PLATES AND MAPS

IN ILLUSTRATION OF

THE FIRST VOLUME

OF THE

TRANSACTIONS

OF

THE GEOLOGICAL SOCIETY.

LONDON:

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1811.

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CONTENTS

Explanation of the Views, in illustration of Dr. MacCulloch's Account of Guernsey, and the other Channel Islands.

No. 1 is a view of the small port and beach of the Creux in the Isle of Sercq, exhibiting the gate of the Tunnel, through which is the only entrance into the island. The adjacent rocks are of trap, and in the distance is seen a detached mass of granite.

No. 2 is a view of the Coupée in the Isle of Sercq, taken from the smaller division of the island, called *Petit Sercq*. That part of the isthmus, the furthest from the spectator, is traversed by the soft vein mentioned in the Memoir, and is rapidly wearing down.

No. 3 represents one of the granite veins in Port des Moulins in the Isle of Sercq. The grauwacke has been washed away; and part of the granite itself, from the effects of rifts and decomposition, has fallen down; thus making a kind of rude door-way through the vein.

No. 4 is a general view of Port des Moulins. The rocks on the right hand are of grauwacke-slate, as also are the three insulated buttress-like rocks that appear in the distance. Behind the two furthest of these is situated the granite-vein represented in Pl. 3: the steatitical vein described in the Memoir lies also among the distant cliffs.

No. 5 is a view of Fourchi Point in the Isle of Alderney, representing the great fracture in the porphyry rock, of which this headland is composed. The open sea is the passage called the *Race of Alderney*, and Cape la Hogue is seen in the distance.

No. 6 is a view taken from the shore in the Greve de Lecq, in the Isle of Jersey, a coast of very difficult access. The cliffs are formed of the granite or sienite described in the Memoir, as are also the two detached rocks advanced in front of the coast. The most distant of these latter is of a pyramidal shape, and is pierced through by an arched cavity not visible from this point of view. The quarries of Mont Mado are not far from this place, and lie in the same kind of rock as forms these cliffs.

Explanation of the Section, in illustration of Mr. Aikin's Observations on the Wrekin, and on the Great Coal-Field of Shropshire.

Fig 1 is a section through the Wrekin, exhibiting the order in which the mineral beds occur on the E. and W. of that hill.

Fig. 2 represents the horizontal angle formed by such of the beds as are distinctly stratified, together with the point of the compass towards which they rise.

A A A. Old Red Sandstone.

B. Independent Coal Formation.

C. A Limestone Formation lying below the Coal.

D. Sandy Slate Clay.

E. Slaty micaceous Greenstone.

F. Quartz-grit.

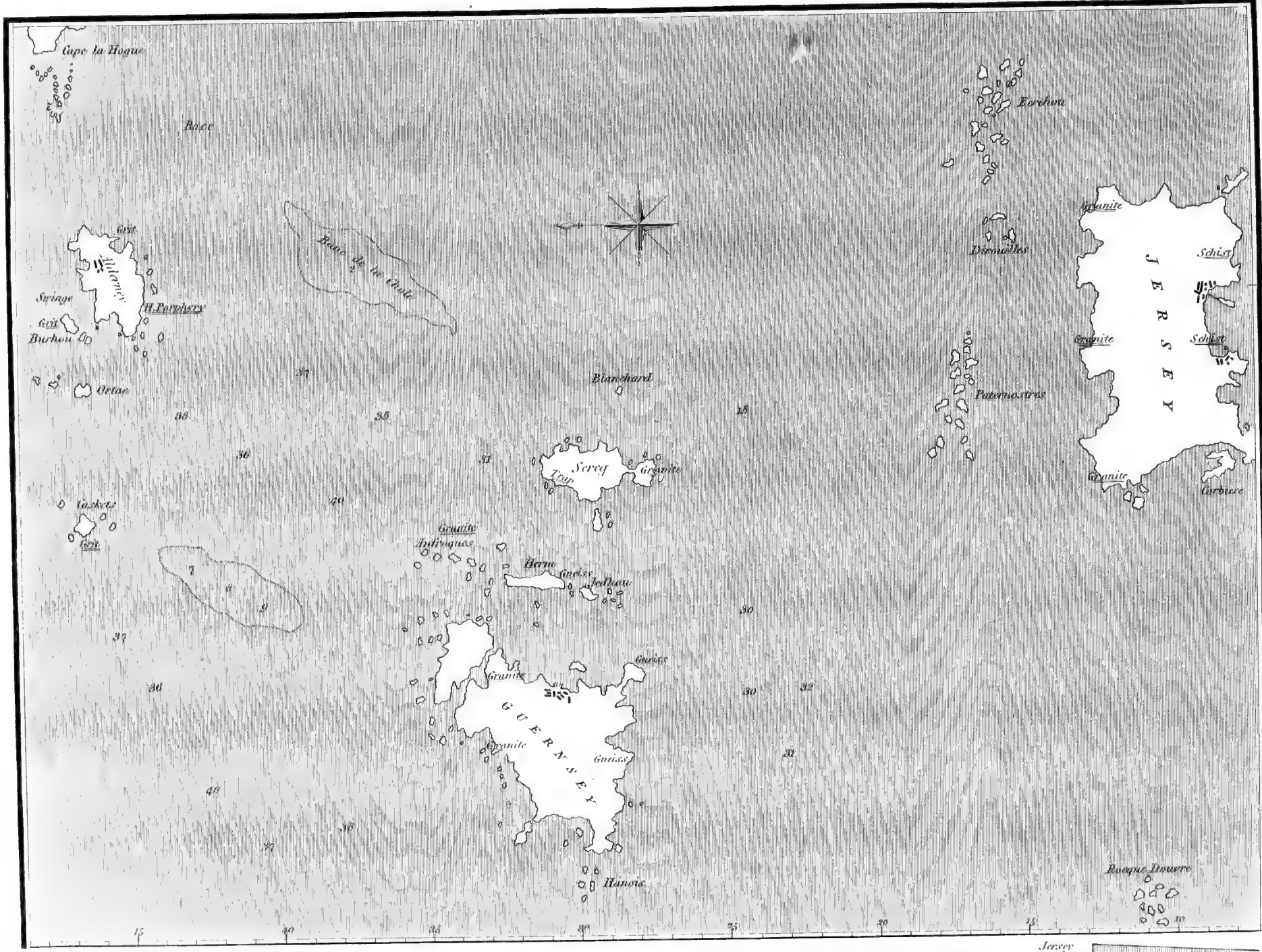
G. Claystone.

H. Feldspar and greenstone amygdaloid.

I. Greenstone.

K K. Two small Coal-formations at Dryton and Welbach.

L. The Grauwacke of Lyth-hill, upon which rests a patch of Greenstone I, the old Red Sandstone A, and the Coal-formation of Welbach K, which latter fills a narrow trough formed by the junction of the Grauwacke and Sandstone.


Cape la Hogue
Race
Gull
Alderney
Swinge
H. Perchery
Grit
Burhou
Ortac
Race of la Chaise
Blanchard
Casket
Grit
Granite
Anfroquas
Herm
Gneiss
Jethou
Granite
Gneiss
GUERNSEY
Granite
Gneiss
Hanois
Serq
Trap
Granite
Ecrehou
Dirouilles
Granite
Schist
JERSEY
2° 20′ W.
Granite
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Paternosters
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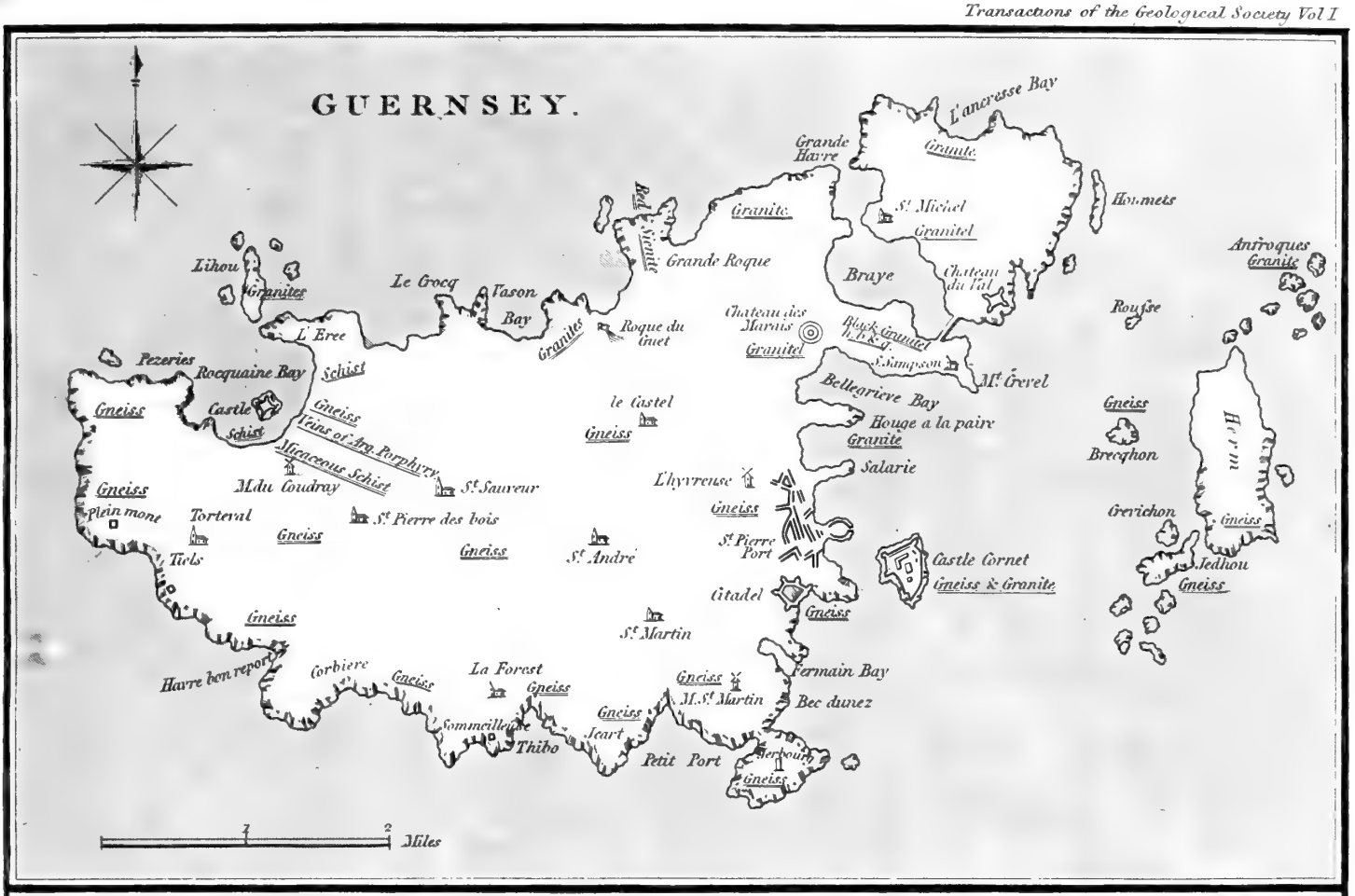
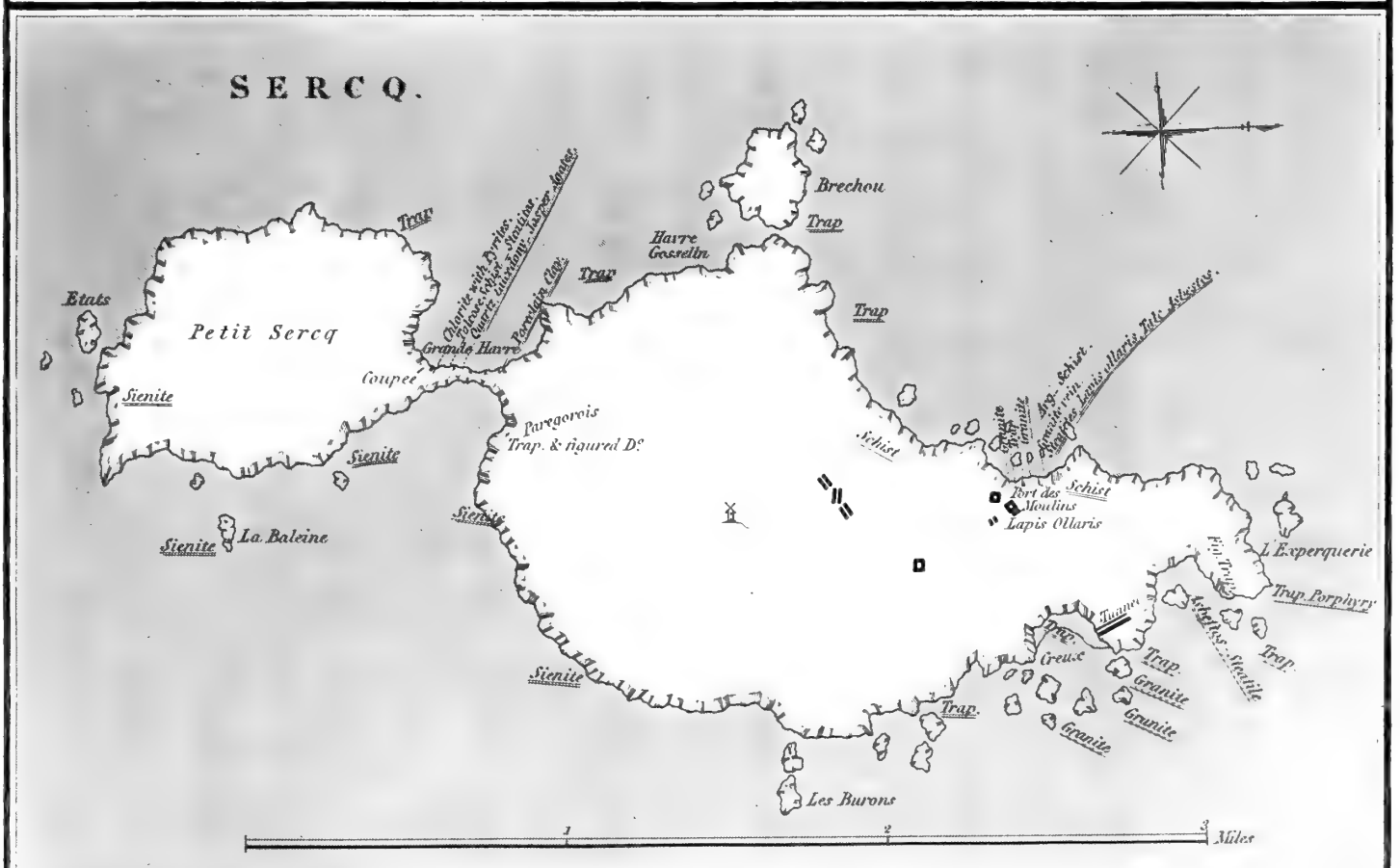
Corbiere
Roque Dourre
Alderney
Serq
Guernsey
Jersey
49° 7′





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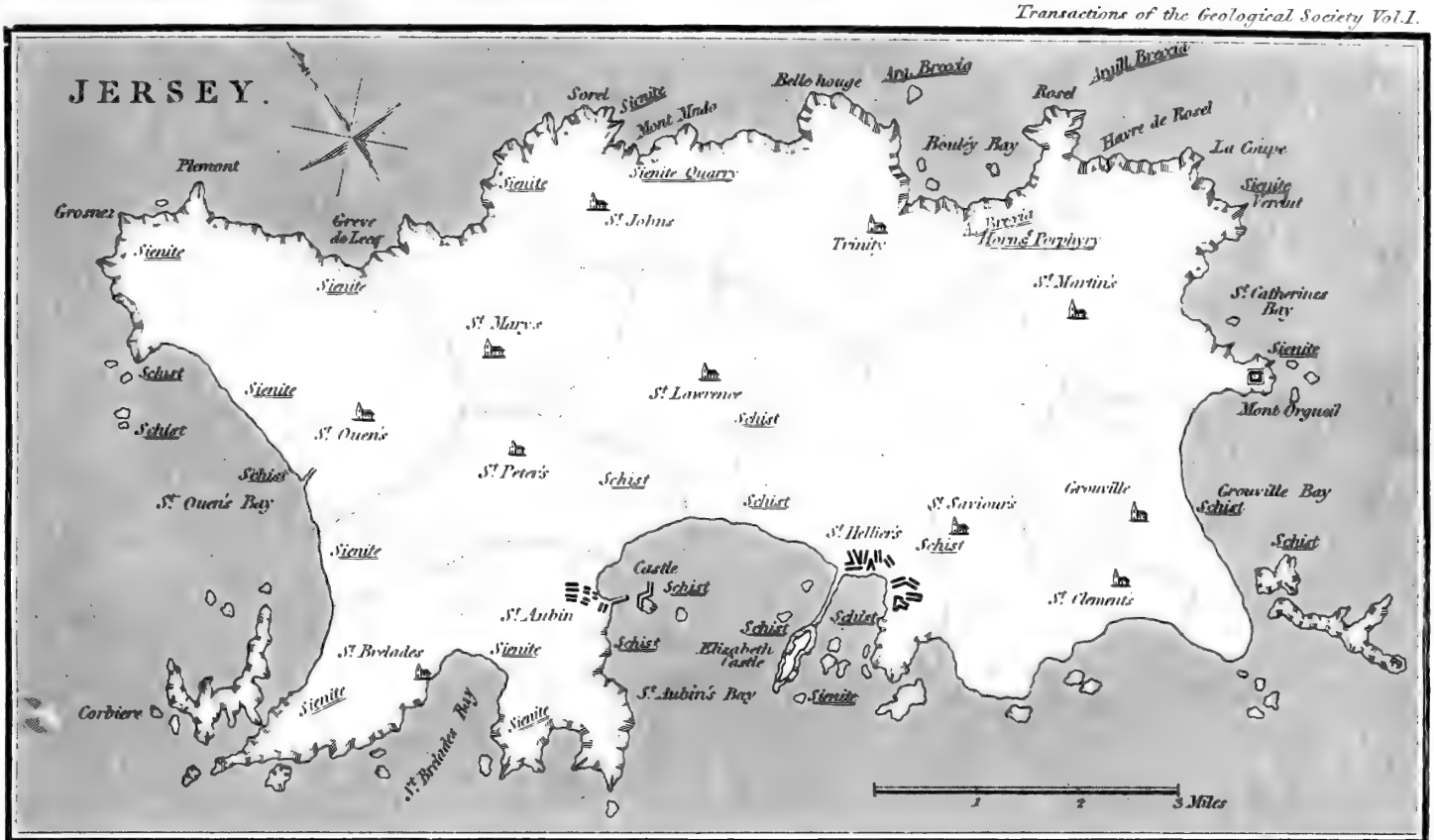

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J. MacCulloch del. M. Barenger sculp.

No. 1. View of the CREUX in the ISLE of SERCQ.

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J. Macculloch del. M. Barenger sculp

N° II. View of the COUPÉE in the ISLE of SERCQ.

Published for the Society, by Cadell and Davies, London, 1811.

J. MacCulloch del

N°. III. A GRANITE VEIN in PORT DES MOULINS in the ISLE of SERCQ.

Published for the Society, by Cadell and Davies, London, 1811.

J. Mac Culloch del. M. Barenger sculp.

No. IV. General View of PORT DES MOULINS in the ISLE of SERCQ.

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J. MacCulloch del.

N°. V. View *of* FOURCHI POINT *in the* ISLE *of* ALDERNEY.

Published for the Society, by Cadell and Davies, London, 1811.

J. Macculloch del. J. L. sculp.

No VI. View in the GREVE DE LECQ in the ISLE of JERSEY.

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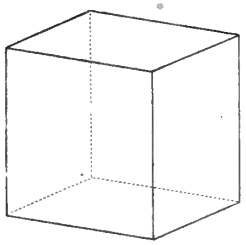
ARSENIATE OF IRON.

Fig. 1.



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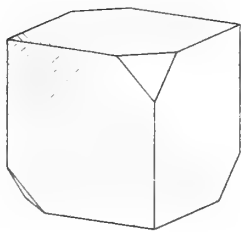

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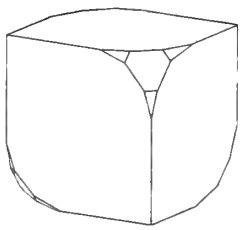

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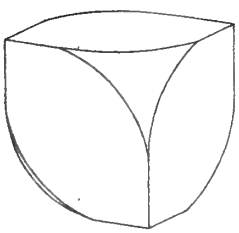

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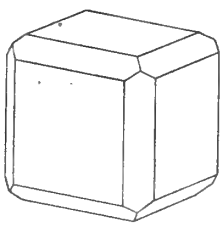

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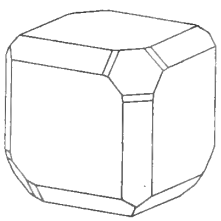

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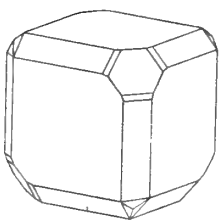

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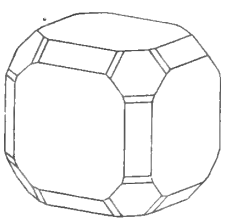

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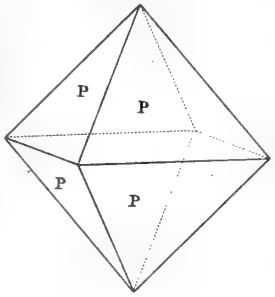
Wilson Lowry Sculp.

RED OXYD OF COPPER.

Primitive Crystal.

Fig. 1.



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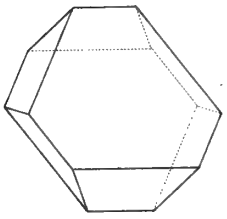

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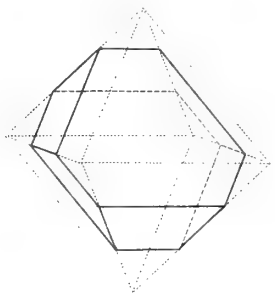

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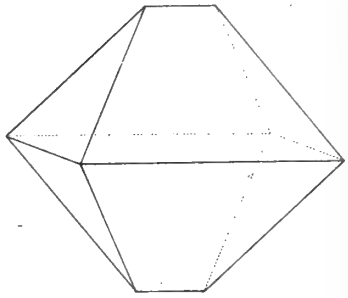

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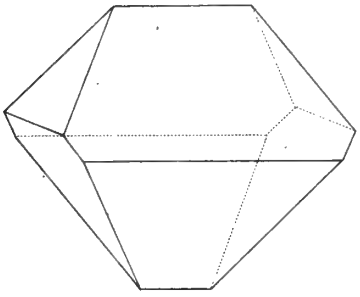

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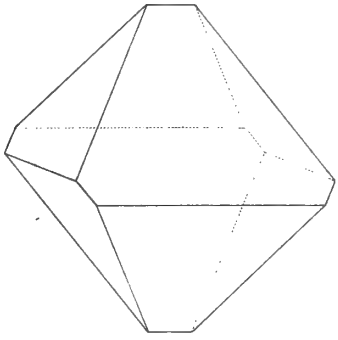

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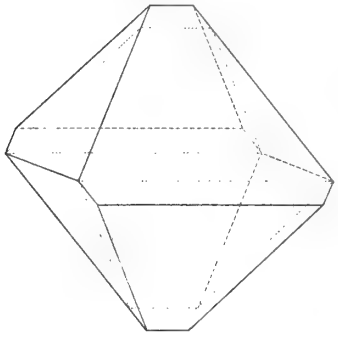

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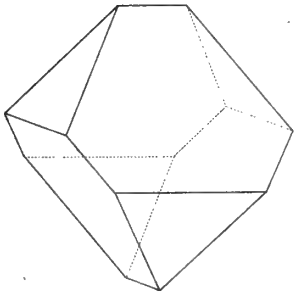

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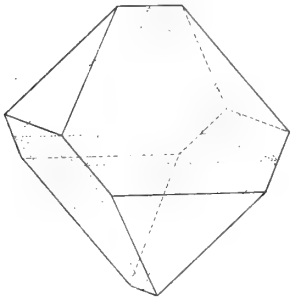

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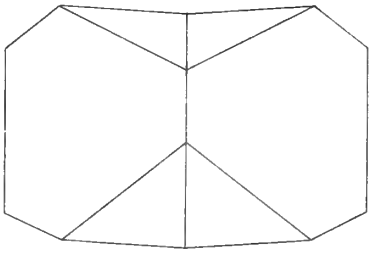

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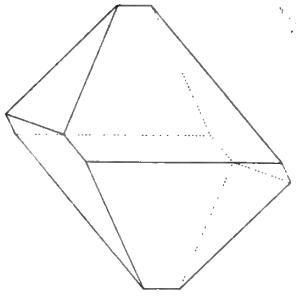

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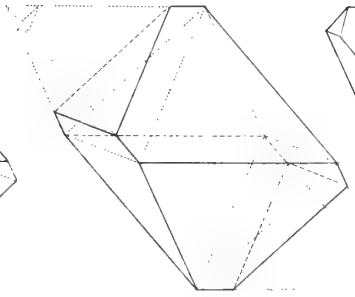

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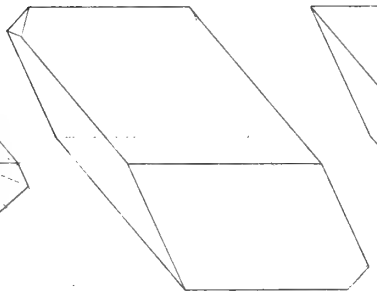

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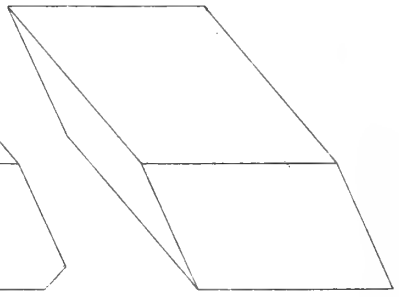

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First Modification.

