

METALLURGY.

THE ART OF EXTRACTING METALS FROM THEIR ORES,
AND ADAPTING THEM TO VARIOUS PURPOSES
OF MANUFACTURE.

By JOHN PERCY, M.D., F.R.S.,

LECTURER ON METALLURGY AT THE GOVERNMENT SCHOOL OF MINES.

FUEL; FIRE-CLAYS; COPPER; ZINC; BRASS, ETC.

WITH ILLUSTRATIONS CHIEFLY FROM ORIGINAL DRAWINGS,
CAREFULLY LAID DOWN TO SCALE.

LONDON:
JOHN MURRAY, ALBEMARLE STREET.
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TO
MICHAEL FARADAY,
WITH THE SINCERE RESPECT
AND
AFFECTIONATE REGARD
OF
THE AUTHOR

P R E F A C E.

IN no country are the operations of Metallurgy conducted on so vast a scale as in Great Britain; and yet the contributions which have been made to the literature of the subject by British metallurgists are few and scanty in the extreme. But this should not lead to the erroneous conclusion which some persons are inclined to draw, that our smelters are too ignorant of chemistry to understand the theory of the processes under their direction, or too illiterate to be able to record the results of their experience. I have the pleasure of knowing many of these men intimately, and I will venture to affirm that with respect to knowledge, both of the theory and practice of the special departments of the Art in which they are engaged, they are not excelled by any metallurgists in Europe.

The chief writers on Metallurgy are the Germans, to whom we owe two of the most remarkable works on the subject, namely, the treatise of Agricola, in Latin, which appeared in 1555; and the System of Metallurgy of Karsten, in German, published in 1831. The monographs, contributions to periodicals, and compendious treatises relating to the science and practice of Metallurgy which have been published in the German language, are very numerous. We are, probably, indebted to the Germans, to a greater extent than is commonly supposed, for the development of our mineral resources, since the introduction of German miners and metallurgists into England, about three centuries ago, through the wisdom of Elizabeth.

The Swedes, who, in the persons of Scheele and Berzelius, have played so distinguished a part in raising chemistry to the dignity of a science, have not been behind with respect to Metallurgy. Many valuable monographs and original papers on metallurgical subjects exist in the Swedish language, which unfortunately is but little known to Englishmen. The 'Jern-Kontorets Annaler,' or Annals of the Board of Iron-Masters, now consist of about forty volumes, which contain theoretical and practical papers of the highest interest to Miners and Metallurgists.