficiency of furnaces	34
Calculation of furnace efficiencies	37
Heat units	3
Melting temperatures of metals, and amounts of heat required to melt them	
Calorific power of fuel	40
Table of calorific powers	4:
Calculation of efficiency of electric steel furnace	4.