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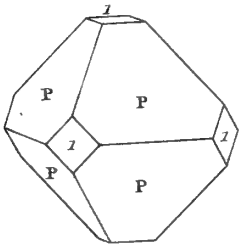

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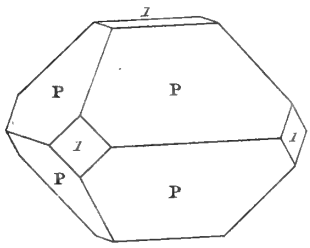

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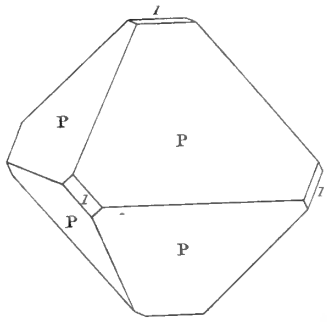

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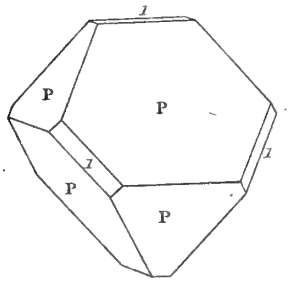

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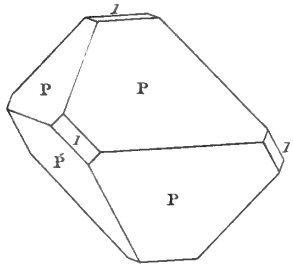

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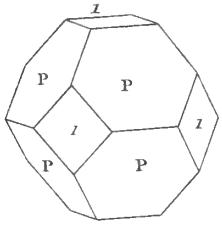

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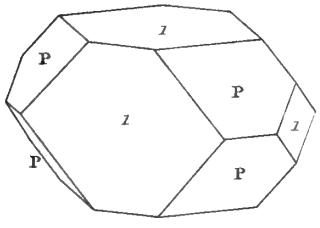

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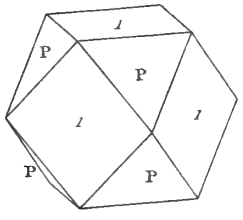

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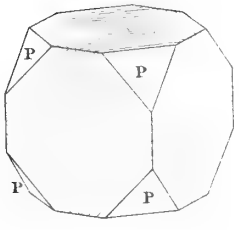

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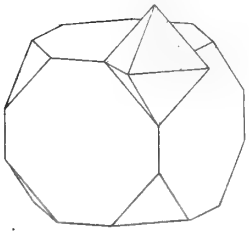

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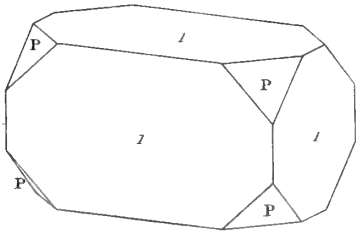

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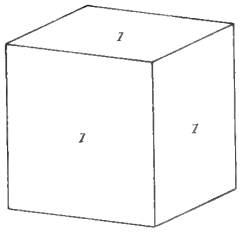

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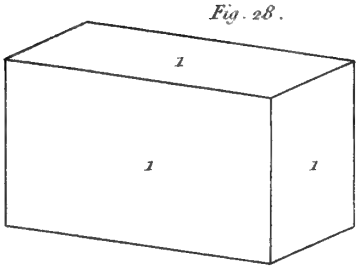

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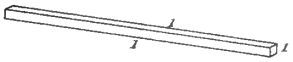

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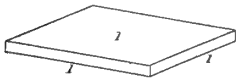

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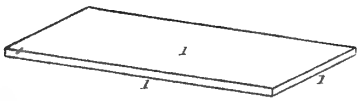

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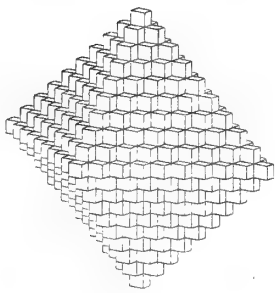

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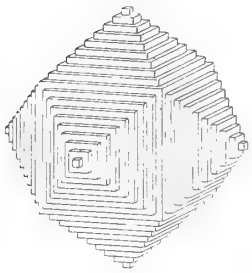

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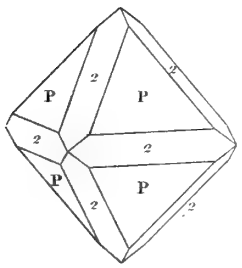

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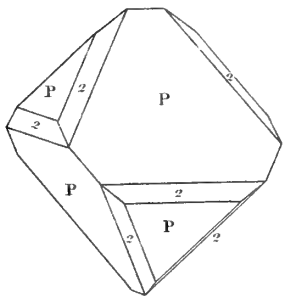

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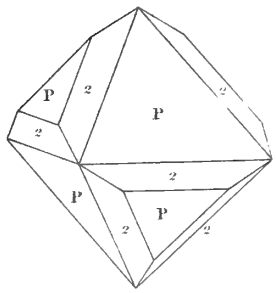

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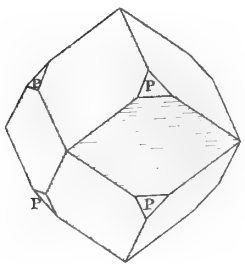
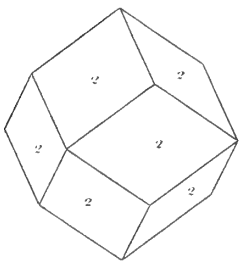


Fig. 38



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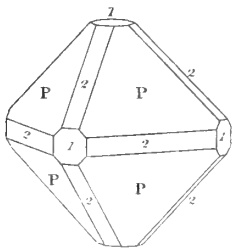

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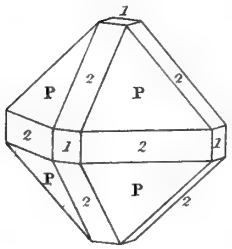
Second Modification continued.

Fig. 40.



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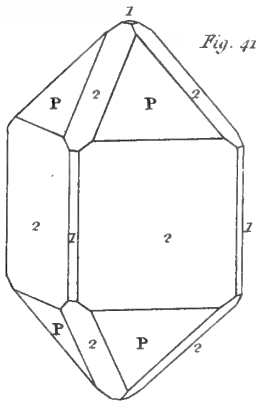

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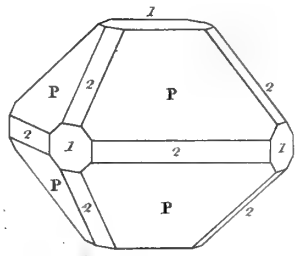

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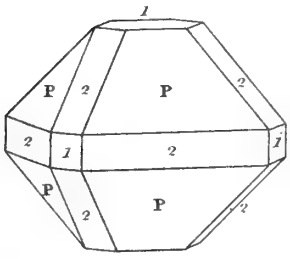

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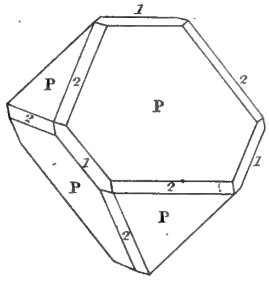

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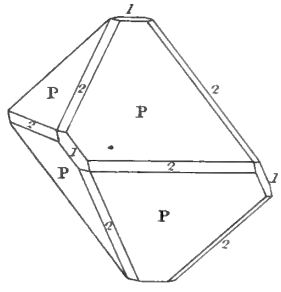

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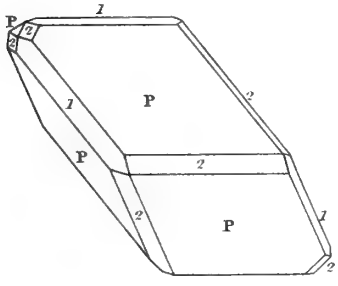

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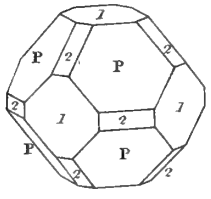

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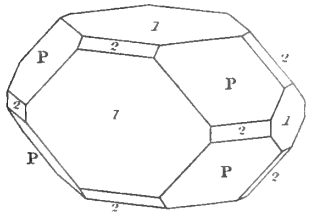

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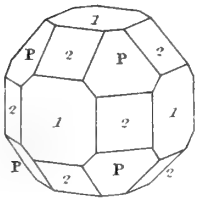

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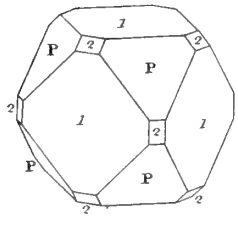

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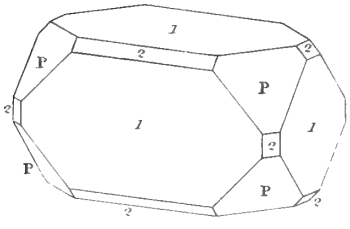

Second Modification continued.

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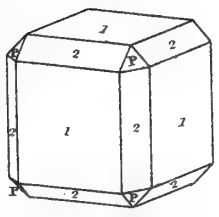

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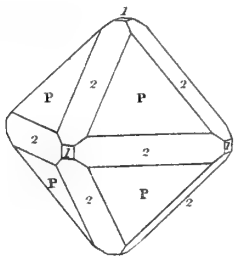

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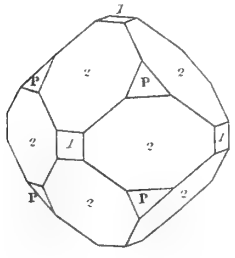

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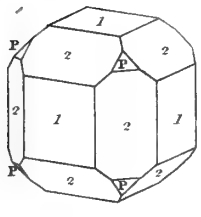

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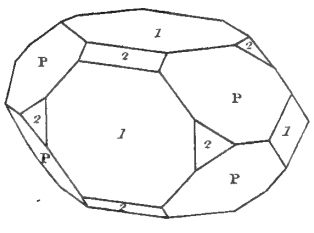

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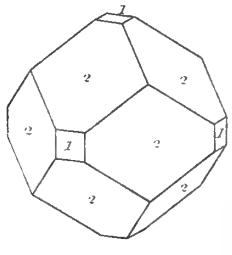

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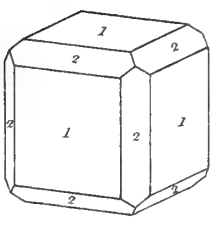

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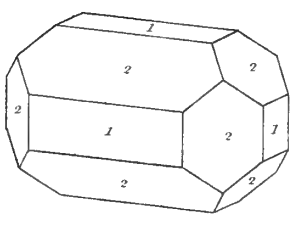

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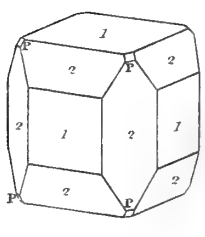
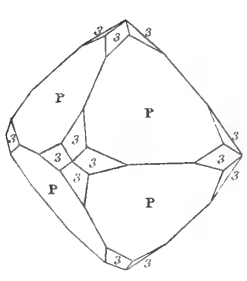


Third Modification.

Fig. 61.



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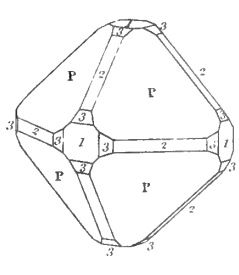

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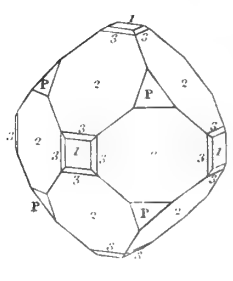
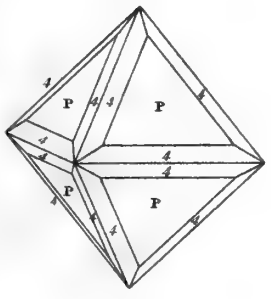


RED OXYD OF COPPER.

Fourth Modification.

Fig. 64.



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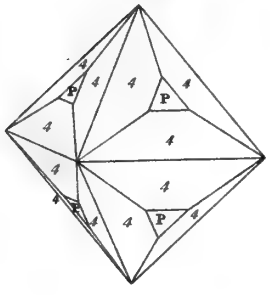

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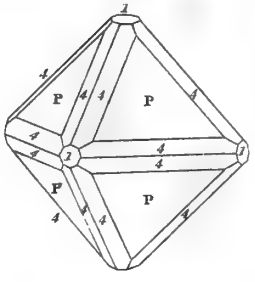

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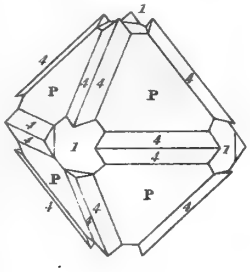

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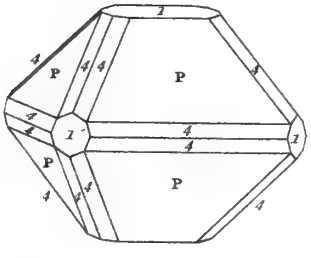

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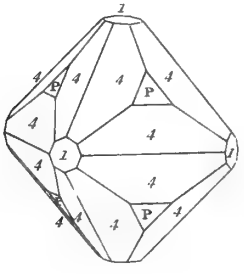

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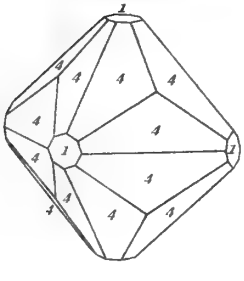

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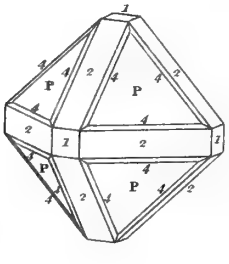

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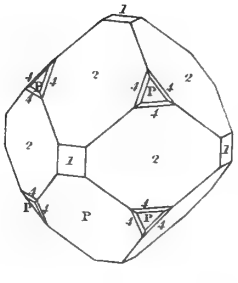

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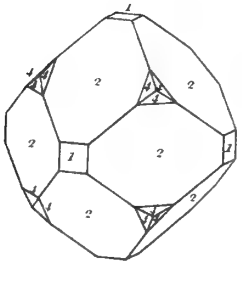

W. Phillips delin.

Published for the Society, by Cadell and Davies, London, 1811.

W. Lowry sculp.

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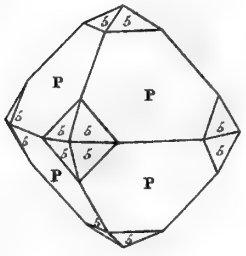
Fifth Modification.

Fig. 74.



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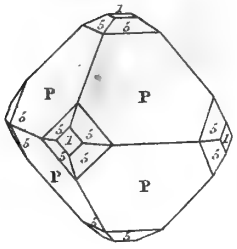

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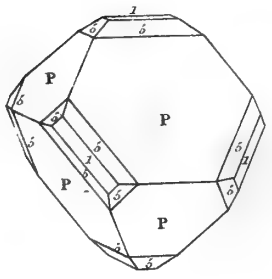

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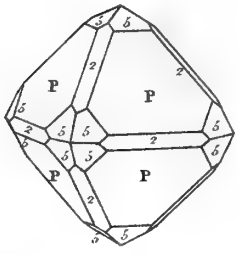

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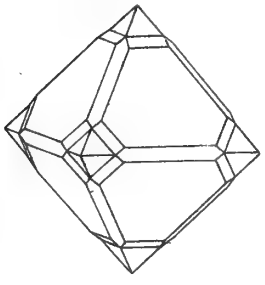

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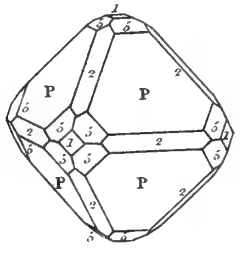

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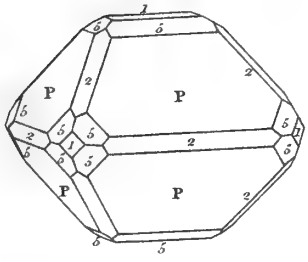

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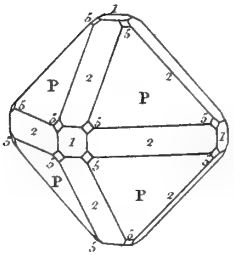

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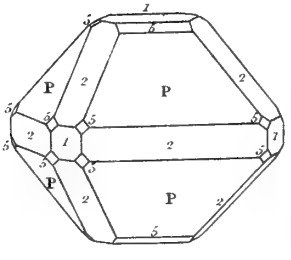

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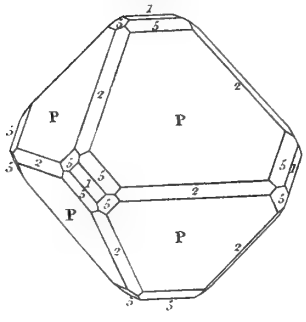

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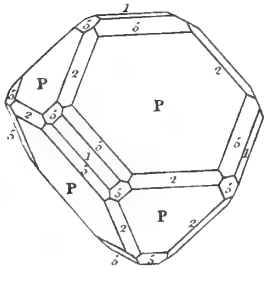

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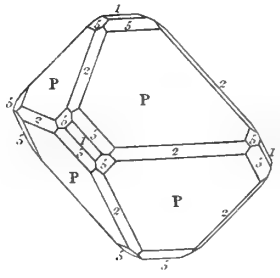
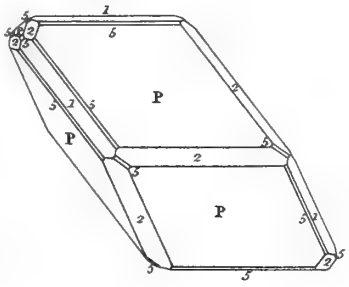


RED OXYD OF COPPER.

Fifth Modification continued.

Fig. 86.



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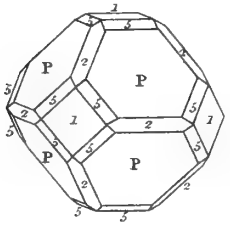

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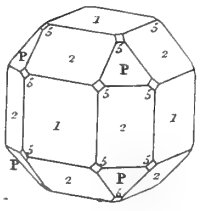

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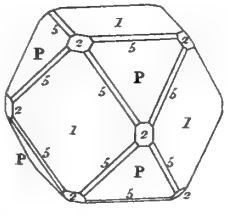

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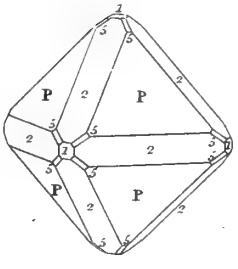

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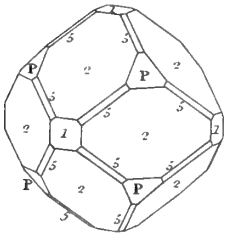

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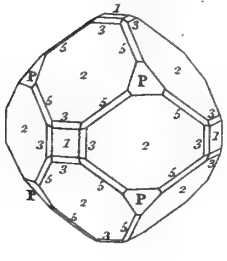

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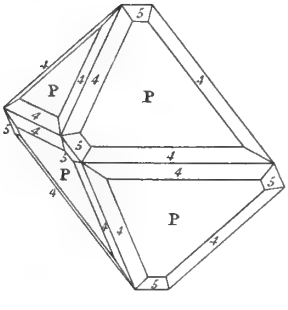

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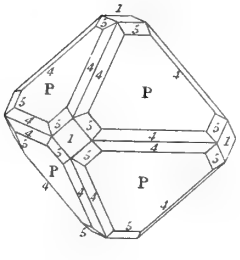

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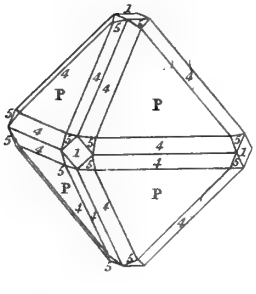

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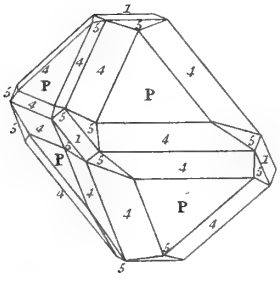
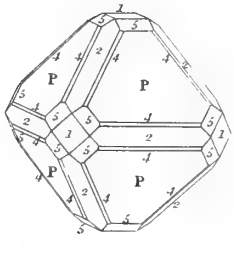


Fig. 97.



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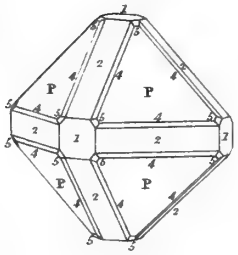
Fifth Modification continued.

Fig. 98.



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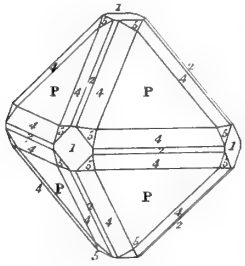

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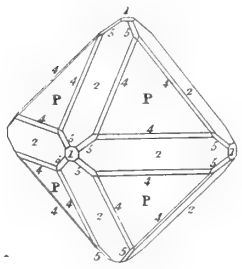

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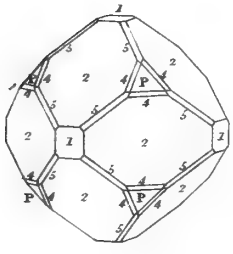

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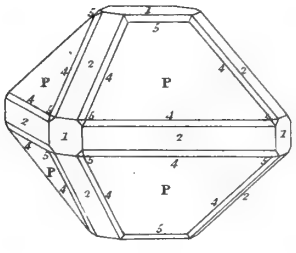

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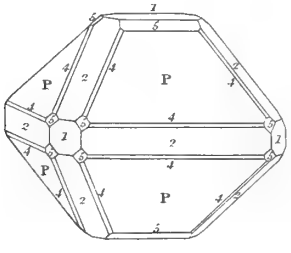

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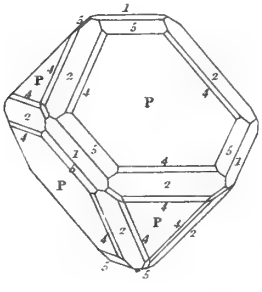

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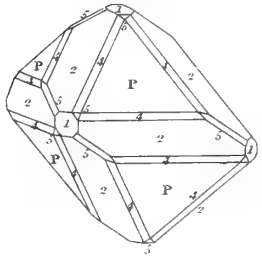
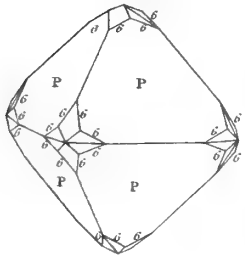


Sixth Modification.

Fig. 106.



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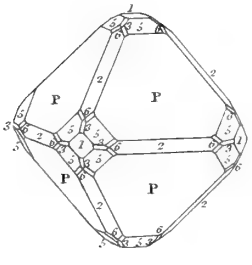

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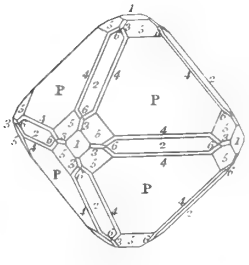

A MAP *ILLUSTRATIVE OF THE SITUATION &c. OF THE* SALT DISTRICT.

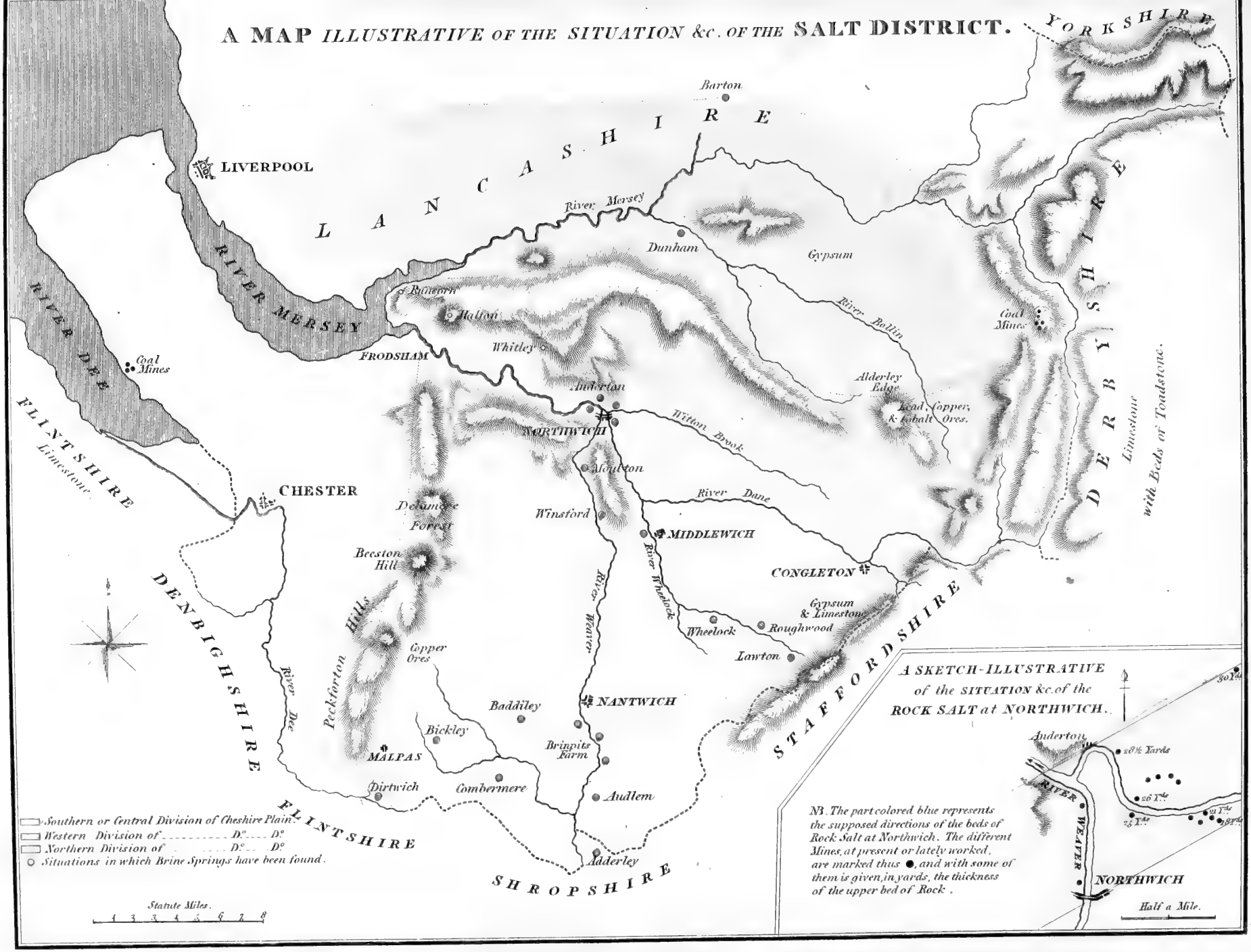

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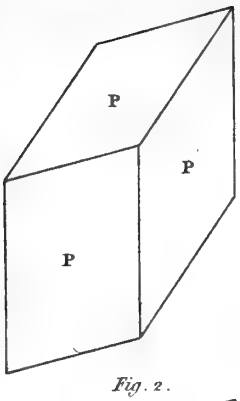
Fig. 1.



