

TRANSACTIONS

OF THE

ROYAL SOCIETY OF EDINBURGH.

VOL. I.

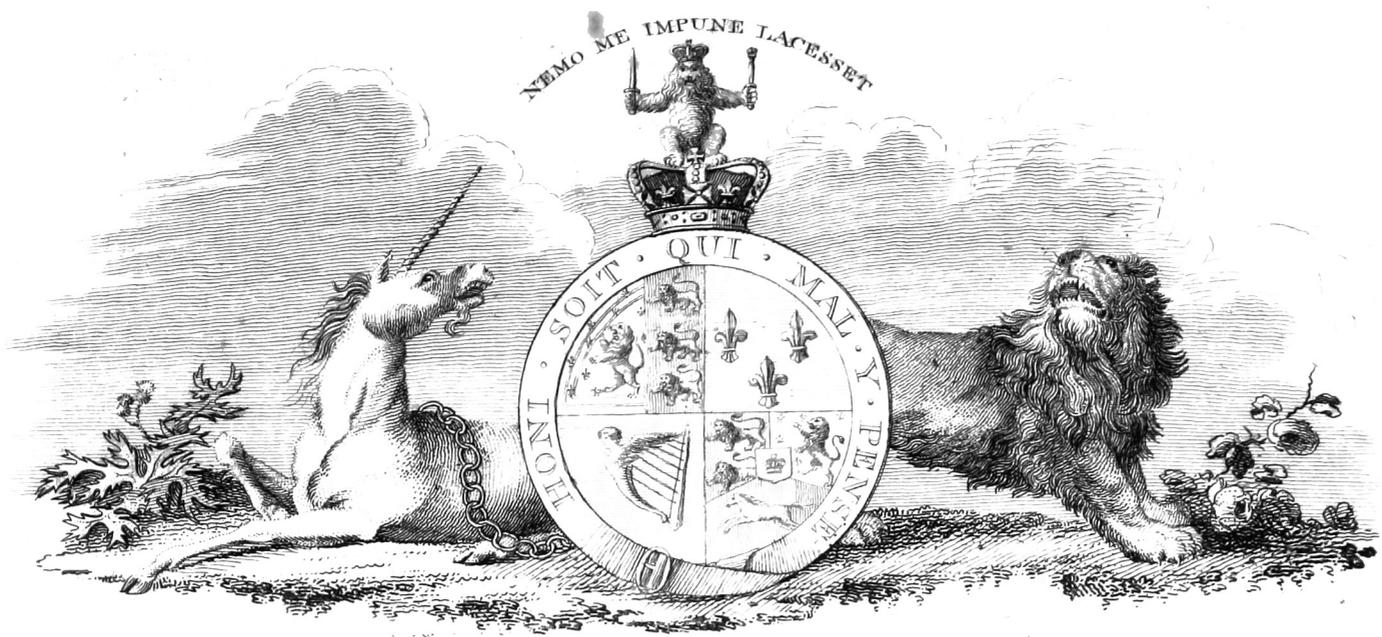


EDINBURGH:

PRINTED FOR J. DICKSON, BOOKSELLER TO THE ROYAL SOCIETY.

SOLD IN LONDON BY T. CADELL, IN THE STRAND.

M.DCC.LXXXVIII.



T O T H E

K I N G.

S I R,

I AM desired by the Members of The Royal Society of Edinburgh, humbly to request Your MAJESTY to accept the first fruits of their Philosophical and Literary labours.

To

TO YOUR MAJESTY, as the Founder and Patron of the Society, they, of right, should be presented.

IF they shall be found worthy of the approbation of a MONARCH, who has distinguished His Reign by the utility of His Institutions for improving the elegant Arts, as well as by the splendour and success of His undertakings to extend the knowledge of Nature, The Royal Society of Edinburgh may hope to occupy a respectable place among those Bodies of learned Men, who, by their united efforts, have contributed,

DEDICATION. vii

buted, so eminently, to the progress of
Science and of Taste in Europe. I am,
with the highest respect,

Your MAJESTY'S dutiful subject,

and devoted servant,

BUCCLEUGH.

C O N T E N T S
O F T H E
F I R S T V O L U M E.

P A R T I. *

HISTORY of the SOCIETY.

