FAMILIAR LESSONS ON MINERALOGY AND GEOLOGY: WITH COLORED PLATES. TO WHICH IS ADDED A PRACTICAL DESCRIPTION OF THE USE OF THE LAPIDARY'S APPARATUS, EXPLAINING THE METHODS OF SLITTING AND POLISHING PEBBLES, &C.

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Familiar Lessons on Mineralogy and Geology: With Colored Plates. To Which is Added a Practical Description of the Use of the Lapidary's Apparatus, Explaining the Methods of Slitting and Polishing Pebbles, &c. by John Mawe

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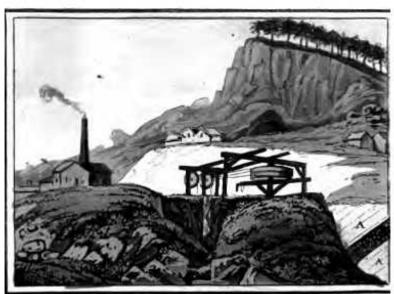
# JOHN MAWE

FAMILIAR LESSONS ON MINERALOGY AND GEOLOGY: WITH COLORED PLATES. TO WHICH IS ADDED A PRACTICAL DESCRIPTION OF THE USE OF THE LAPIDARY'S APPARATUS, EXPLAINING THE METHODS OF SLITTING AND POLISHING PEBBLES, &C.



### A BRAZILIAN MINER WASHING THE ALLUVIAL SOIL SCARED FROM THE RIVULET FOR GOLD & DIAMONUS.





VIEW NEAR MATLOCK, DERBYSHIRE.

### FAMILIAR

# LESSONS

ON

# MINERALOGY AND GEOLOGY:

WITH

#### COLORED PLATES.

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A PRACTICAL DESCRIPTION OF THE USE OF

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### BY JOHN MAWE,

Honorary Member of the Historicogical Society of Jens, Sec. Sec. Anther of Transle therugh the Bold and Dismond District of Brazil; Transles on Dismonds and Provious Stones, New Description Galdingus, Sec.

> Whose hand unseen the works of nature docume, By laws unknown! WHO GIVES AND WHO RESUMES.

> > RIGHTH EDITION.

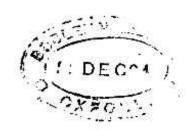
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## PREFACE.

IT is the object of these Lessons, to unlock, as it were, a casket of useful knowledge; and to present to the learner, a compendious view of the importance of Mineralogy\*. The proprietor of landed estates, the artizan, and manufacturer, may all render this science subservient to their respective advantages.

The author, fully aware of the difficulties the learner has to encounter in reading voluminous treatises on Mineralogy, has endeavoured, by easy description, and concise explanation, to give him a knowledge of the science, without fatiguing his mind, or diverting his attention, by the enumeration of endless varieties.

Tax beginner will more readily attain a knowledge of Minerals, by availing himself of the aid of Chemistry, which will not only afford him additional amusement, but greatly facilitate his inquiries.—The Acids dissolve the metals, which may be precipitated under various forms, in small glass tubes, and watch-glasses, as described in the following pages.

 <sup>&</sup>quot;Our National strength and riches are derived from our mines."

THE aid of the blow-pipe is indispensable; it is scarcely possible to find words sufficiently strong to convey an idea of the importance and the use of this little instrument; for, by blowing through it across the flame of a candle, such an intense degree of heat is instantly produced, that small particles of Gold, Silver, Copper, &c. may be fused with facility, when placed on charcoal, and held in contact with the point of the flame. These experiments are particularly interesting, and are performed so immediately under the eye of the practitioner, that he cannot refrain from observing the changes which take place on the application of heat: the vapors and the color of the slag (more particularly when boras is used) elucidate many important facts. The whole of the materials necessary for such examinations scarcely occupy the space of a teacaddy.

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