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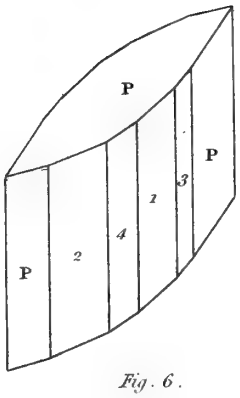

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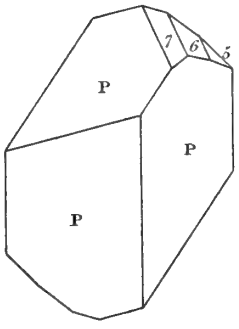

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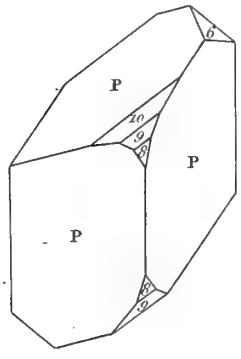

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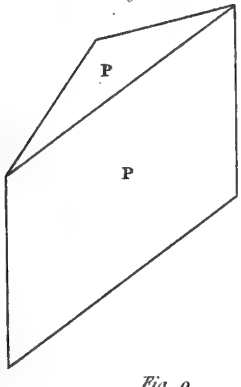

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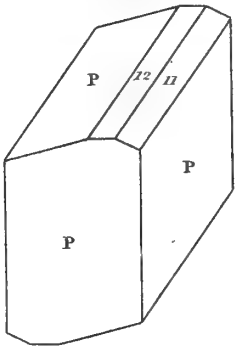

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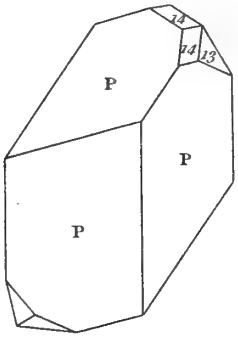

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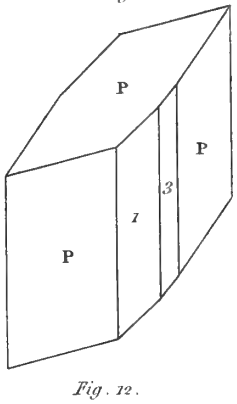

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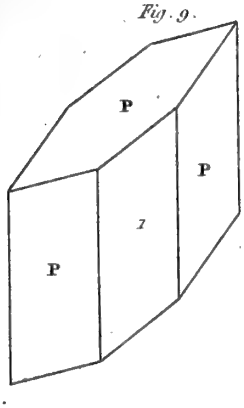

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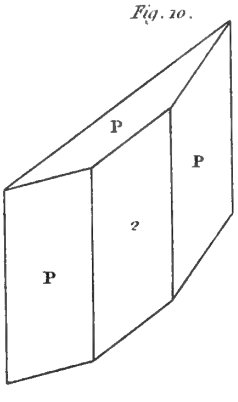

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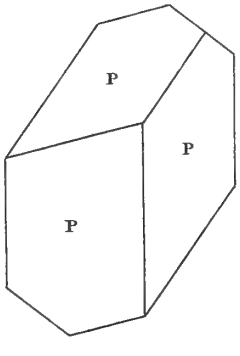

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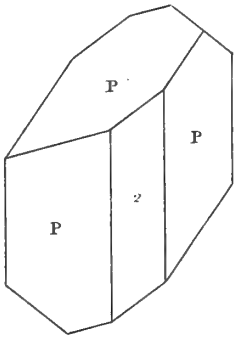

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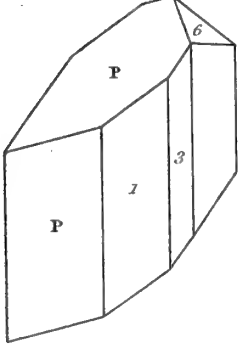

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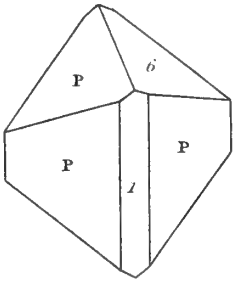

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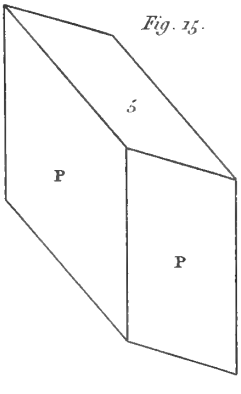

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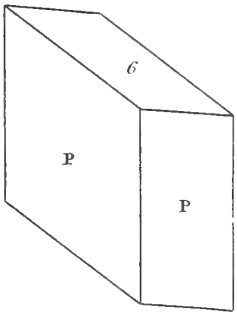

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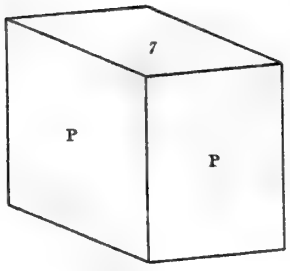
Fig. 17.



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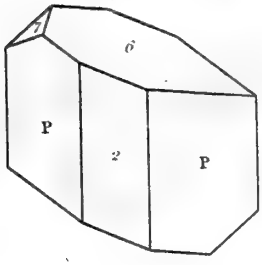

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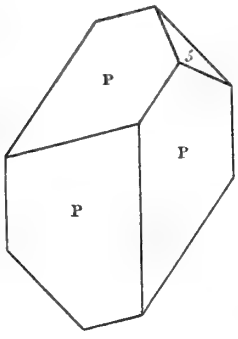

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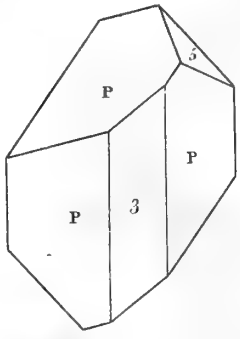

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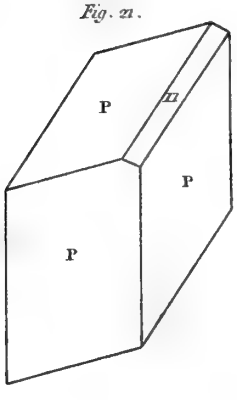

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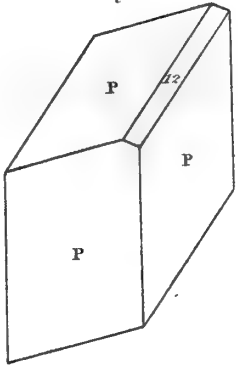

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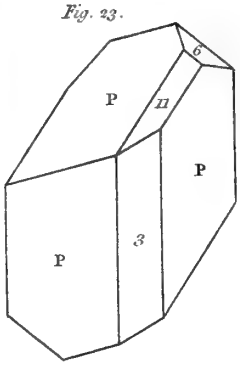

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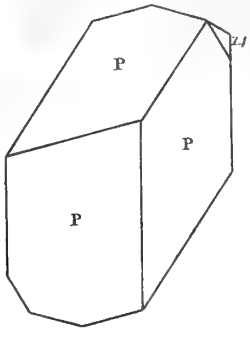

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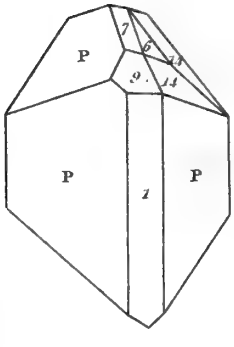

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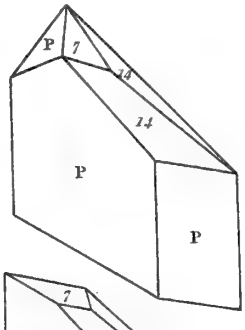

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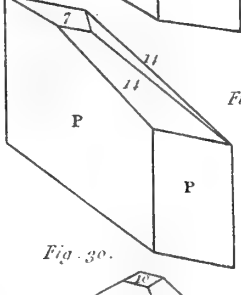

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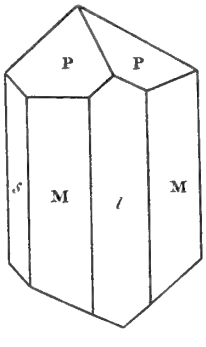

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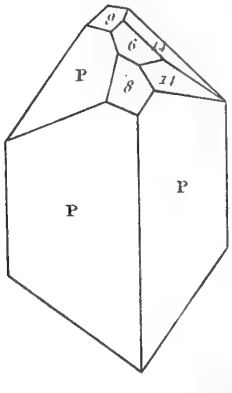

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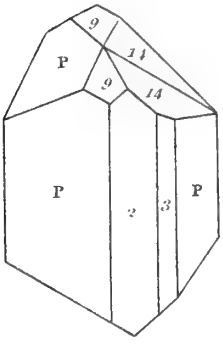

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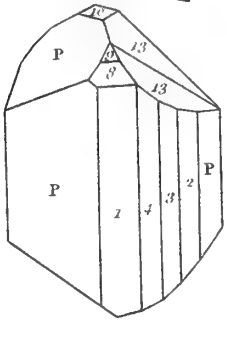

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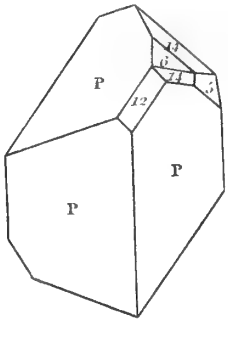

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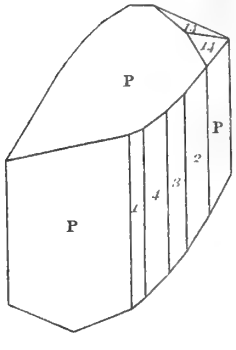

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A Section representing the principal mineral Formations of the Middle and Eastern part of Shropshire in the parallel of the Wrekin.

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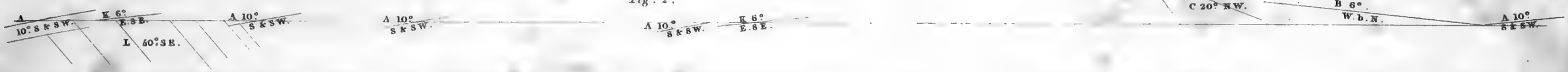
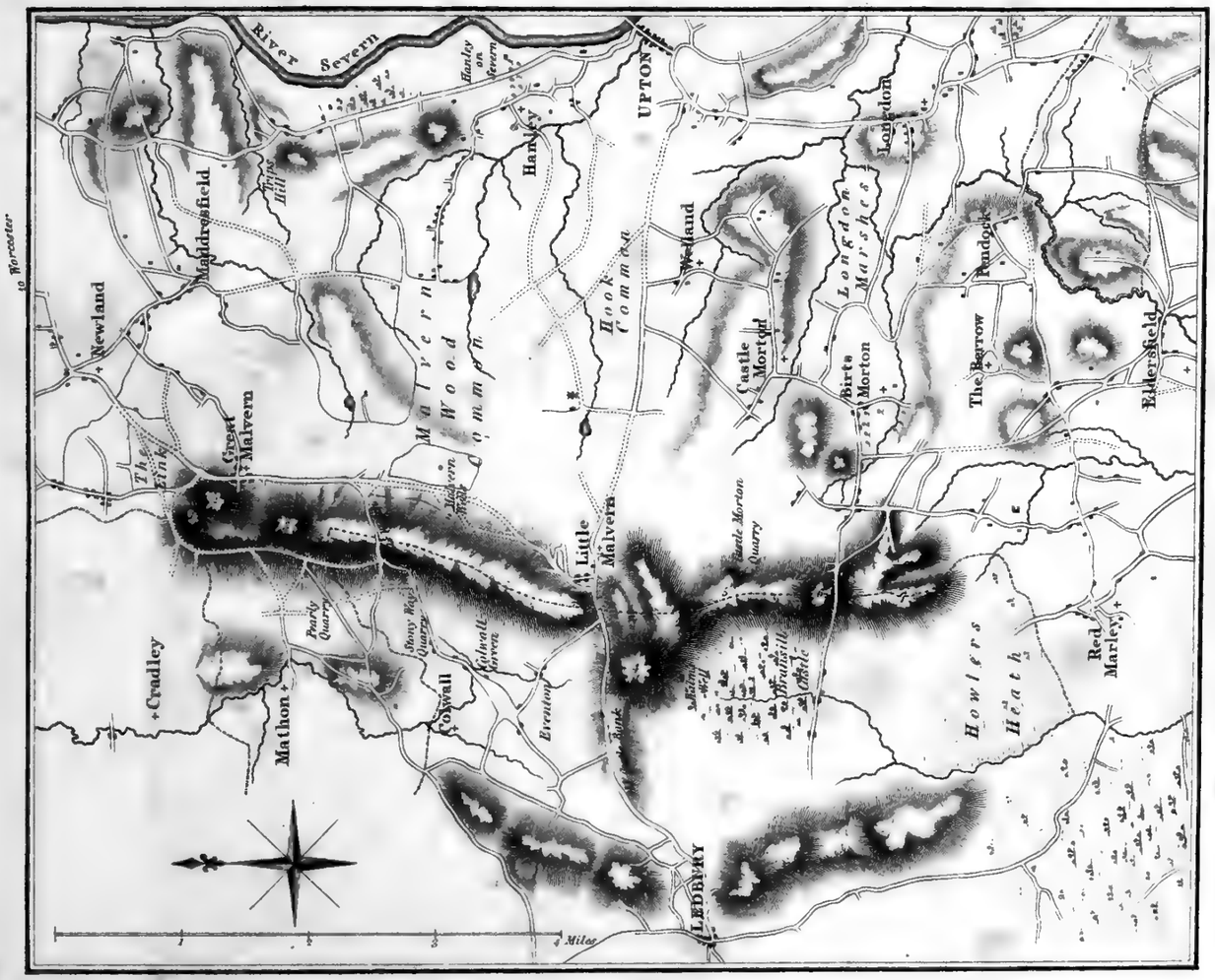
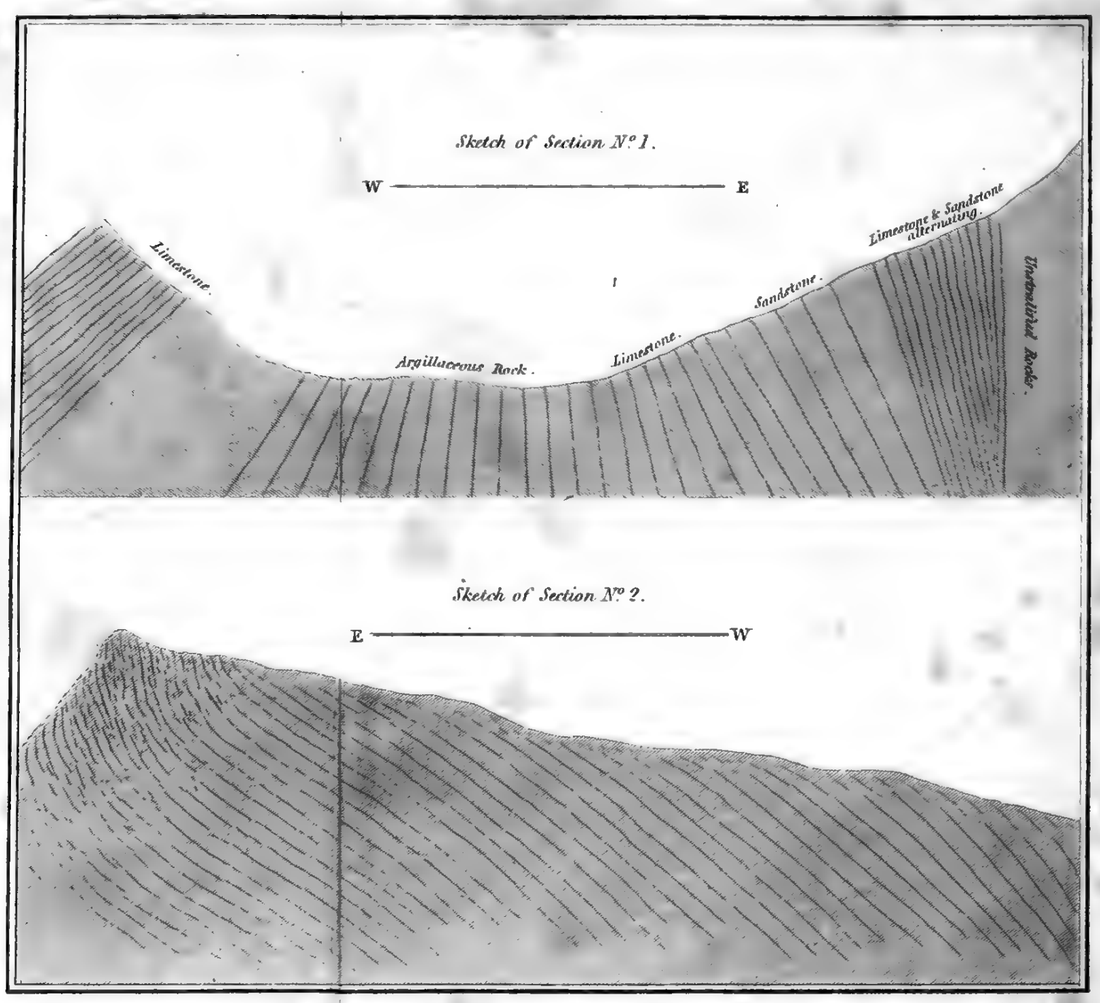
Fig. 1.

Fig. 2.



PLAN & SECTIONS OF THE MALVERN HILLS, & PART OF THE ADJACENT COUNTRY.





1. The End Hill. 3. The Worcestershire Beacon. 5. Swinnit Hill. 7. The Ragstone Hill.
2. The North Hill. 4. The Herefordshire Beacon. 6. The Holly Bush Hill.

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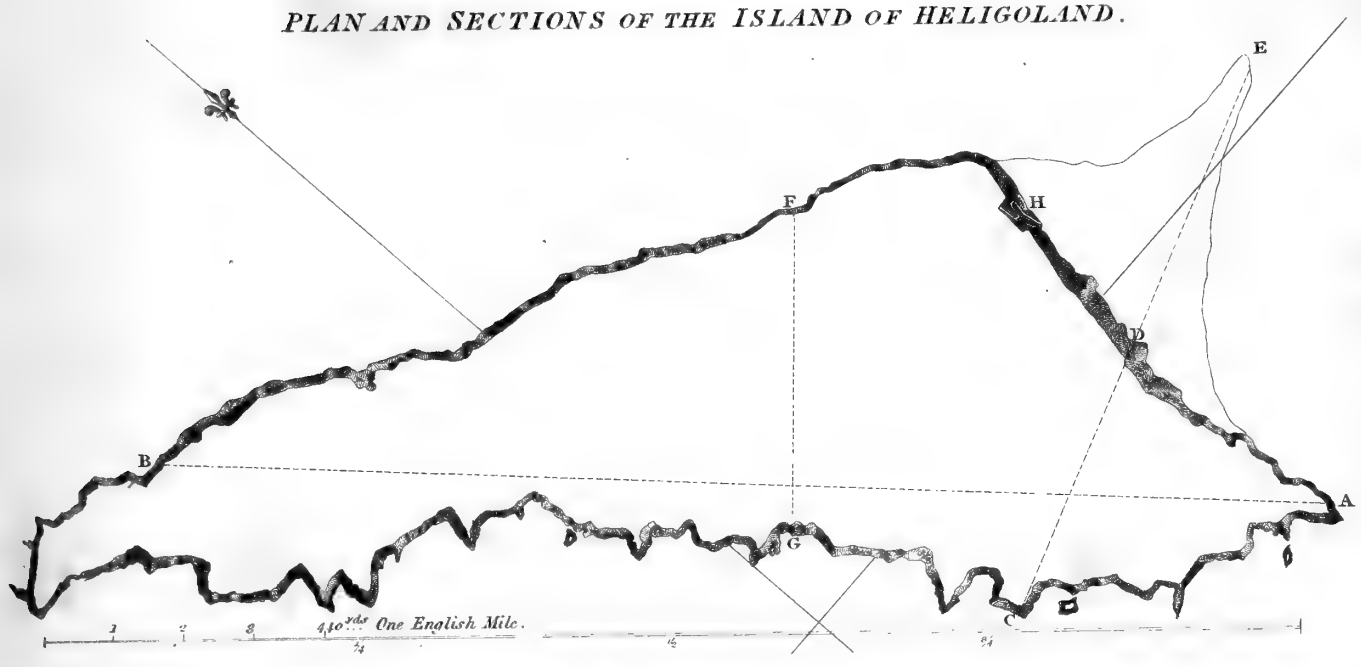
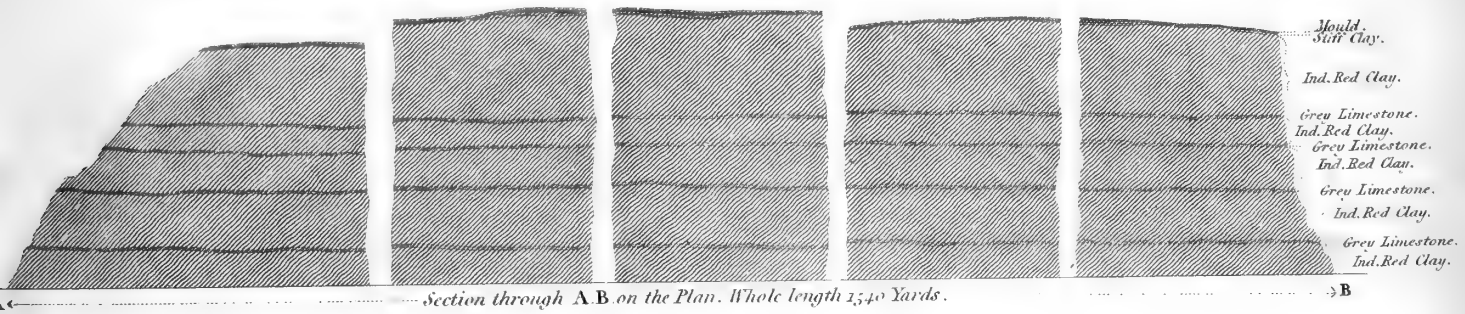
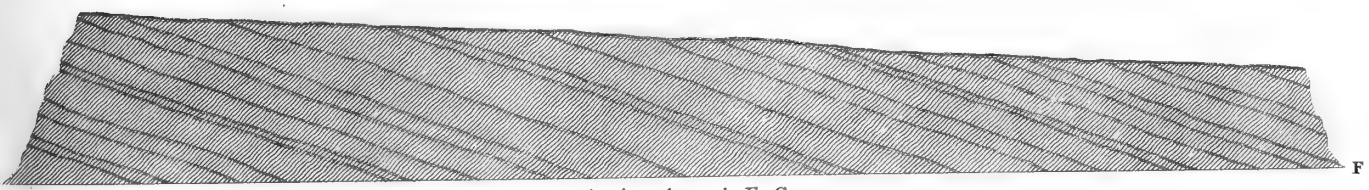
PLAN AND SECTIONS OF THE ISLAND OF HELIGOLAND.





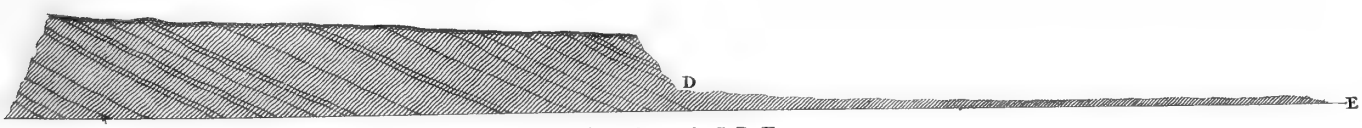
Section through A B on the Plan. Whole length 1540 Yards.

300 Feet.



Section through F G.

400 Feet.



Section through C D E.

600 Feet.

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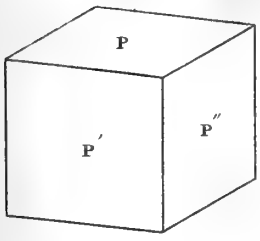
TABLE OF MODIFICATIONS OF THE PRIMITIVE CRYSTAL OF BARDIGLIONE.

Fig. 1.



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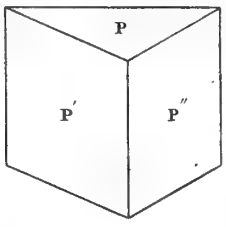

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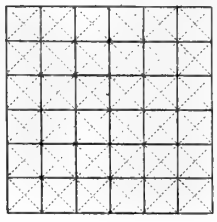
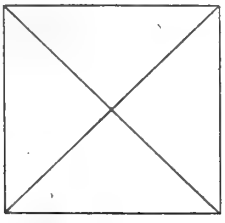


Fig. 3.



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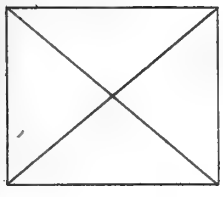

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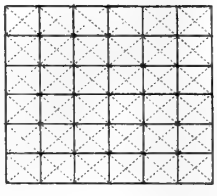

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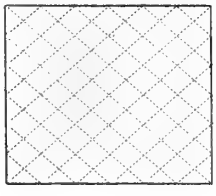
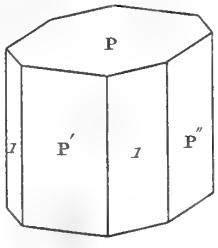


Fig. 8.



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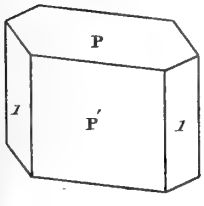

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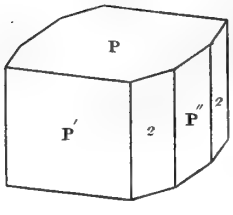

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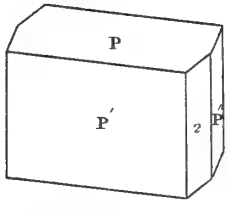

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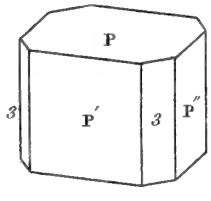

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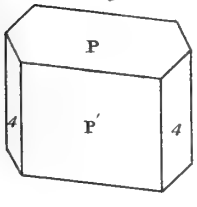


Fig. 14.

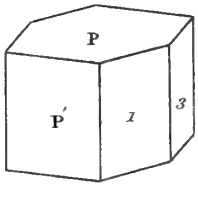


Fig. 15.

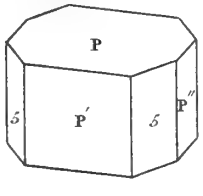


Fig. 16.

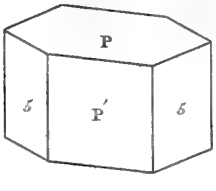
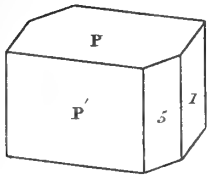


Fig. 17.



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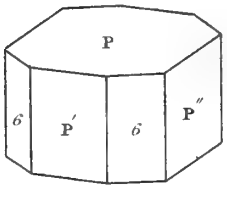

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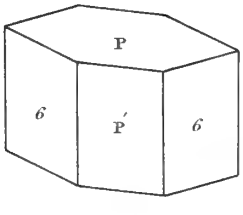
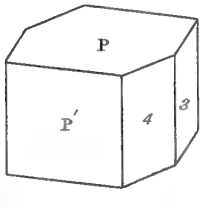


Fig. 20.