INTRODUCTION,	-	-	Page 3.
<i>Charter of the Society,</i>	-	-	7.
<i>Laws of the Society;</i>	-	-	11.
<i>Account of Experiments on Antimony, by Mr James Ruffell,</i>	-	-	16.
<i>Dr Roebuck on the filling of Corn,</i>	-	-	17.
<i>The Earl of Dundonald on Sea-Salt,</i>	-	-	19.
<i>Dr Anderfon on Cast Iron,</i>	-	-	26.
<i>Cafe communicated by Dr Andrew Duncan,</i>	-	-	27.
<i>Mr Wilfon on the Solar System,</i>	-	-	28.
<i>Dr Blane's Account of the Hurricane at Barbadoes,</i>	-	-	30.
<i>Count de Windifchgratz's Problem,</i>	-	-	37, 45.
<i>Mr Smellie on Instinct,</i>	-	-	39.
	<i>b</i>		<i>AP-</i>

* *N. B.* PART I. comprehending the HISTORY, is contained under one set of pages; and PART II. comprehending the PAPERS, is contained under two sets, *viz.* PAPERS of the PHYSICAL CLASS under the one, and PAPERS of the LITERARY CLASS under the other.

C O N T E N T S.

A P P E N D I X.

MEMBERS DECEASED,	-	-	Page 46.
I. <i>Biographical Account of William Lothian, D. D.</i>	-	-	47.
II. <i>Biographical Account of Sir George Clerk-Maxwell, Baronet,</i>			51.
III. <i>Biographical Account of Matthew Stewart, D. D.</i>	-	-	57.
LIST of DONATIONS presented to the ROYAL SOCIETY of Edinburgh,			77.
LIST of all the MEMBERS or FELLOWS of the ROYAL SOCIETY of Edinburgh,	-	-	83.
Office-Bearers of the SOCIETY,	-	-	98.

P A R T II.

P A P E R S R E A D B E F O R E T H E S O C I E T Y.

I.

P A P E R S O F T H E P H Y S I C A L C L A S S.

I. <i>Experiments on the Motion of the Sap in Trees. By Dr John Walker,</i>			3.
II. <i>The Theory of Rain. By Dr James Hutton,</i>	-	-	41.
III. <i>On the Causes which affect the Accuracy of Barometrical Mea- surements. By Mr John Playfair,</i>	-	-	87.
IV. <i>On the Use of Negative Quantities in the Solution of Problems by Algebraic Equations. By Mr William Greenfield,</i>	-	-	131.
V. <i>Experiments and Observations upon a remarkable Cold which ac- companies the Separation of Hoar Frost from a clear Air. By Mr Patrick Wilson,</i>	-	-	146.
VI. <i>An Account of the Method of making a Wine, called by the Tartars Koumifs; with Observations on its use in Medicine. By Dr John Grieve,</i>	-	-	178.

VII.

VII. <i>An Improvement of the Method of correcting the observed Distance of the Moon from the Sun or a Fixed Star. By the Reverend Mr Thomas Elliot,</i>	-	Page 191.
VIII. <i>Account of a remarkable Agitation of the Waters of Loch Tay: in a Letter from the Reverend Mr Thomas Fleming to Mr John Playfair,</i>	-	200.
IX. <i>Abstract of a Register of the Weather, kept at Branxholm for ten years. Communicated by the Duke of Buccleugh,</i>	-	203.
X. <i>Theory of the Earth. By Dr James Hutton,</i>	-	209.
XI. <i>The Orbit and Motion of the Georgium Sidus, determined directly from Observations. By Mr John Robison,</i>	-	305.
XII. <i>Abstract of a Register of the Weather, kept at Hawkbill from 1771 to 1776. Communicated by Mr John Macgowan,</i>		333.

II.

PAPERS OF THE LITERARY CLASS.

I. <i>Essay on the Origin and Structure of the European Legislatures. By Mr Allan Maconochie. Part I.</i>	-	3.
II. <i>A Dissertation to prove that Troy was not taken by the Greeks. By Mr John Maclaurin,</i>	-	43.
III. <i>An Ode on the Popular Superstitions of the Highlands. Written by the late Mr William Collins: And communicated by the Reverend Dr Alexander Carlyle,</i>	-	63.
IV. <i>An Essay upon the Principles of Historical Composition, with an Application of those Principles to the Writings of Tacitus. By Mr John Hill. Part I.</i>	-	76.
V. <i>On the Dramatic or Ancient Form of Historical Composition. By Mr William Richardson,</i>	-	99.
VI. <i>A Grammatical Essay on the Nature, Import and Effect of certain Conjunctions; particularly the Greek ΔΕ. By Mr John Hunter,</i>	-	113.
		VII.

- VII. *Essay on the Origin and Structure of the European Legislatures.*
By Mr Allan Maconochie. Part II. - Page 135.
- VIII. *An Essay upon the Principles of Historical Composition, with an
Application of those Principles to the Writings of Tacitus.*
By Mr John Hill. Part II. - 181.

** The Society is indebted to Robert Adam, Esq; for the Design of the engraved
Frontispiece.

T R A N S.

T R A N S A C T I O N S

O F T H E

ROYAL SOCIETY OF EDINBURGH.

V O L . I . P A R T I I .

PAPERS READ BEFORE THE SOCIETY.