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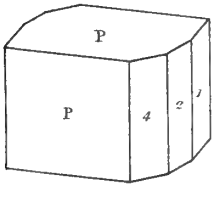

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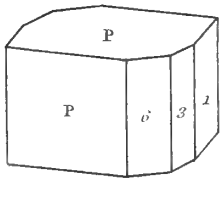

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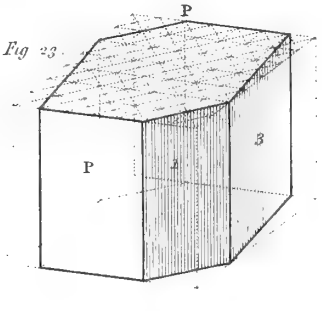

Wilson Lowry Sculp.

Published for the Society, by Cadell and Davies, London, 1811.

PLATES AND MAPS

IN ILLUSTRATION OF

THE SECOND VOLUME

OF THE

TRANSACTIONS

OF

THE GEOLOGICAL SOCIETY.

LONDON:

PRINTED AND SOLD BY WILLIAM PHILLIPS, GEORGE YARD, LOMBARD STREET.

1814.

DESCRIPTION OF THE PLATES.

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Map and Sections of the Isle of Man, in illustration of Dr. Berger's paper, Page 29.

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c d is the lower limit of Turbary ground, at the height of 1378 feet above the sea.

e f is the lower limit of Turbary ground, in another part of the island, at the height of 692 feet above the sea.

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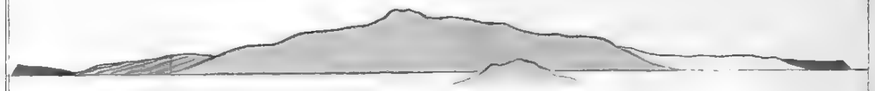
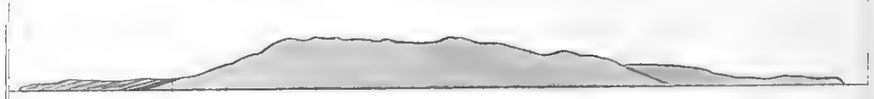
N. B. The Figure attached to each Specimen is intended to express the number of times it is magnified in the Drawing.

Section of the Isle of Man from Aire head to the Calf of Man.



Section from Langness to Peel town.

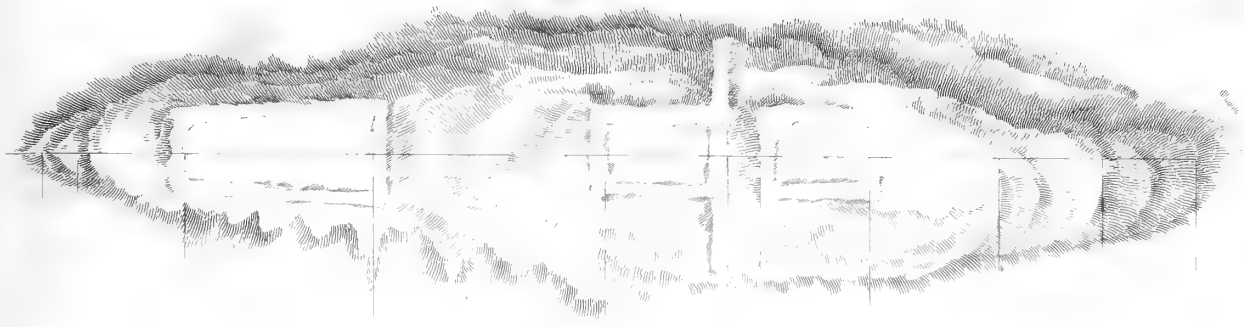


Section from Douglas bay to Kirk Michael.

Section from Duns how to Jurby Point.

London. Published by Wm. Phillips 1814.

Plan of the intended pit on Dunscar Moor Lancashire

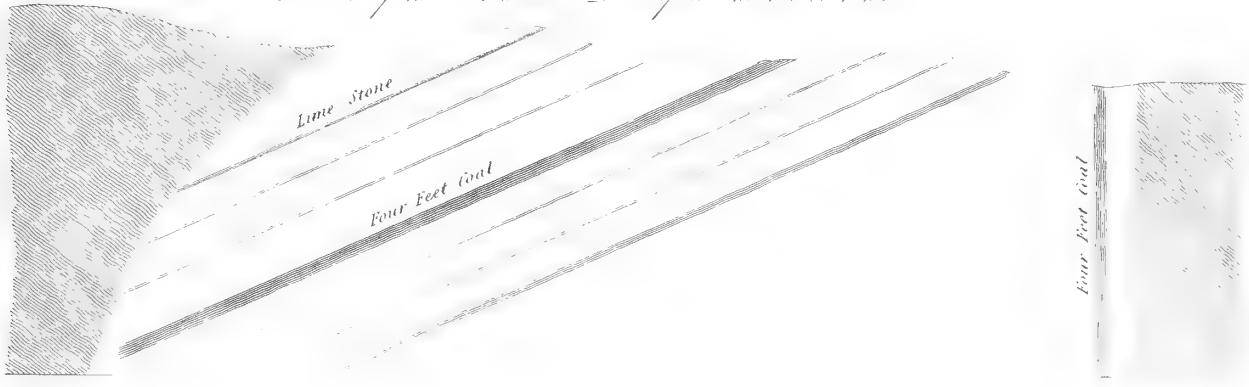


12 32 56 70 37 10 30 36 34 26

Scale of Paces.

Plan of the Bradford Coal field, near Manchester

Section of the Strata at Bradford near Manchester



Published by W. Phillips London, 1814.

Logging Stone.

Cheese-coring

Vixen Torr.

Pubd. 1st Jan. 1827 by William Phillips, London.

GROUND PLAN.

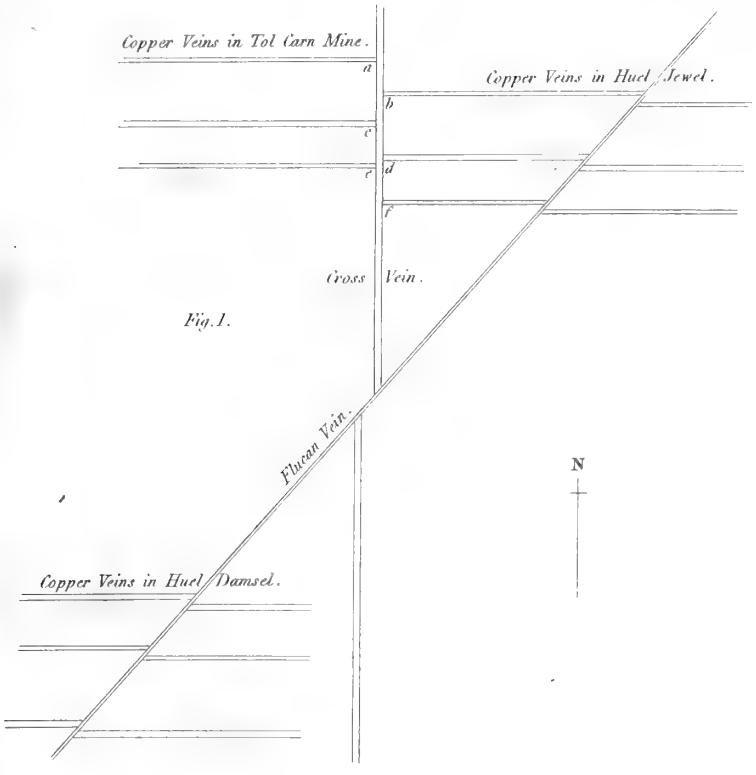


Fig. 1.

Fig. 2.

***SLIDE**, N. & S. Section.*

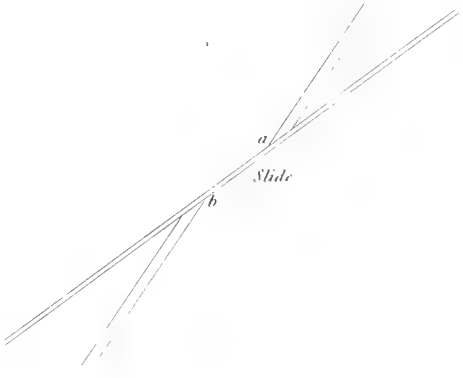


Fig. 3.

***FEEDER**, N. & S. Section.*

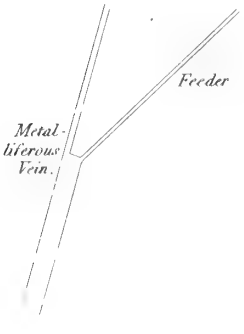


Fig. 4.

***COURSE FLUCAN**, N. & S. Section.*

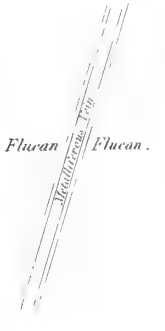


Fig. 5.

***LEADER**, N. & S. Section.*

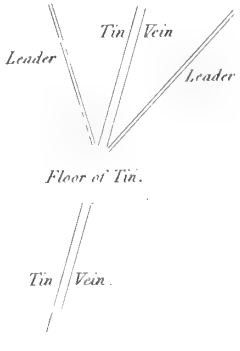
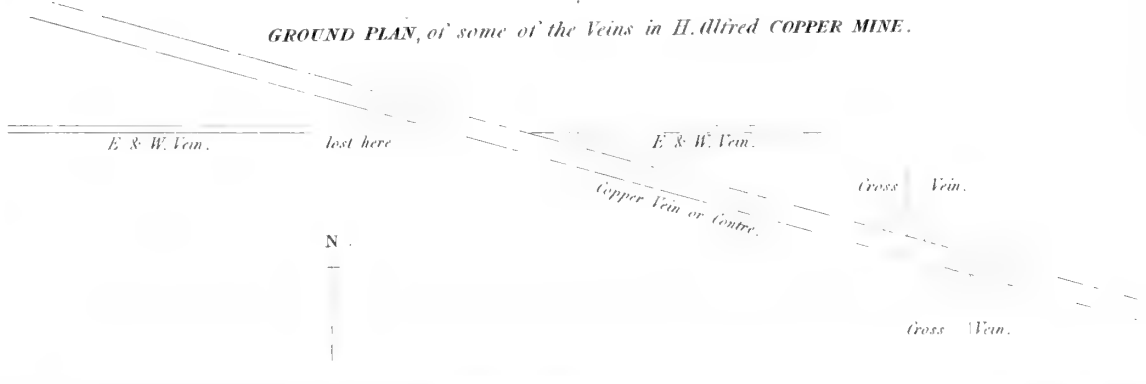


Fig. 6.

***GROUND PLAN**, of some of the Veins in Hallfred COPPER MINE.*



VEINS OF CORNWALL.

Fig. 7.

SECTION OF GOON LAZ AND THE PINK MINE

from Prices Mineral Cornub.

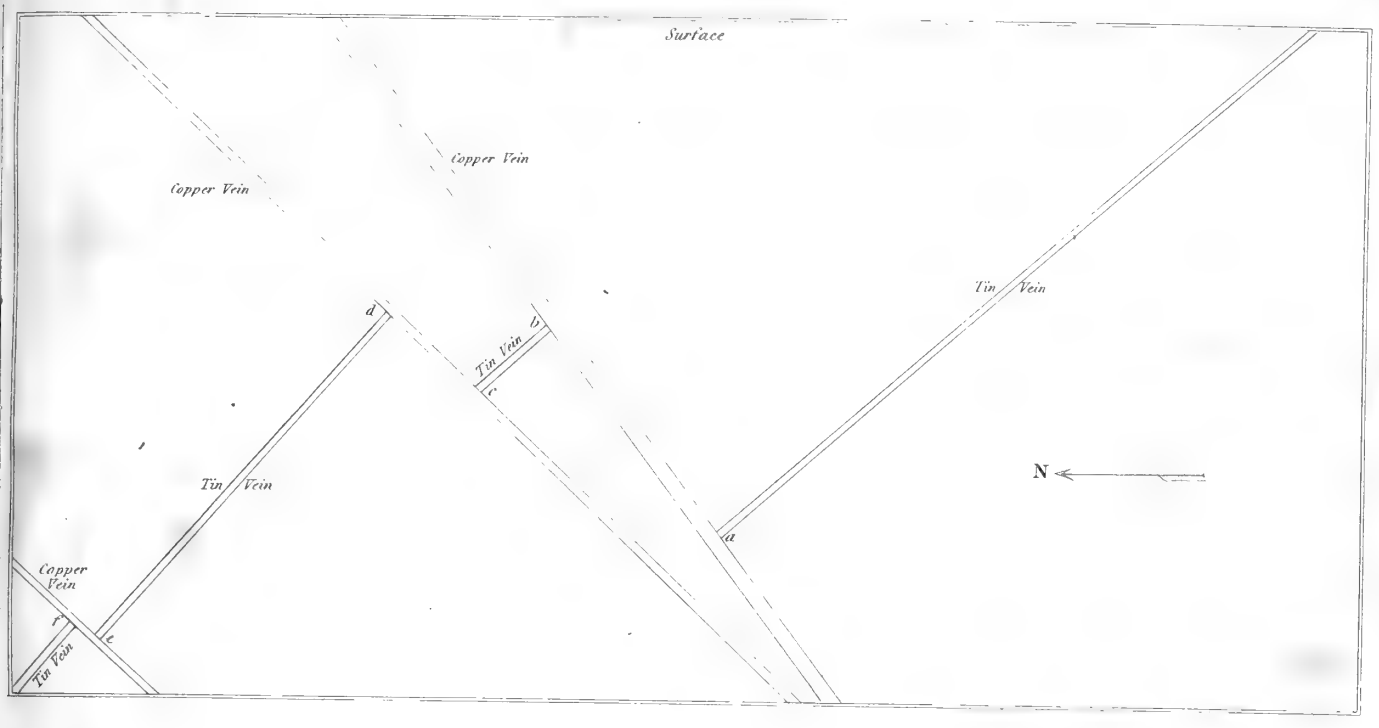
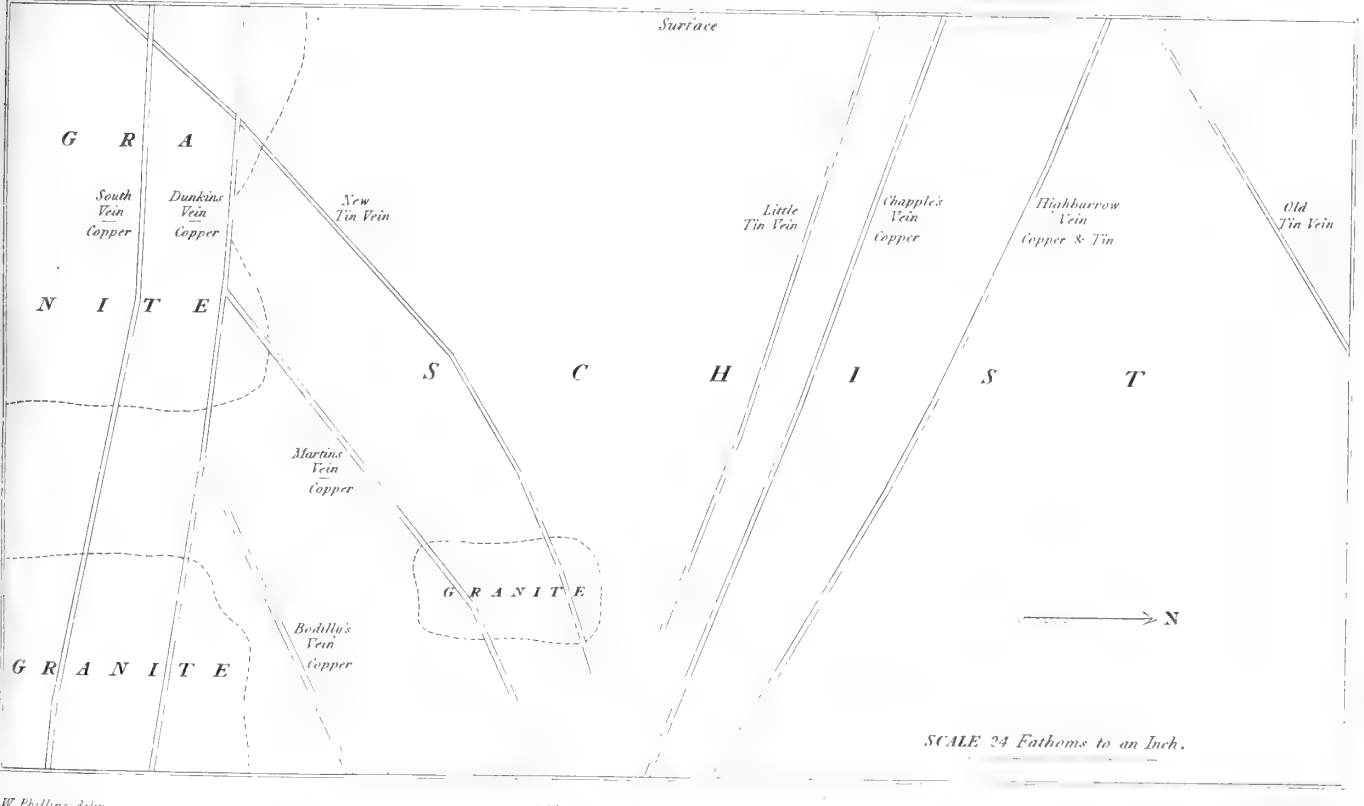


Fig. 8.

SECTION OF TIN CROFT MINE.



W Phillips delin.
Published by William Phillips, London 1815.
W. Lowry Sculp.

Mines.

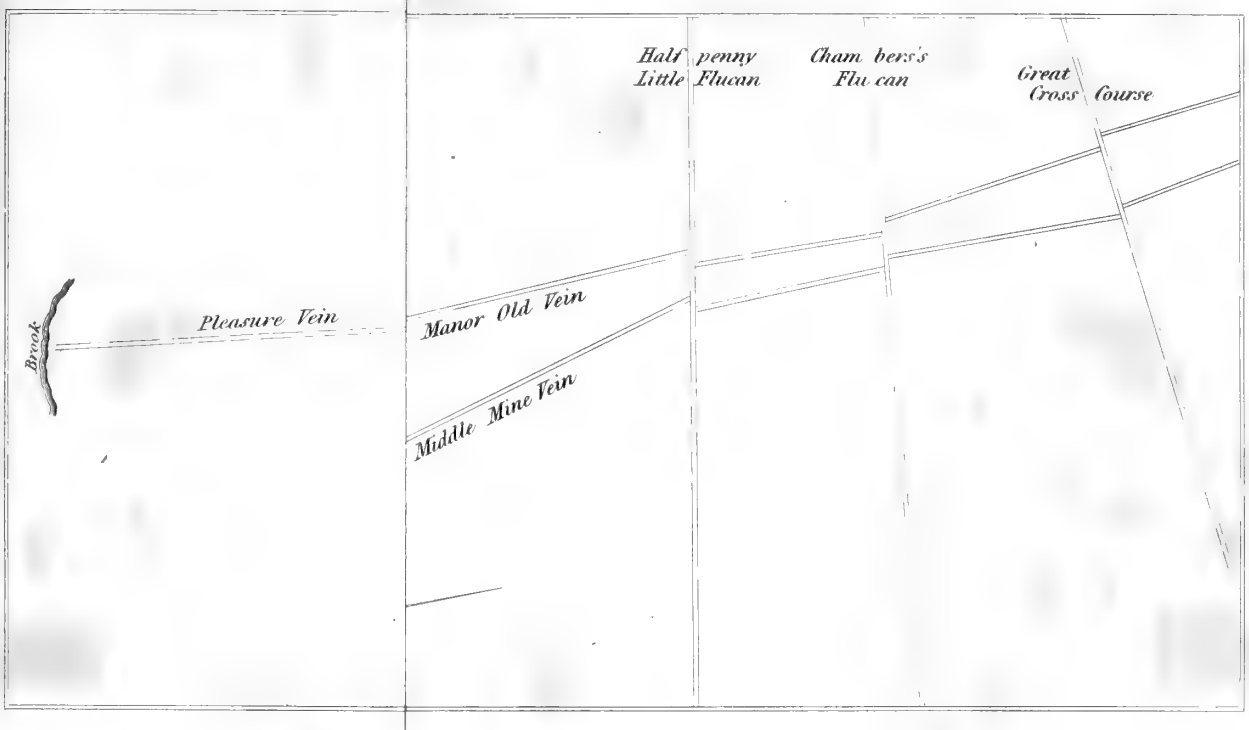
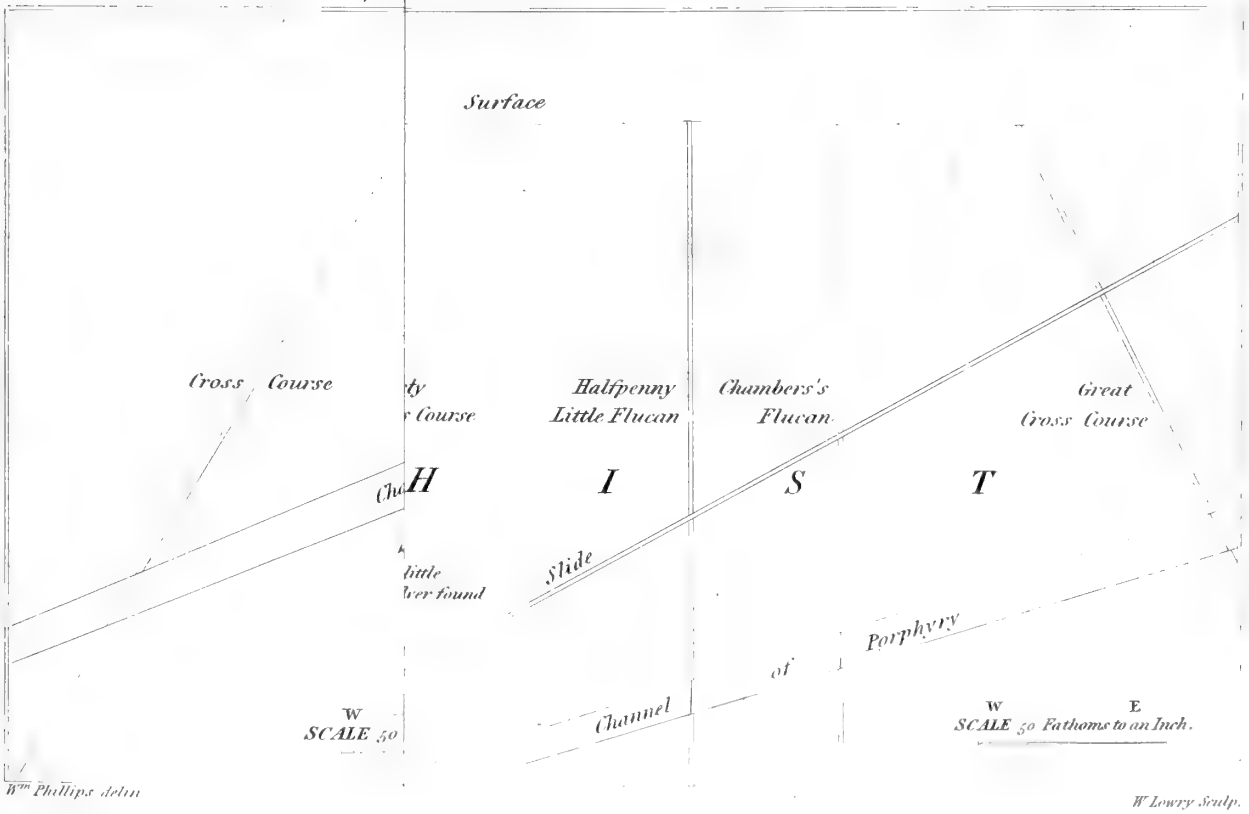


Fig. 11.

Section of the Manor Old Vein.



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W Lowry Sculp.

Veins of Cornwall.

Fig. 9.

Ground Plan of Herland and Dranack, and Prince George Copper Mines.

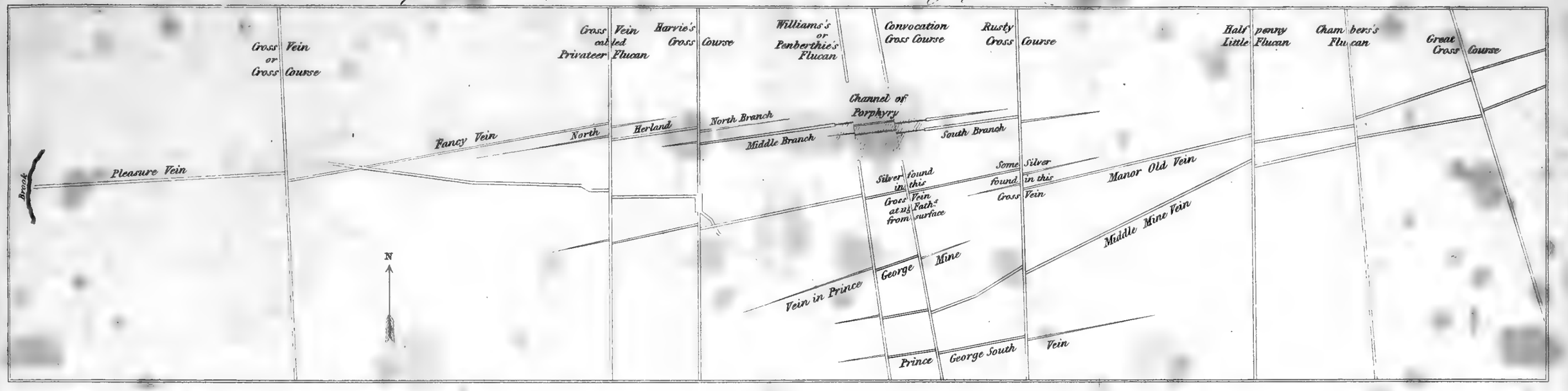
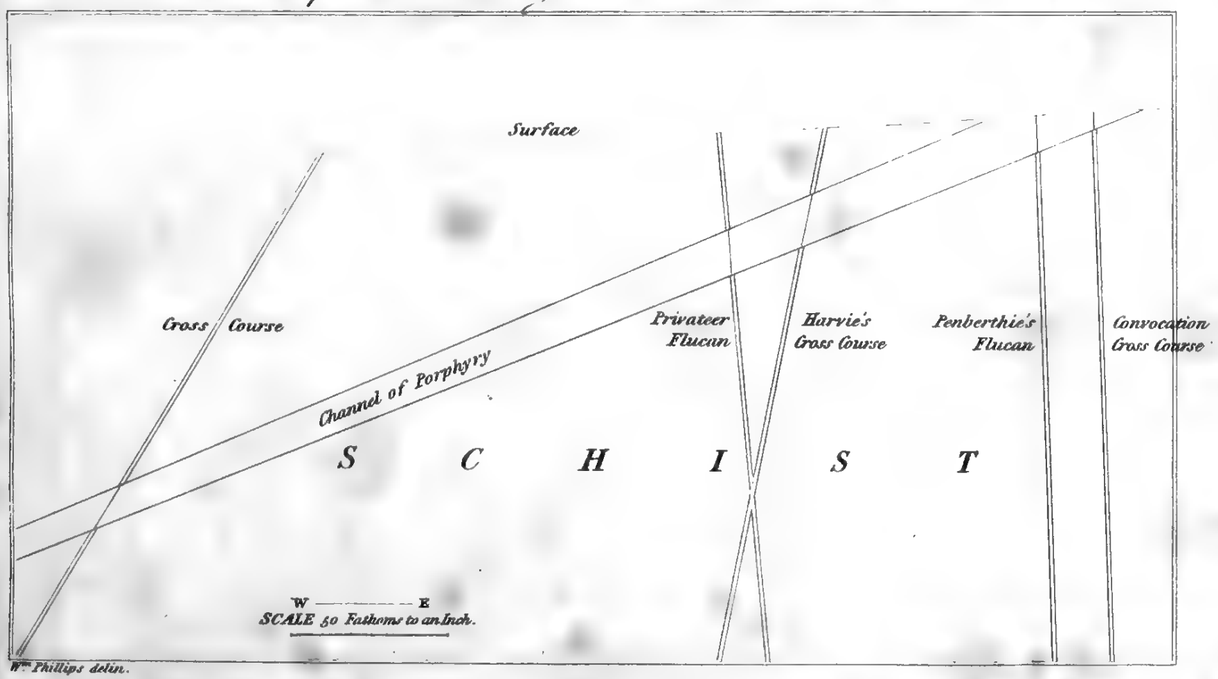


Fig. 10.

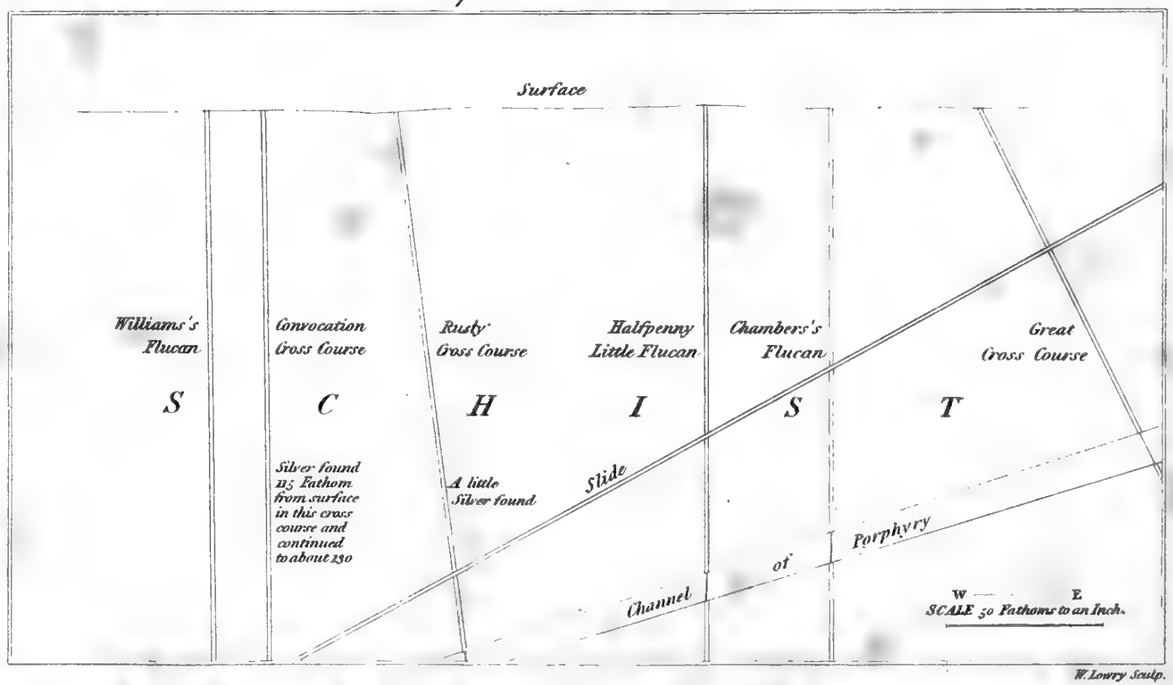
Section of Pleasure, Fancy and North Herland Veins.



Wm. Phillips delin.

Fig. 11.

Section of Manor Old Vein?



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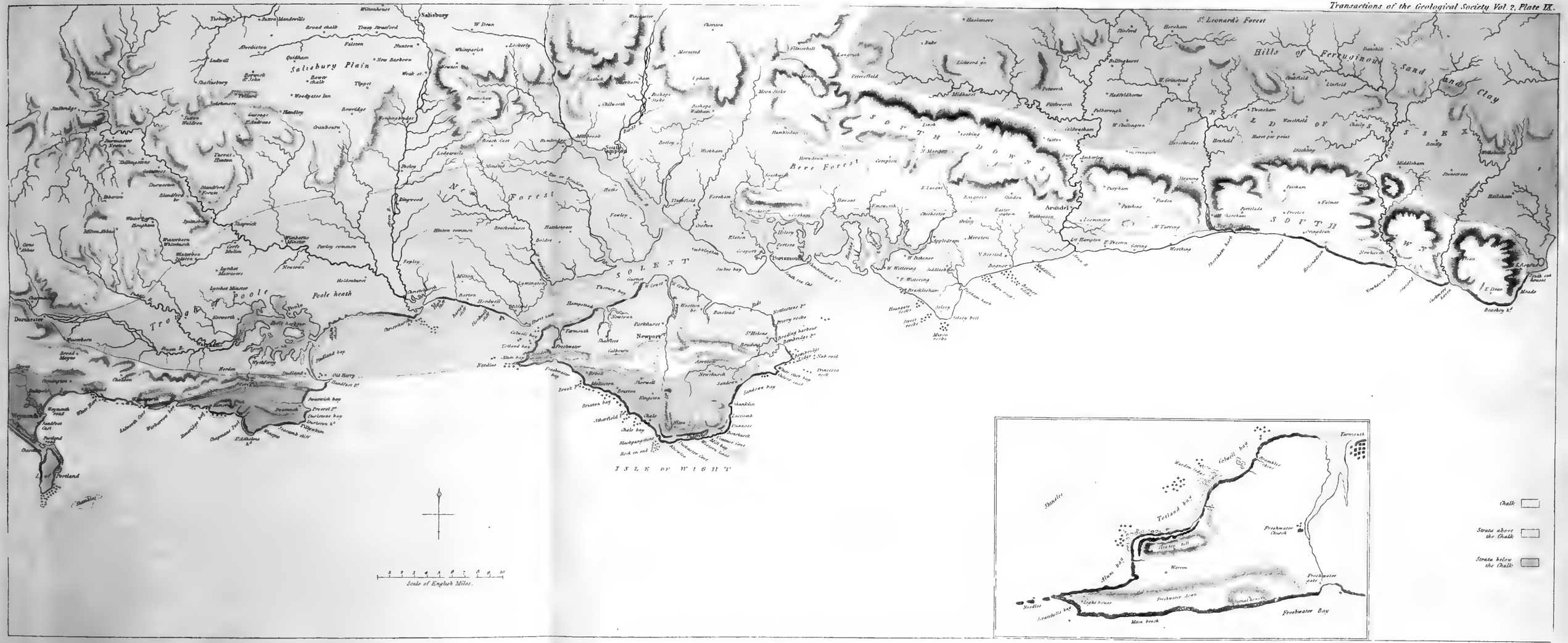
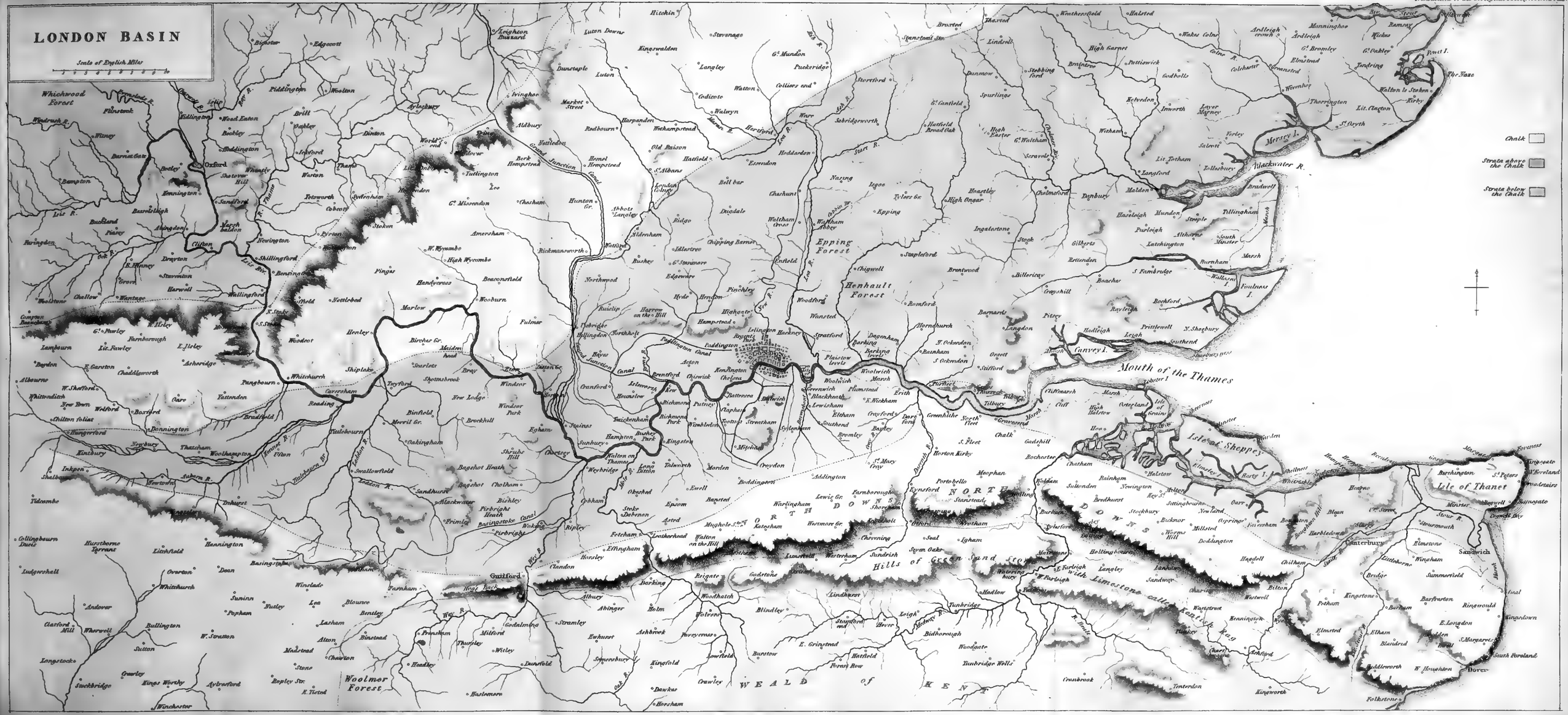
Published by Wm. Phillips, London. 1824.

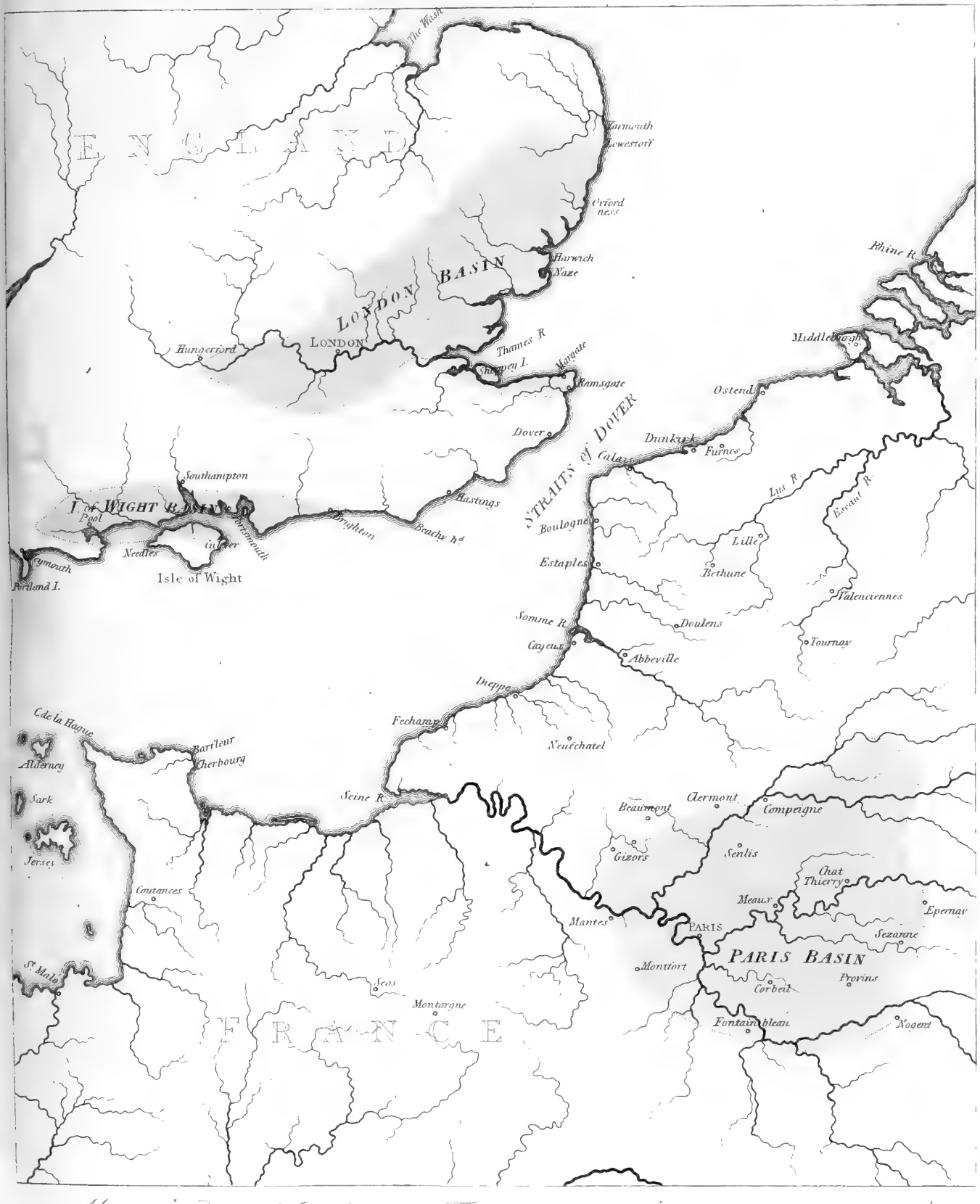
HAMPSHIRE or ISLE of WIGHT BASIN.

Transactions of the Geological Society Vol. 2. Plate IX.



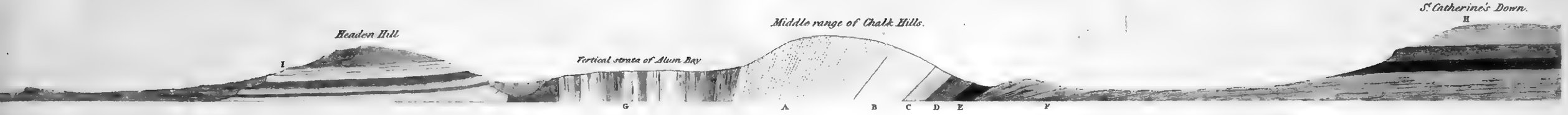
Published by W. Phillips, London, 1814.


LONDON BASIN
Scale of English Miles
Chalk
Strata above the Chalk
Strata below the Chalk
Epping Forest
Henhault Forest
Mouth of the Thames
Isle of Sheppey
Isle of Thanet
NORTH DOWNS
Hills of Green Sand
with Limestone called Kentish Rag
WEALD of KENT
Woolmer Forest
Whichwood Forest
Mersey I.
Canvey I.
Foulness I.
Blackwater R.
Thames
Medway
Published by W. Phillips, London. 1814.

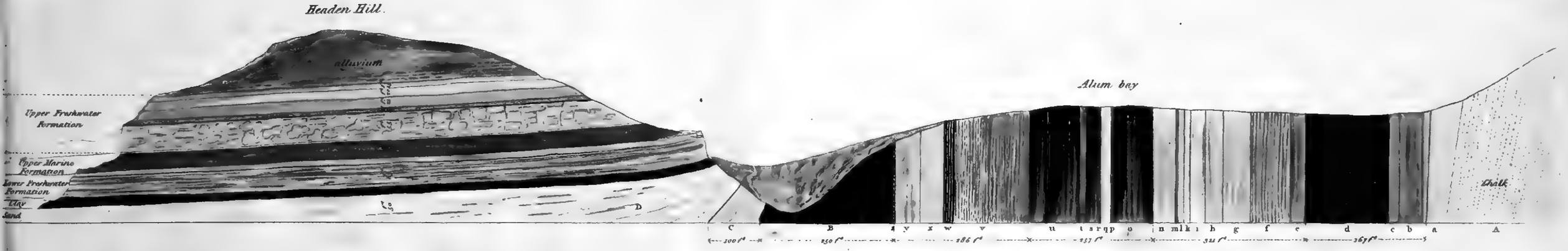


Map of Part of England & France, shewing the relative situations of the Paris, London & Isle of Wight Basins.

Published by W. Phillips London 1814



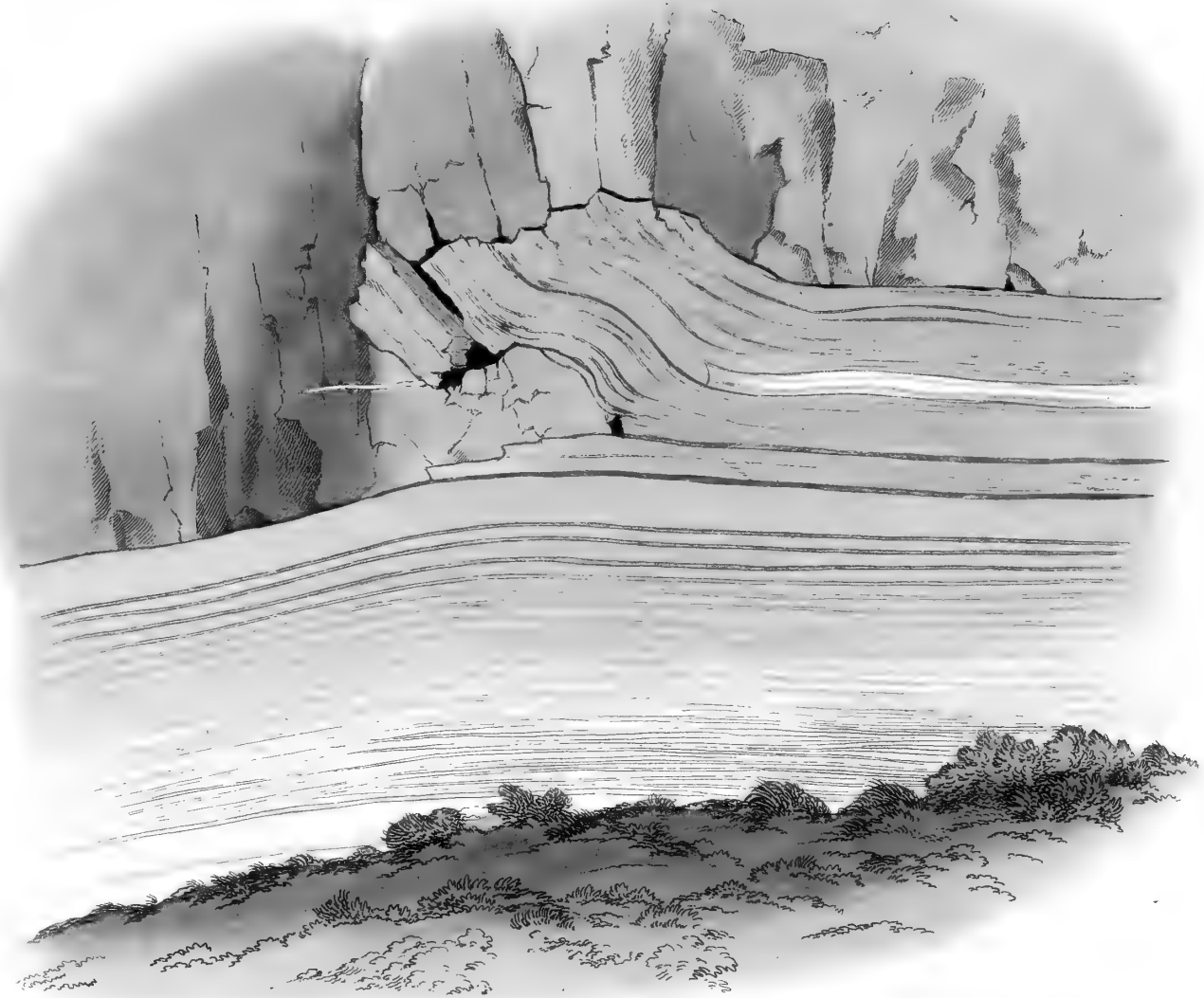
Section of the Isle of Wight from North to South.



Published by Wm. Phillips. London. 1814.

Junction of Sandstone & Trap, at Stirling Castle

Engraved by Basire



Junction of Sandstone & trap, at Stirling Castle.

Fig 1

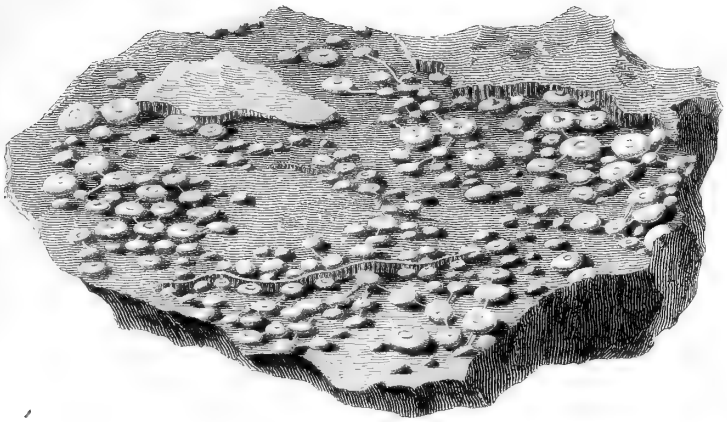


Fig 2

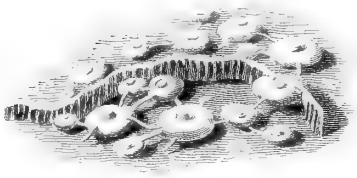


Fig 4

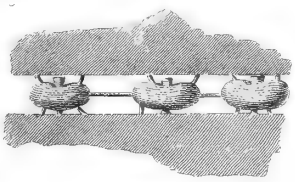


Fig 3

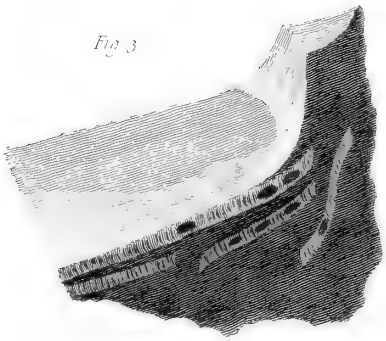


Fig 5

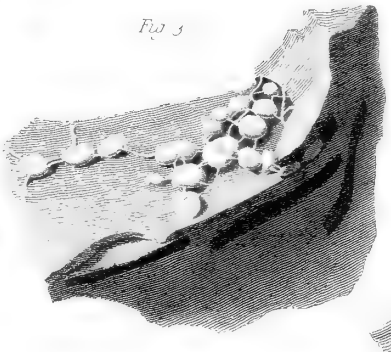


Fig 7

Fig 8

Fig 6

Fig 5

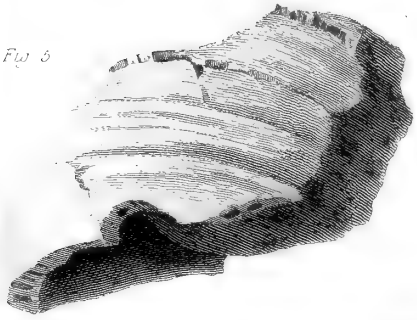


Fig 9

OXYD OF TIN.

Primitive Crystal.

Fig. 1.

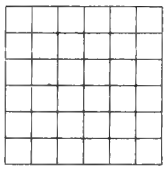


Fig. 2.

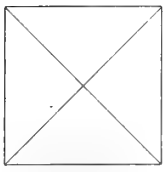


Fig. 3.

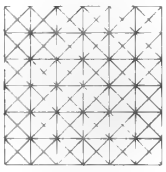


Fig. 4.

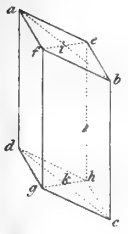
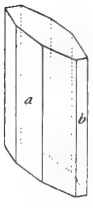


Fig. 5.



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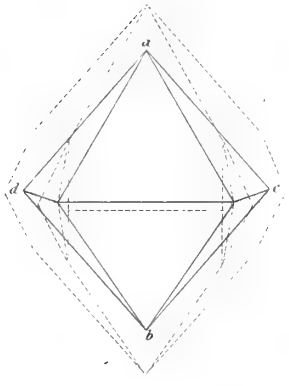

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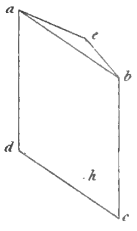

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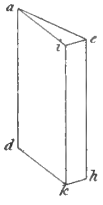

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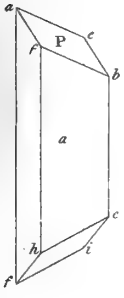
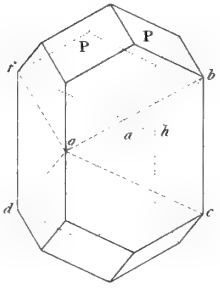


Fig. 10.

Fig. 11.



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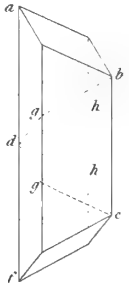

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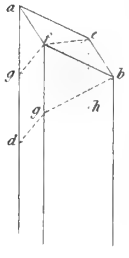
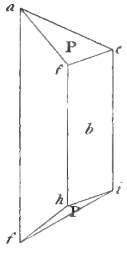


Fig. 14.



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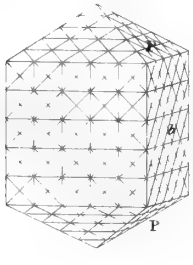

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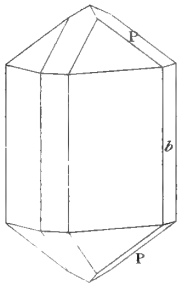
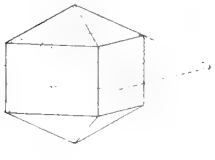


Primitive.

Fig. 17.



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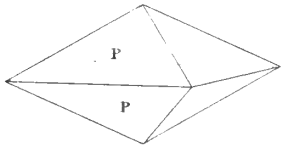


OXYD OF TIN.

First Modification.

Fig. 19.

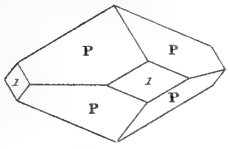


Fig. 20.

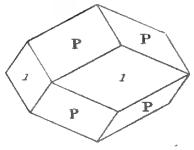
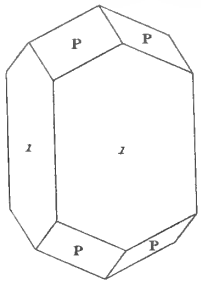
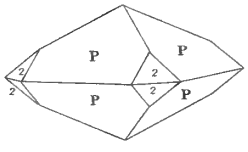


Fig. 21.



Second Modification.

Fig. 22.



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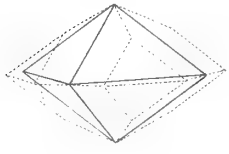
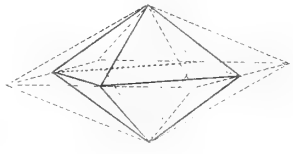


Fig. 24.



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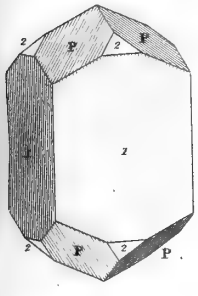


Fig. 26.

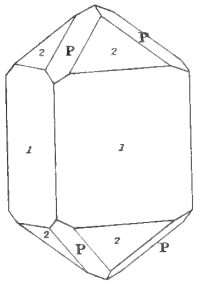
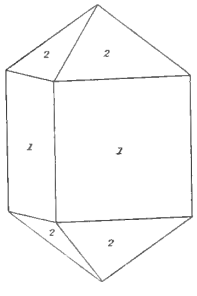


Fig. 27.



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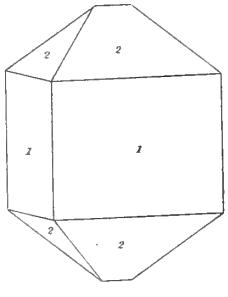


Fig. 29.

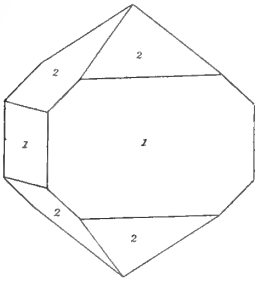


Fig. 30.

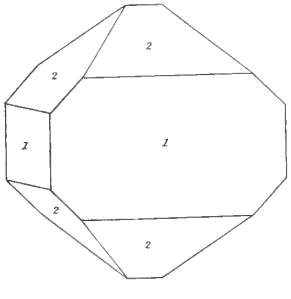
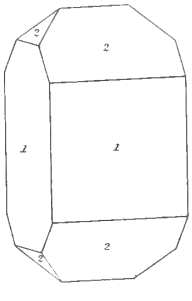


Fig. 31.



Third Modification.

Fig. 32.

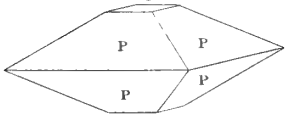
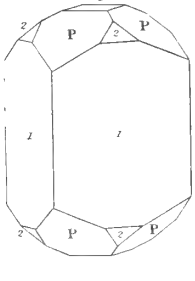


Fig. 33.



OXYD OF TIN.

Fourth Modification.

Fig. 34.

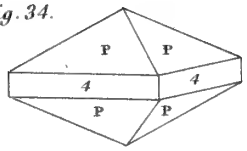
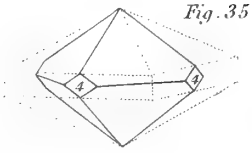


Fig. 35.



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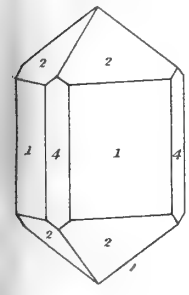


Fig. 37.

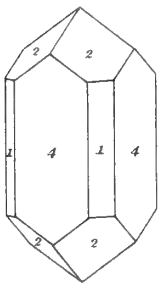


Fig. 38.

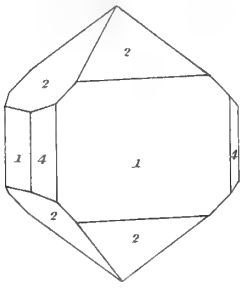
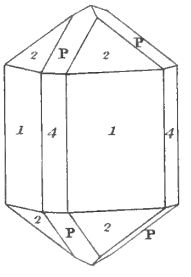


Fig. 39.



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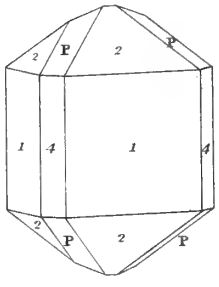


Fig. 41.

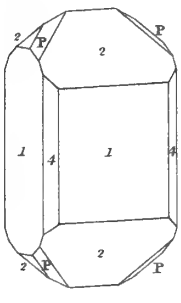


Fig. 42.

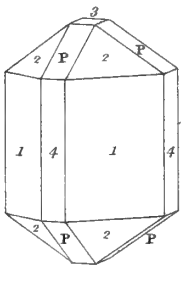
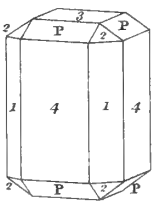


Fig. 43.



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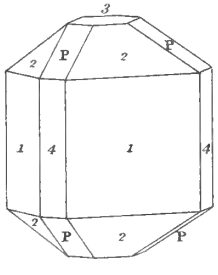


Fifth Modification.

Fig. 45.

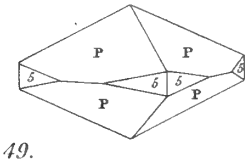


Fig. 46.

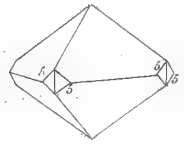


Fig. 47.

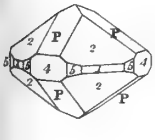


Fig. 48.

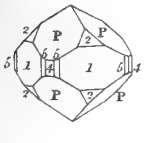


Fig. 49.

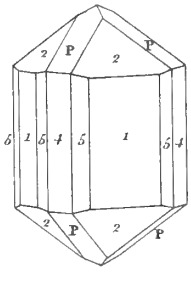


Fig. 50.

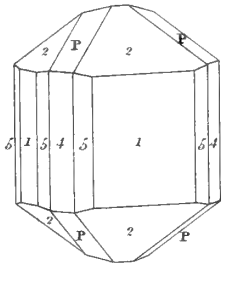
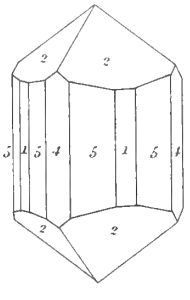


Fig. 51.



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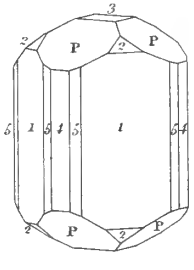

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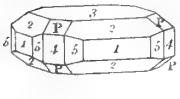

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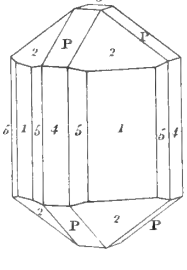

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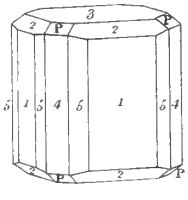

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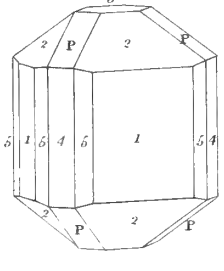

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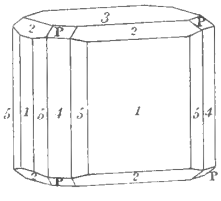

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Sixth Modification.

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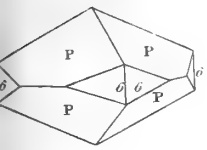

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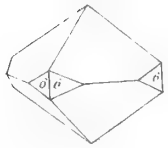

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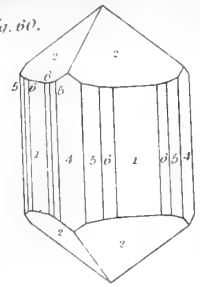

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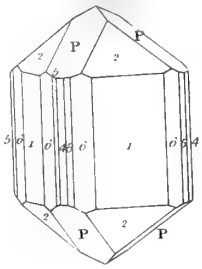

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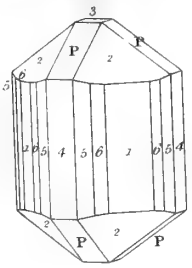
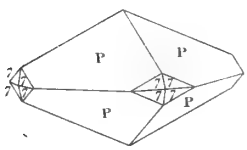


Seventh Modification.

Fig. 63.



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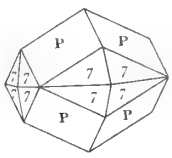

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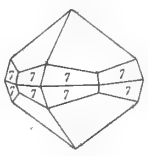

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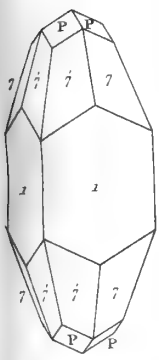

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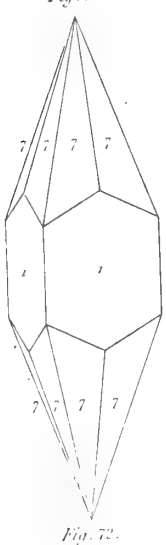

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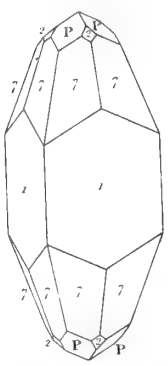

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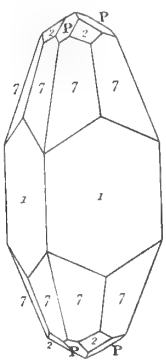

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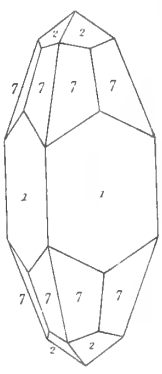

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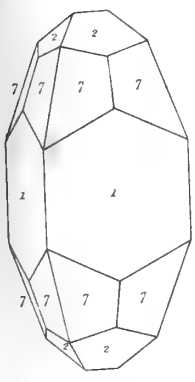

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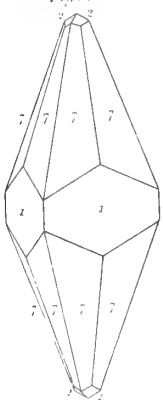

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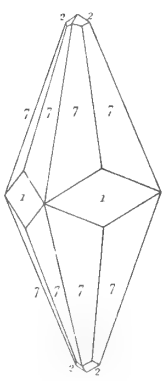

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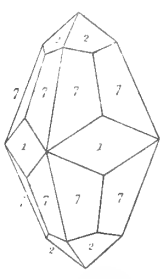

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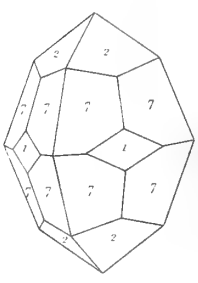

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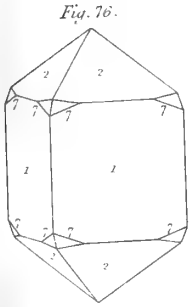

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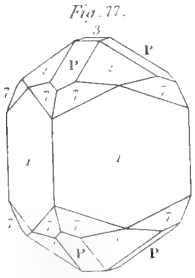

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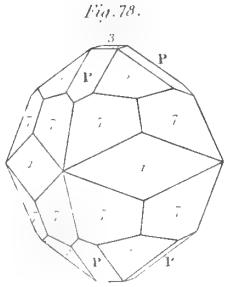

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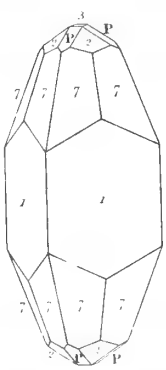

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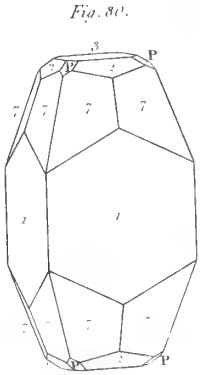

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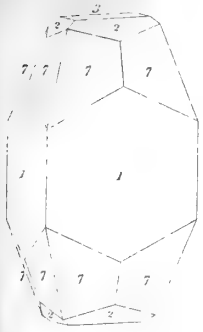
OXYD OF TIN.

Seventh Modification continued.

Fig. 81.



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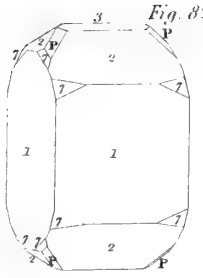

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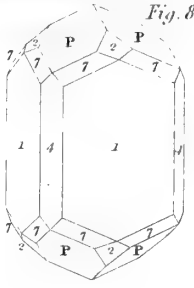

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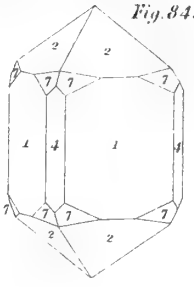

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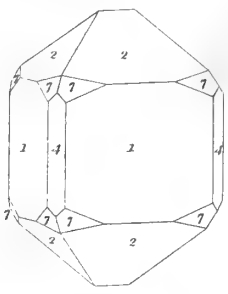

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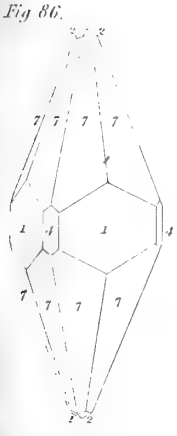

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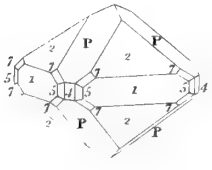

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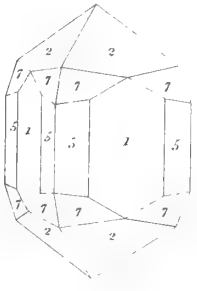

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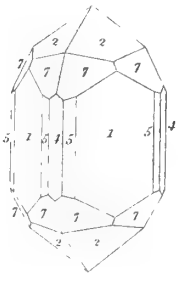

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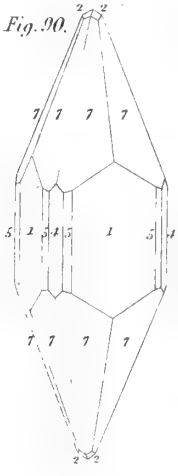

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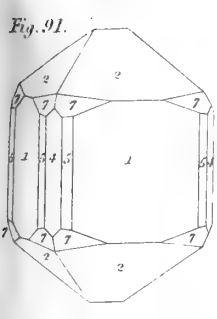

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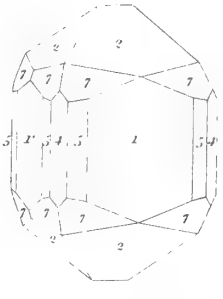

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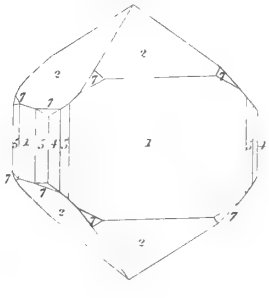

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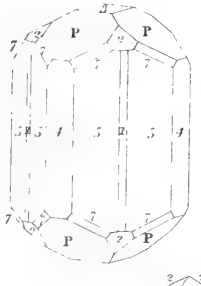

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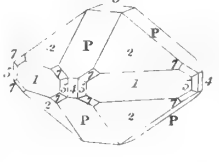

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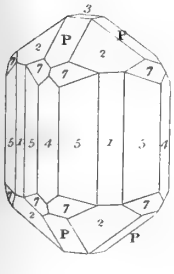

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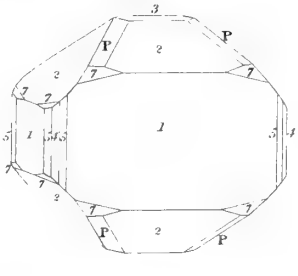

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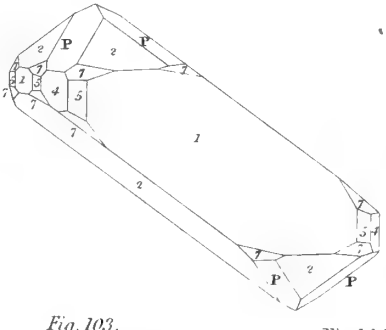

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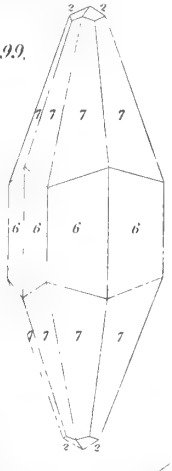

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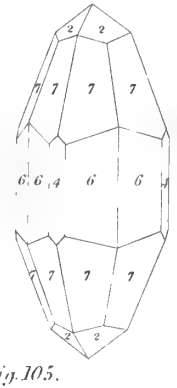

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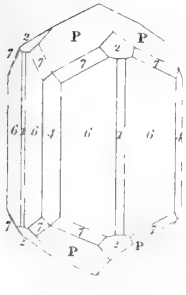

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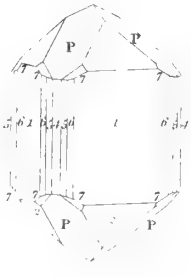

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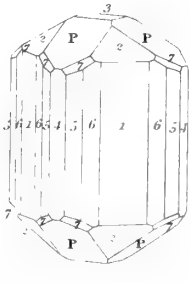

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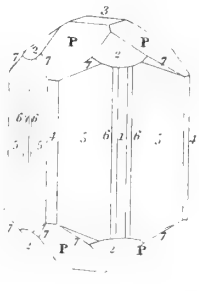

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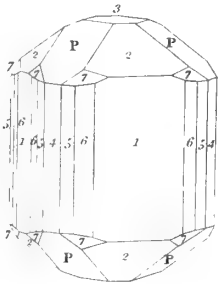

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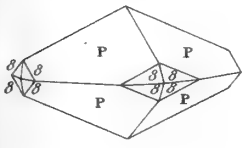
OXYD OF TIN.

Eighth Modification.

Fig. 106.



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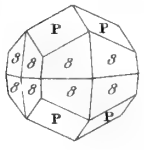

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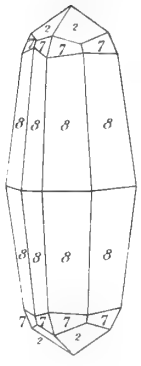
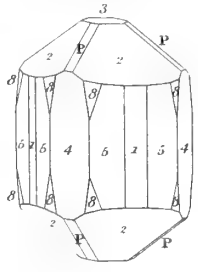


Fig. 109.



Ninth Modification

Fig. 110.

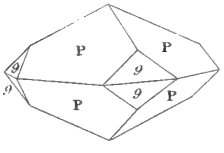


Fig. 111.

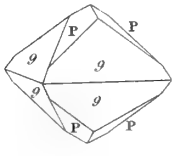


Fig. 112.

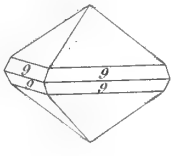
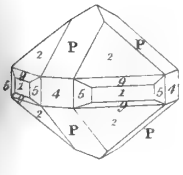


Fig. 113.



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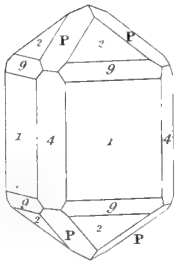

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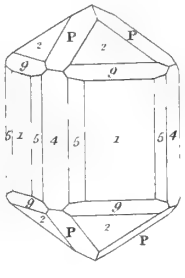


Fig. 116.

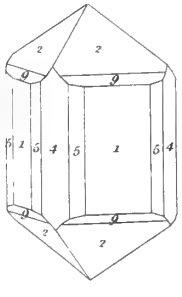
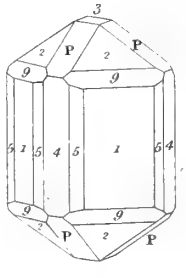


Fig. 117.



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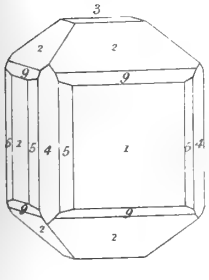

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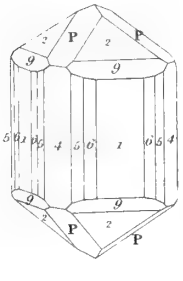
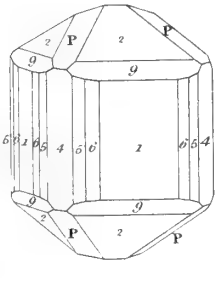


Fig. 120.



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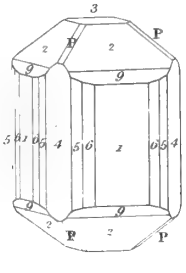

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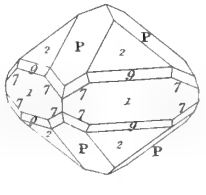
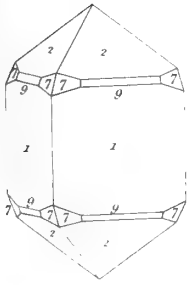


Fig. 123.



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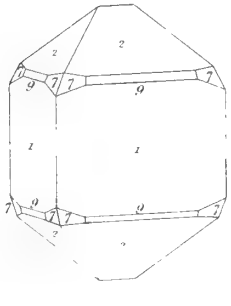
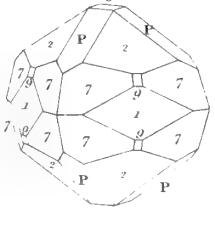


Fig. 125.



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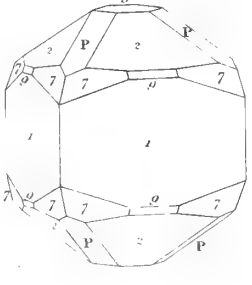

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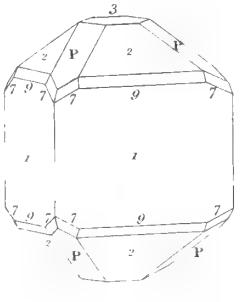

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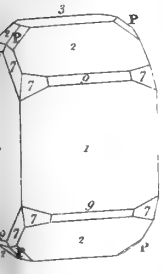
OXYD OF TIN.

Ninth Modification Continued.

Fig. 128.



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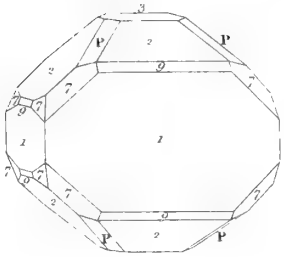

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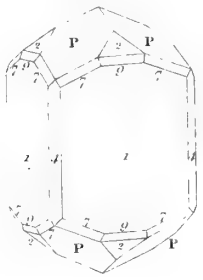
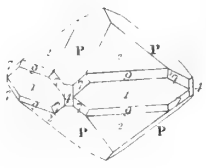


Fig. 131.



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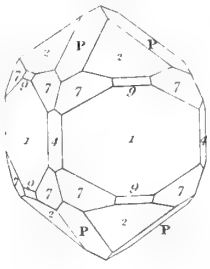

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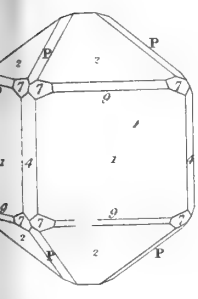

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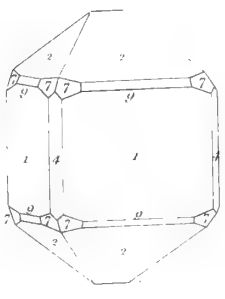

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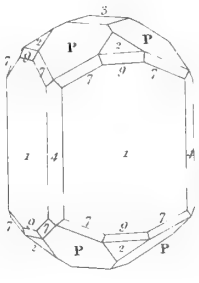
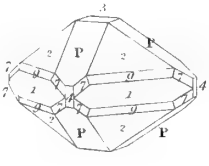


Fig. 136.



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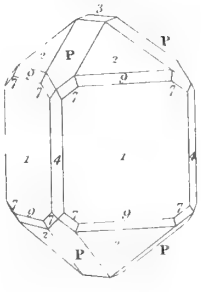

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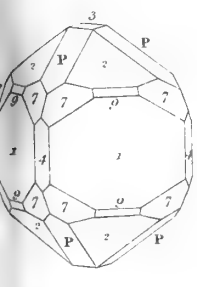

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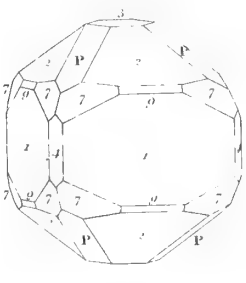
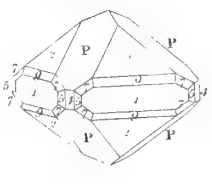


Fig. 140.



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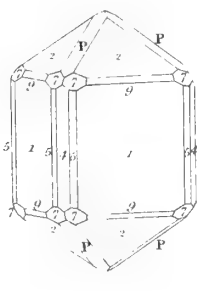

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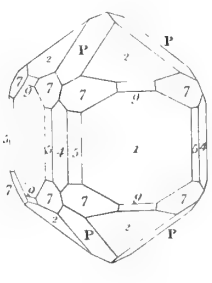

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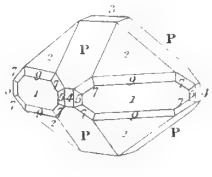
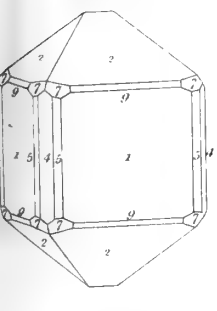


Fig. 143.



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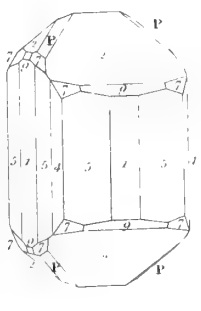

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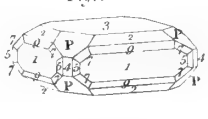

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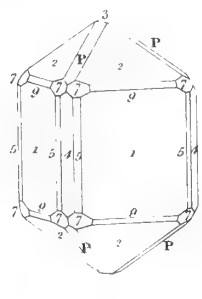
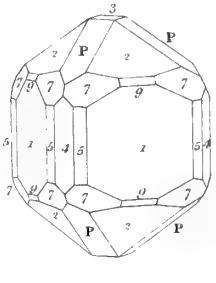


Fig. 148.



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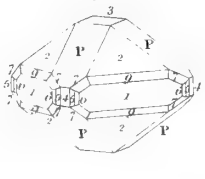

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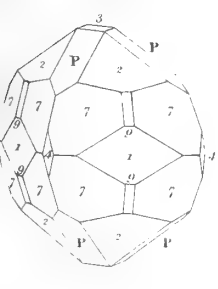

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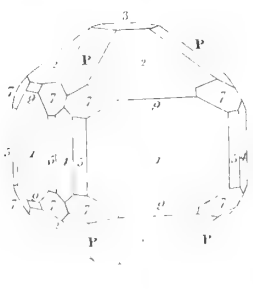
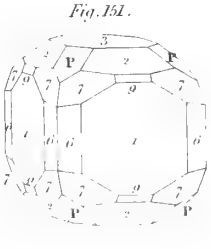


Fig. 151.



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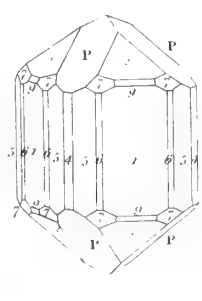

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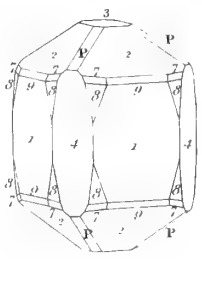
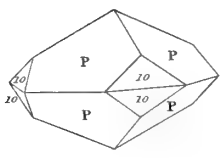


OXYD OF TIN.

Tenth Modification.

Fig. 155.



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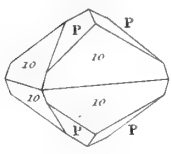

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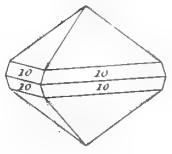

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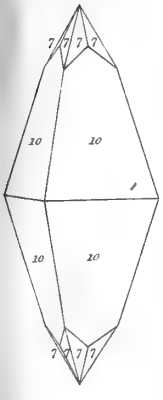

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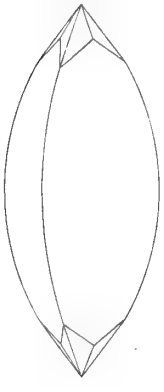

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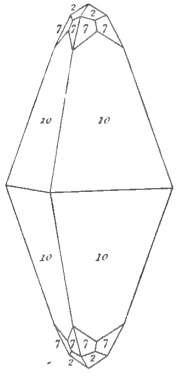

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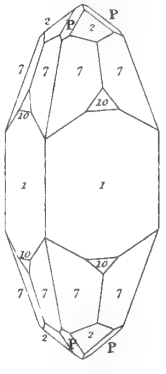

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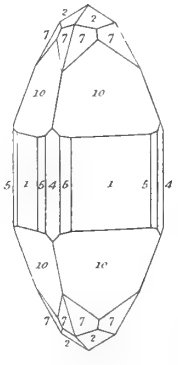


Fig. 165.

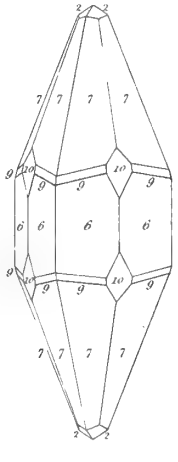


Fig. 163.

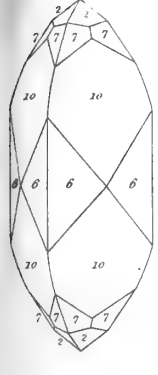
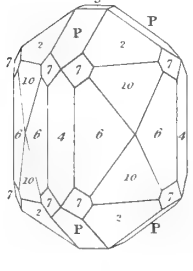


Fig. 164.



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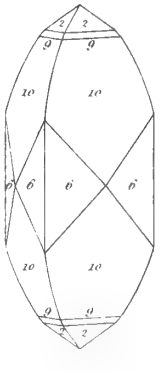

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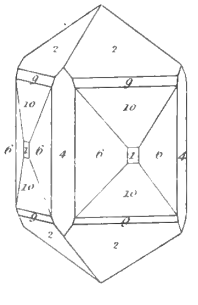

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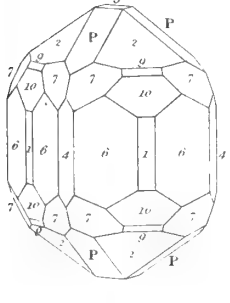
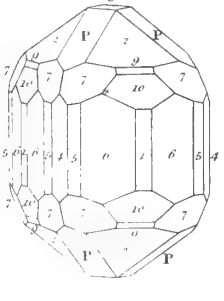


Fig. 169.



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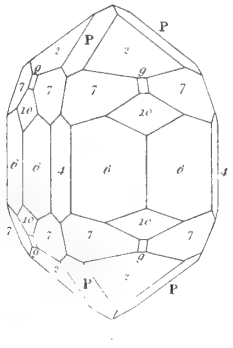

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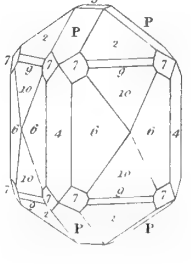

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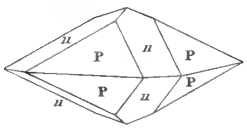
Eleventh Modification

Fig 172.



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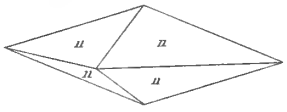

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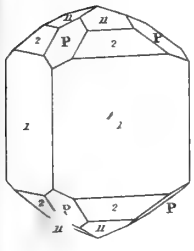

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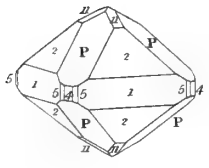

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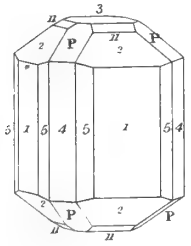

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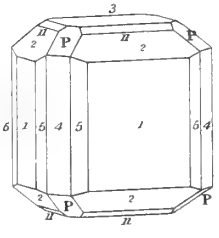

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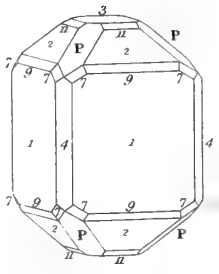

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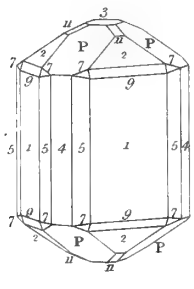

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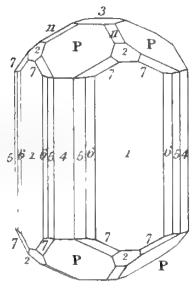

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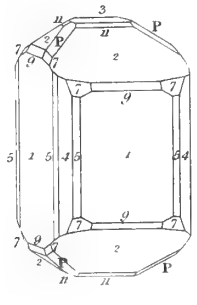
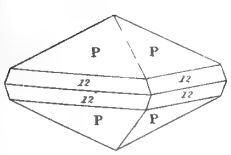


Twelfth Modification

Fig. 182.



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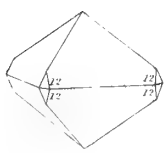

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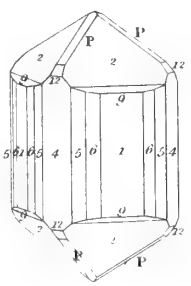

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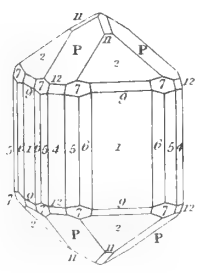

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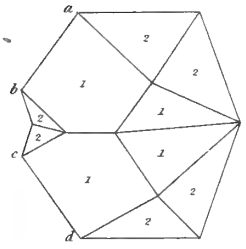
Fig. 186.



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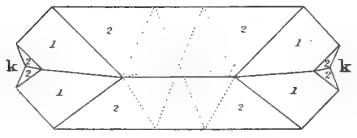

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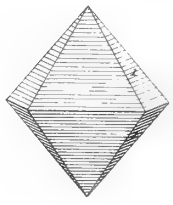

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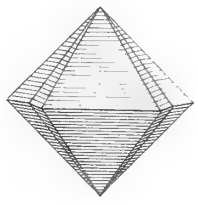

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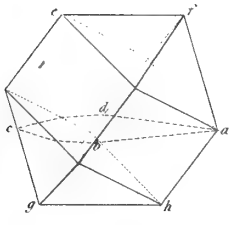

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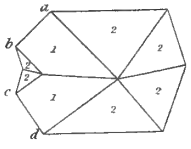

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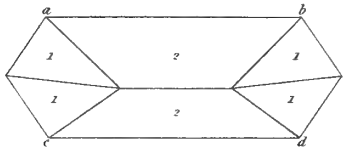

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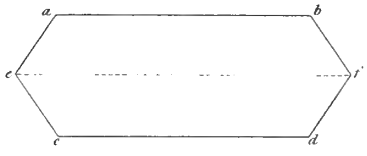

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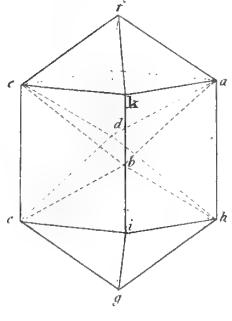

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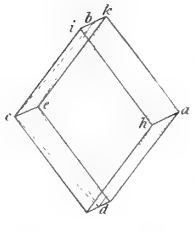

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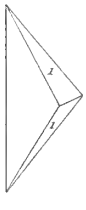

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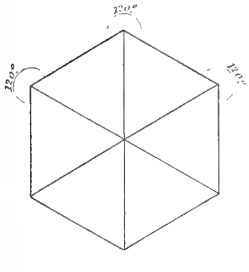

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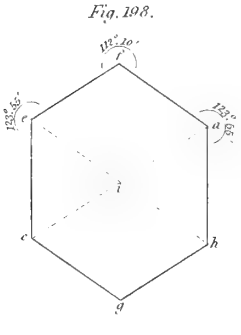

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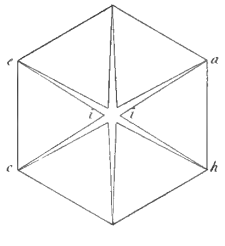

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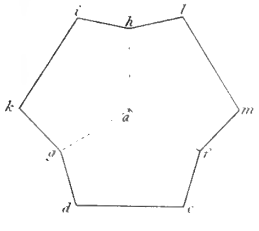

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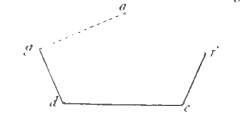

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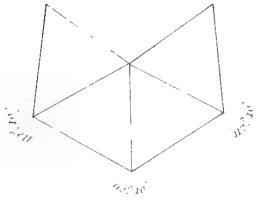

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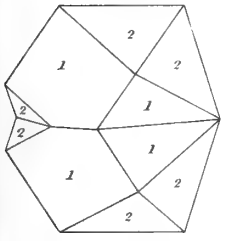
Fig. 203.



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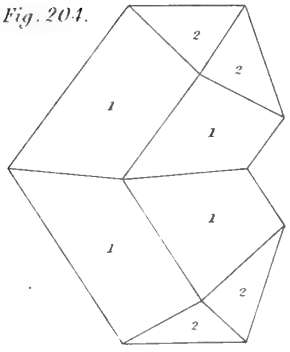

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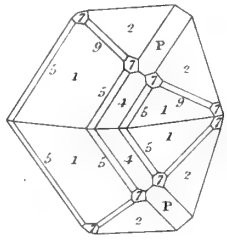

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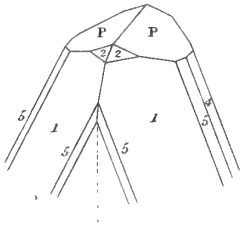

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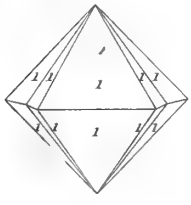

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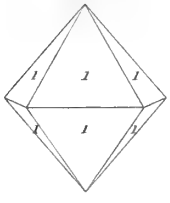

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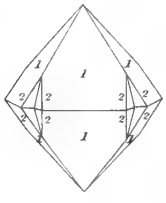

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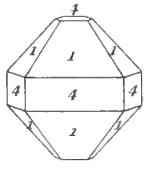

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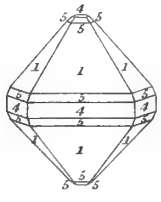

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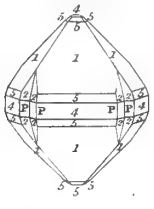

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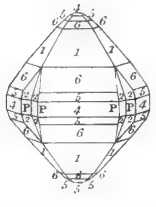

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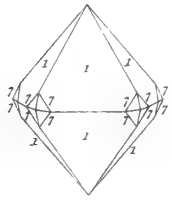

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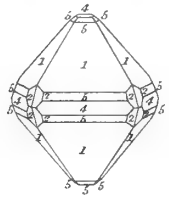
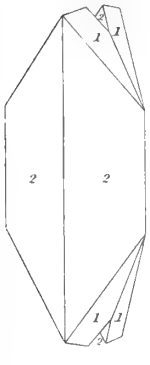


Double Macles.

Fig. 216.



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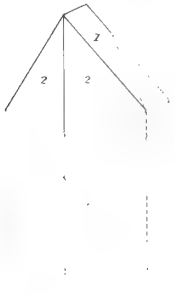

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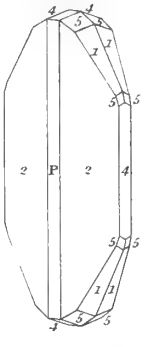

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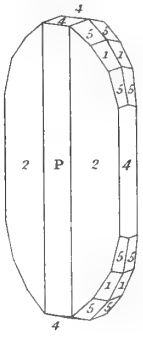

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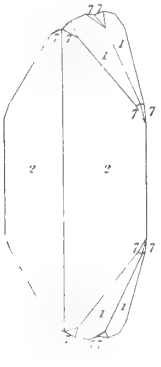

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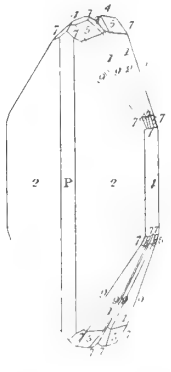

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W. Lowry sculp

OXYD OF TIN.

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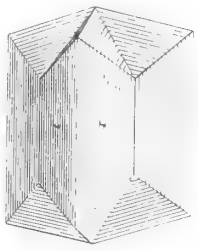
Fig. 222.



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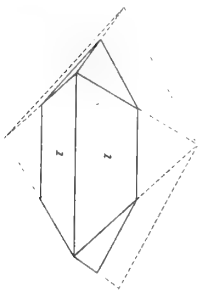

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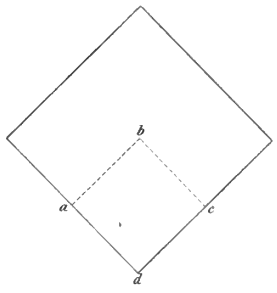

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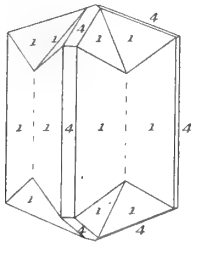

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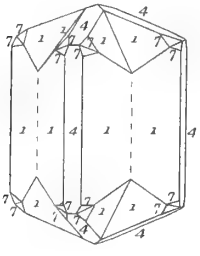
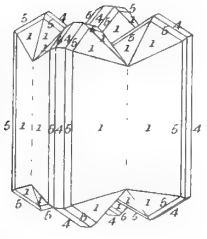


Fig. 227.



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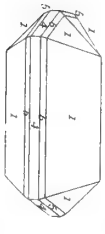

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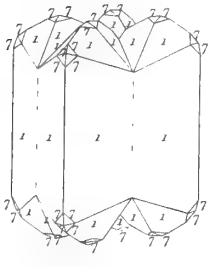

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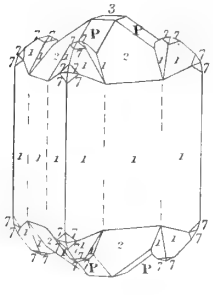

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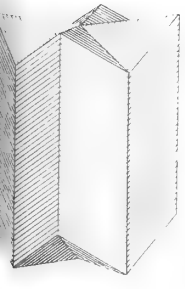
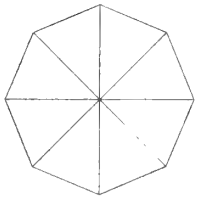


Fig. 232.

Fig. 233.



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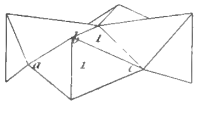

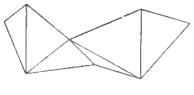

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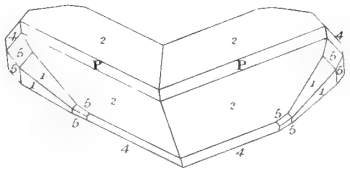

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Fig. 1

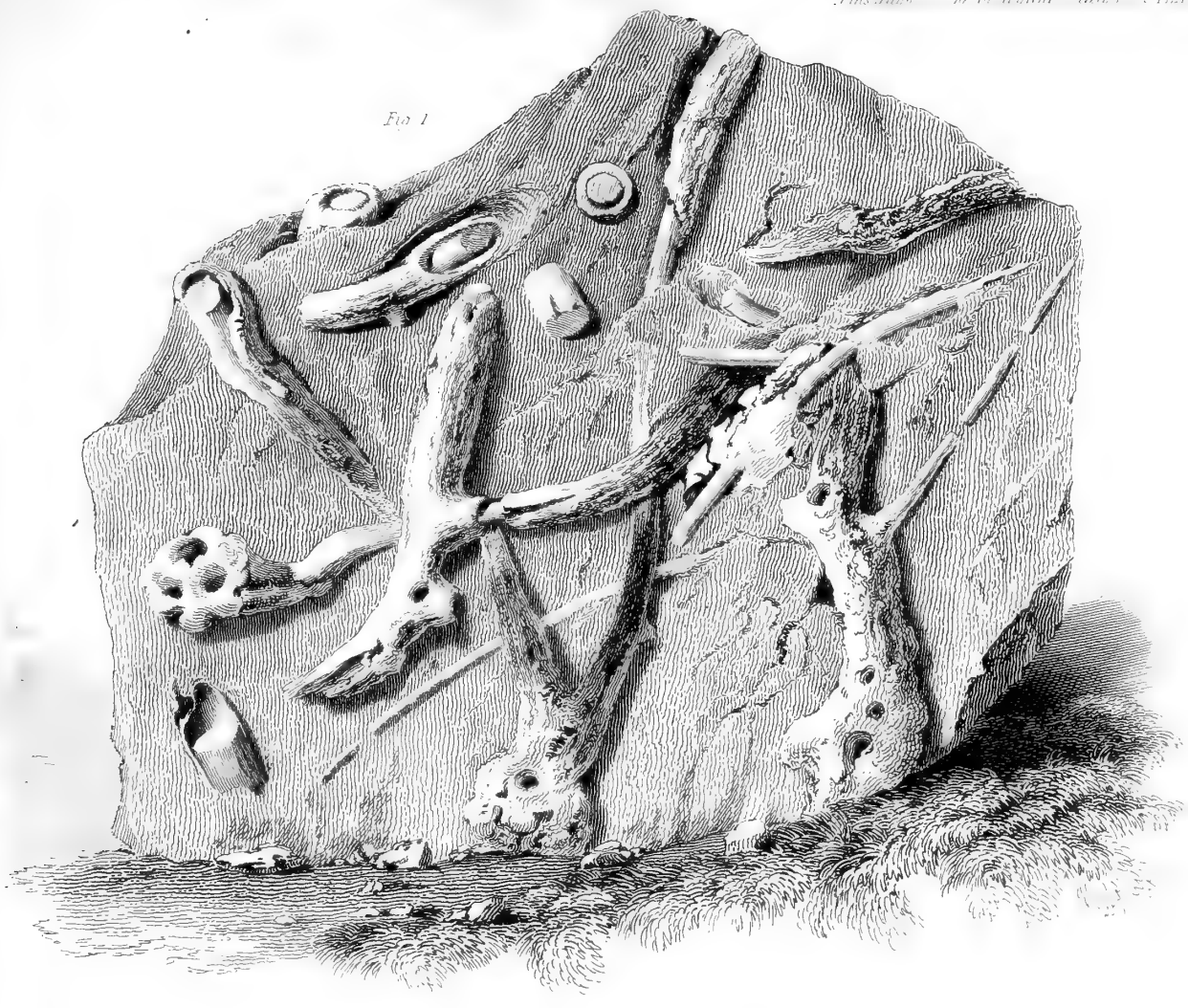
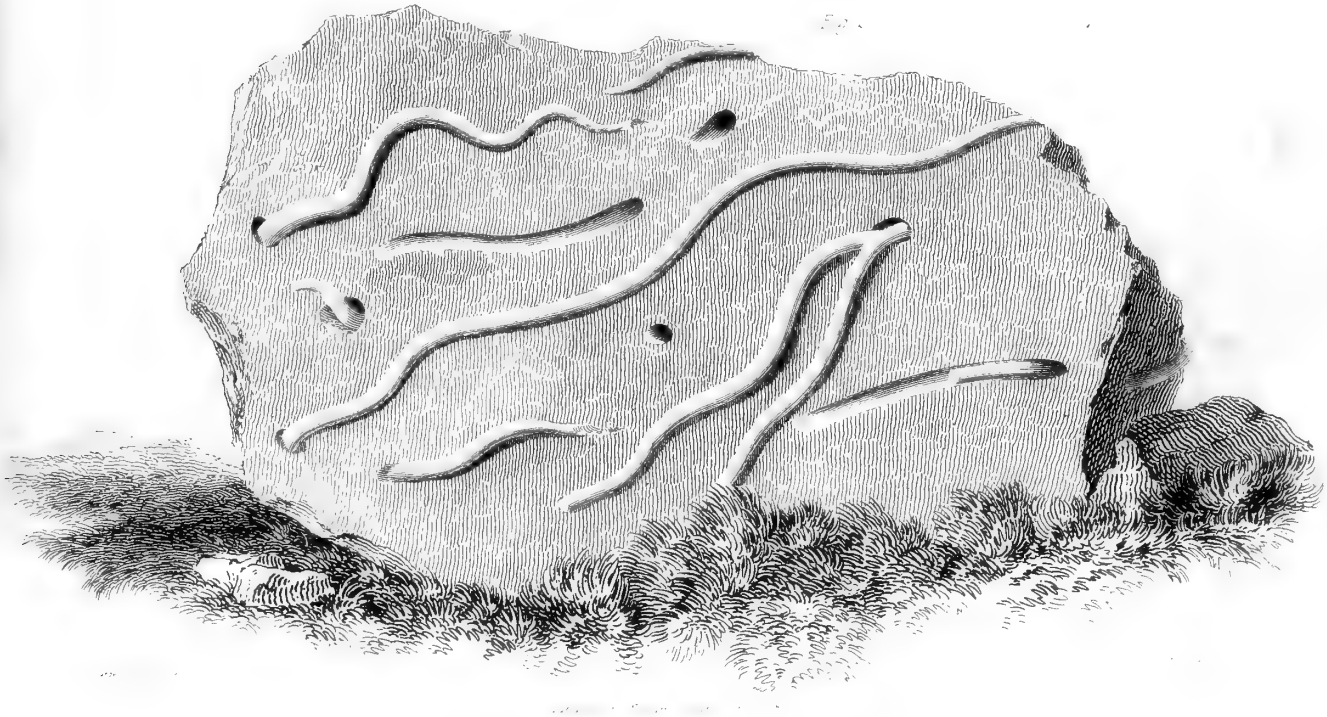


Fig. 2.



Alcyonia.

Fig. 3.

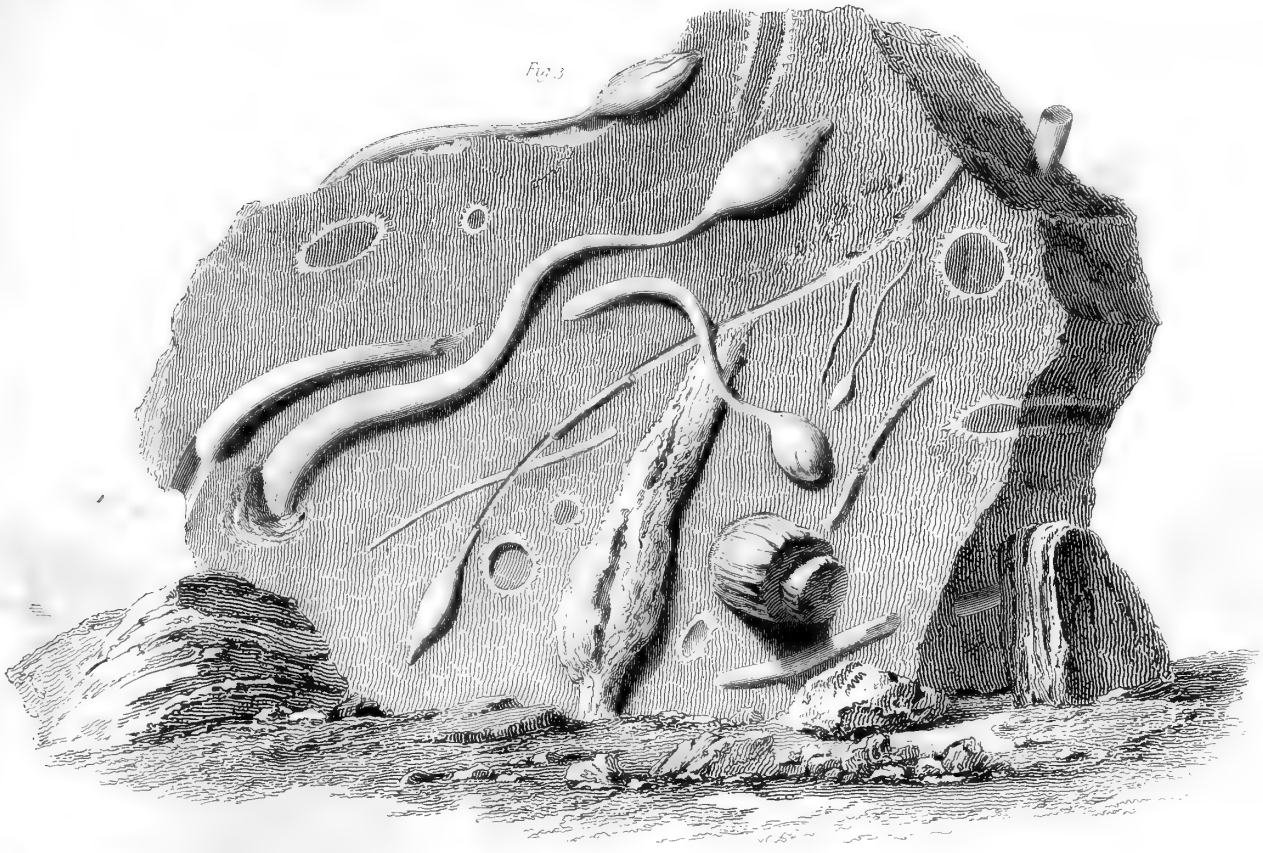


Fig. 4.

Fig. 5.

Fig. 6.

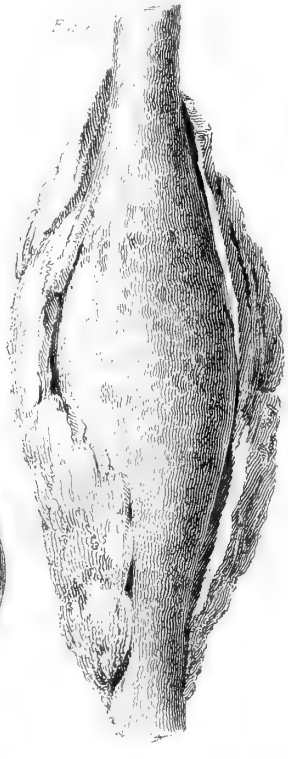


Fig. 7.

Fig. 8.

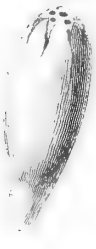


Fig. 9.

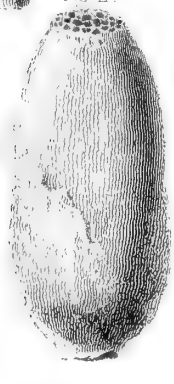
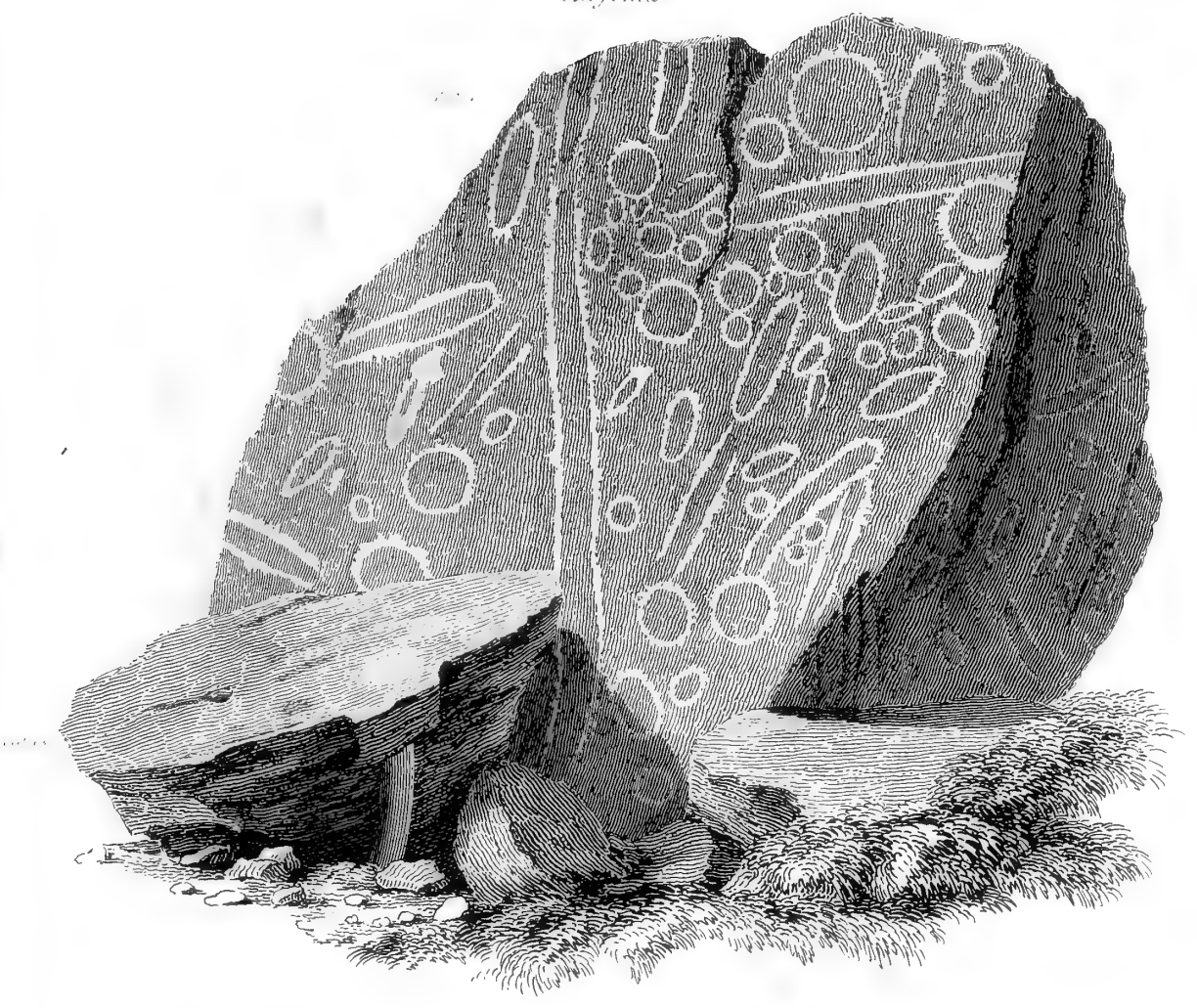
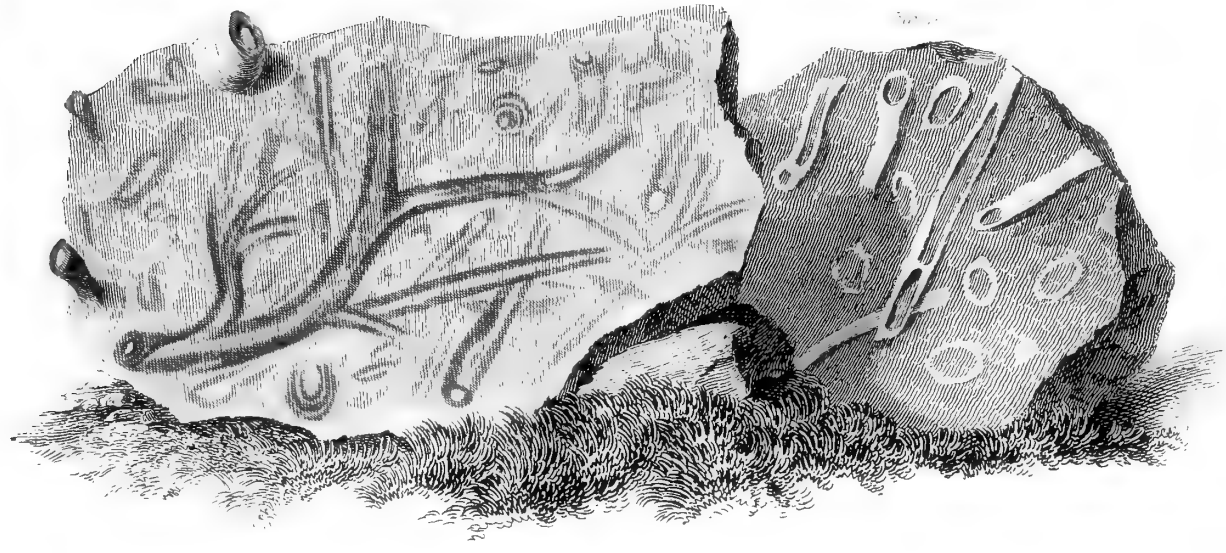


Fig. 10.

Alcyonia





Western Lines. Isle of Wight

Contorsions in Mica-slate, at Loch Lomond.

Fig 1.

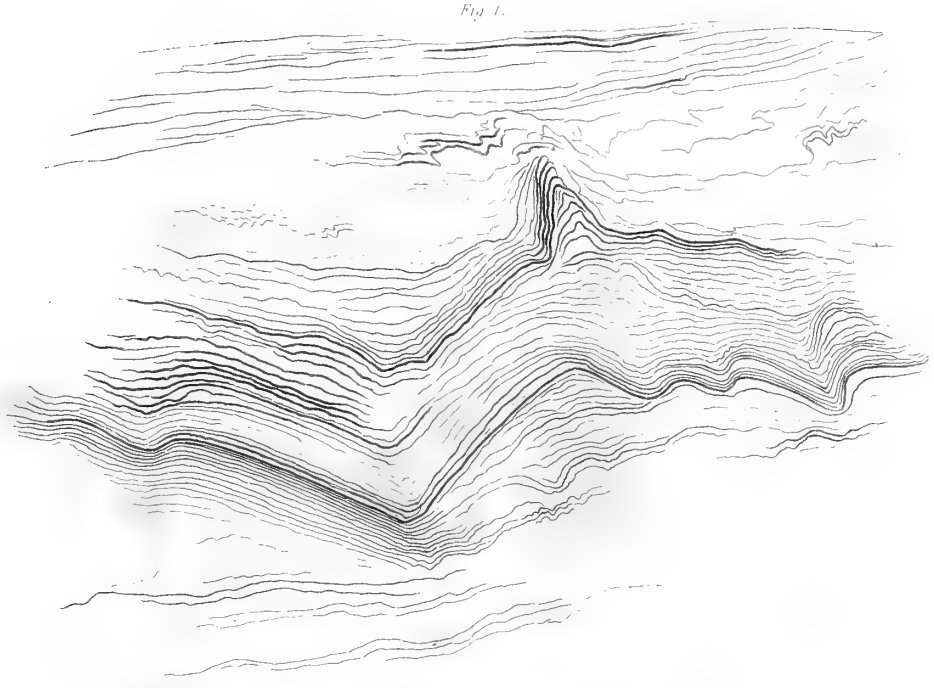
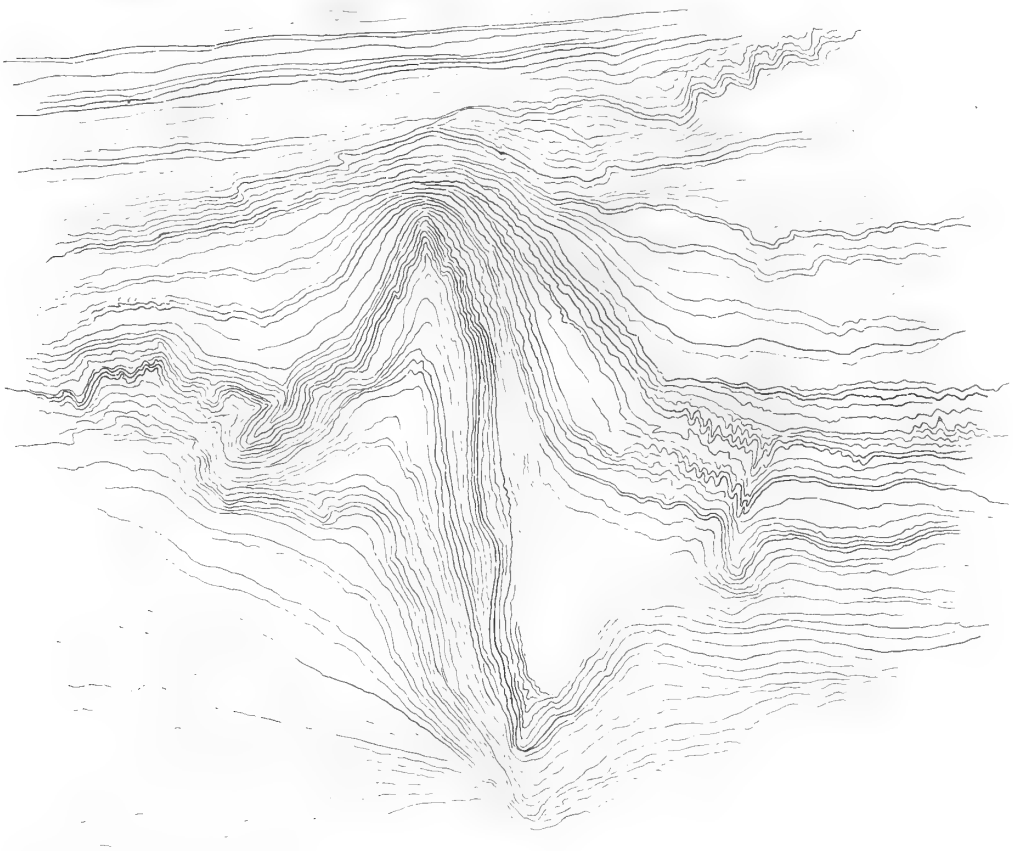
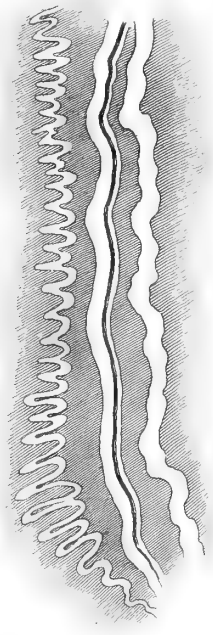


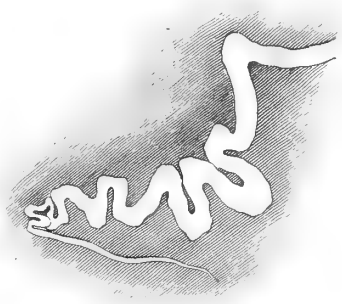
Fig 2



Granite traversing Mica-slate.
Glen Spean.



Granite traversing Mica-slate.
Blair in Atholl.



Quartz traversing Mica-slate.
Arisaig

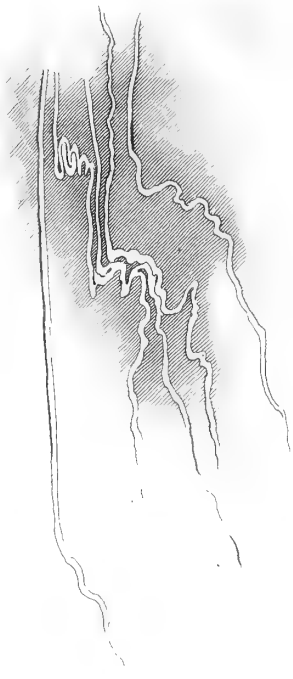
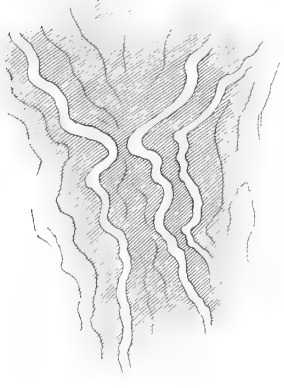
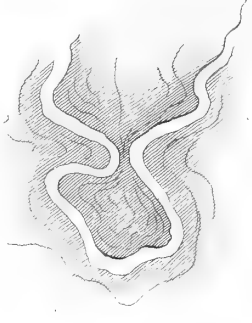


Fig 3

Granite traversing Gneiss.
Glen Elg



Granite traversing Mica-slate
Aylort.



Quartz traversing Mica-slate.
Arisaig

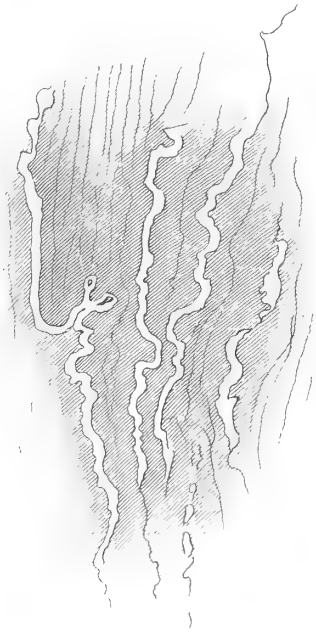


Fig 1

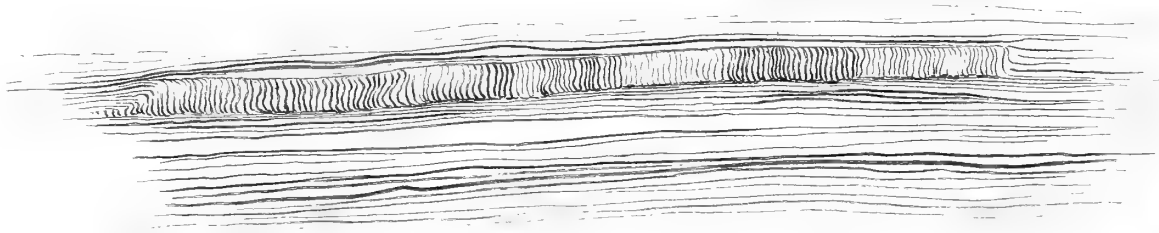


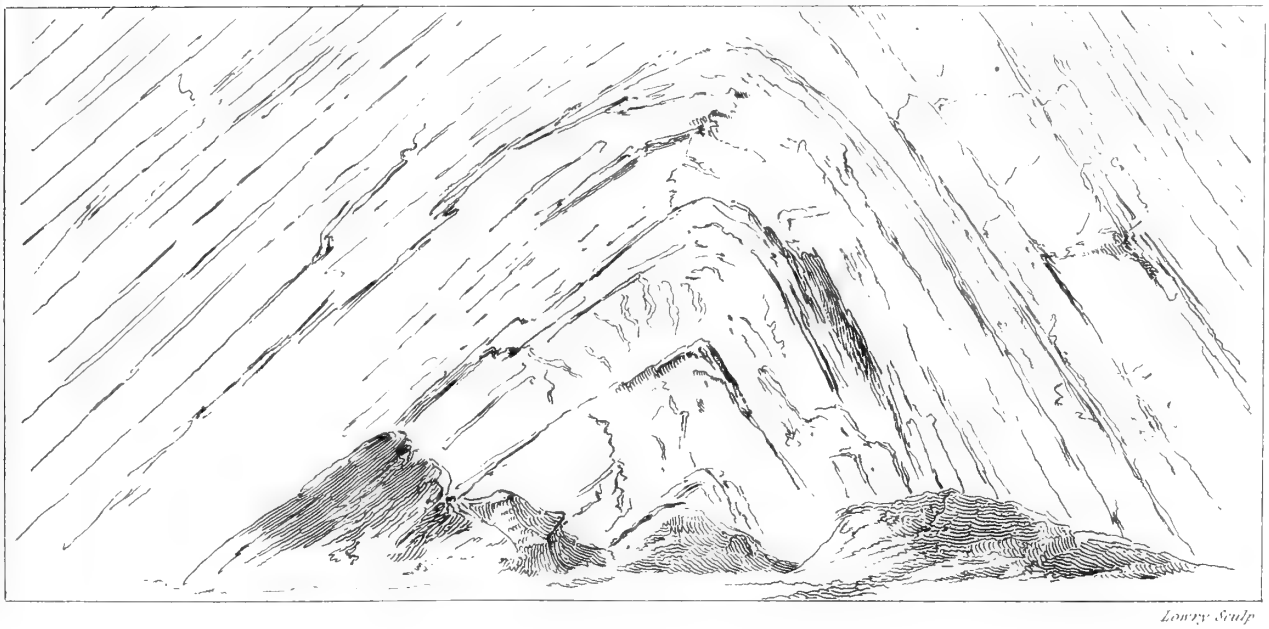
Fig 2

Drawn by T. Macculloch, F.M.L.

Published as the Act directs, March 1st 1827, by G. B. Whittaker, London.

Curvatures in the Strata near Cloverly, Devon.

Transactions of the Geological Society, Vol 2. Pl. 33.

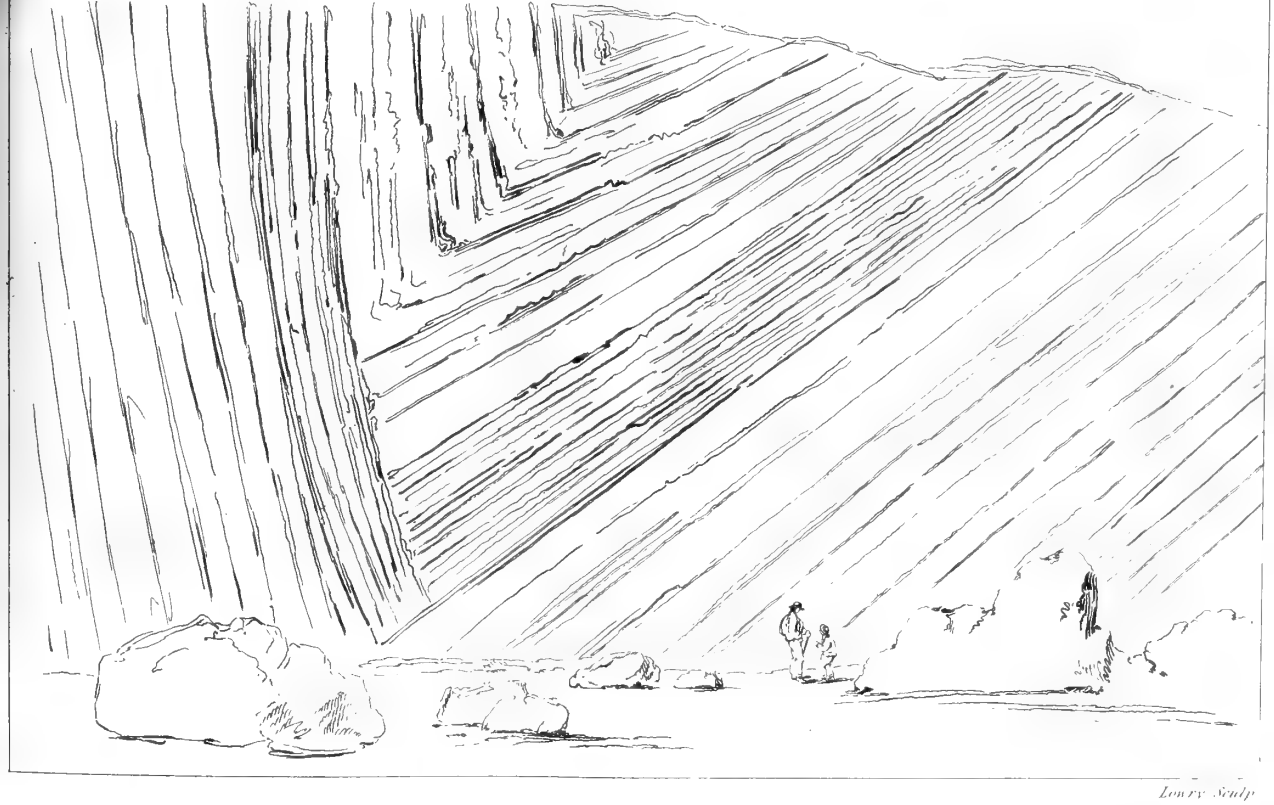


Lowry Sculp

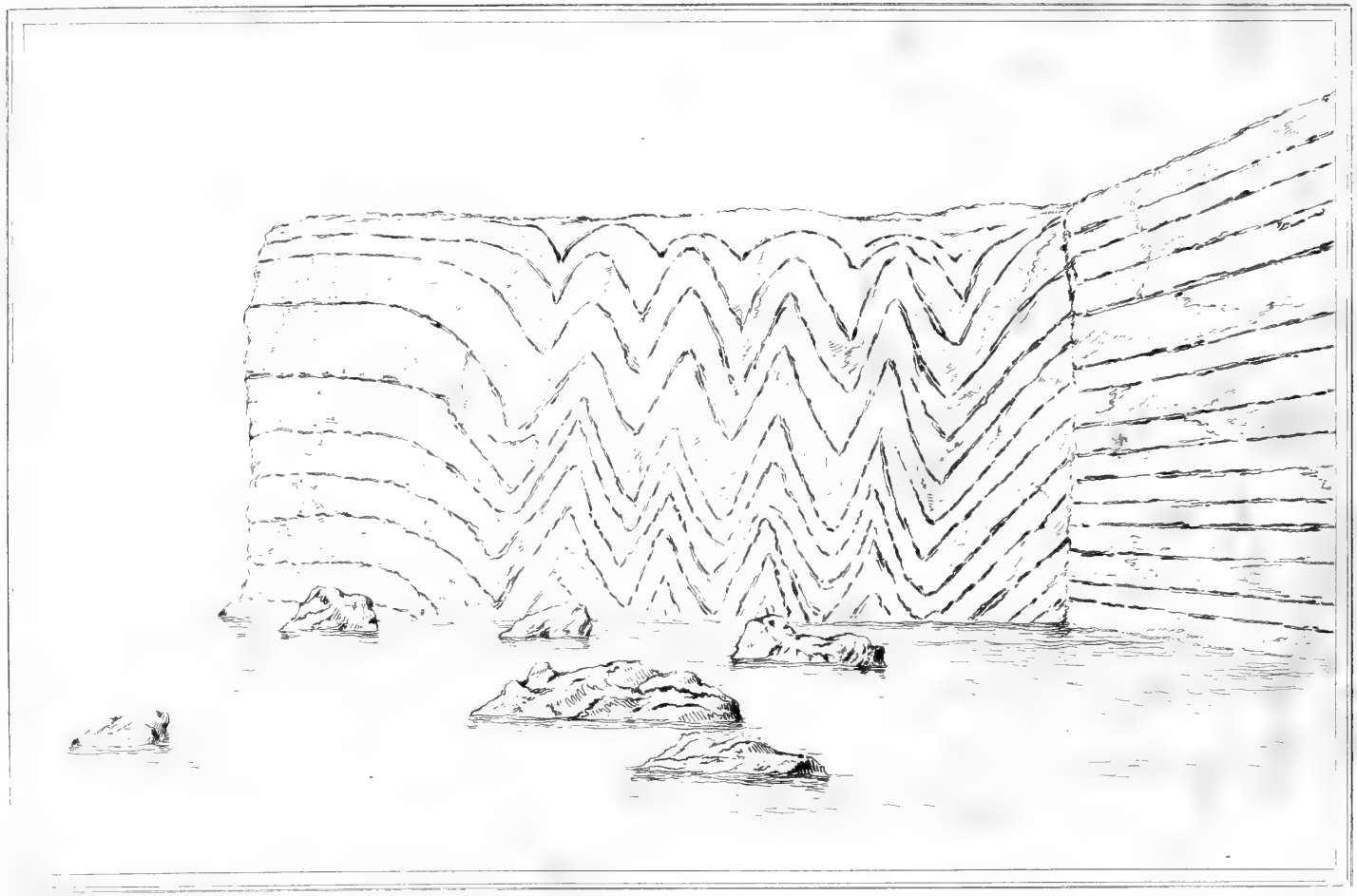
Published by Wm Phillips, London. 1814.

Excavations in the Strata near Cherry, Devon.

Transactions of the Geological Society, Vol. 2 Pl. 34.



Lowry Sculp



Grauwacke of Hartland Point.

Published by William Phillips, London.

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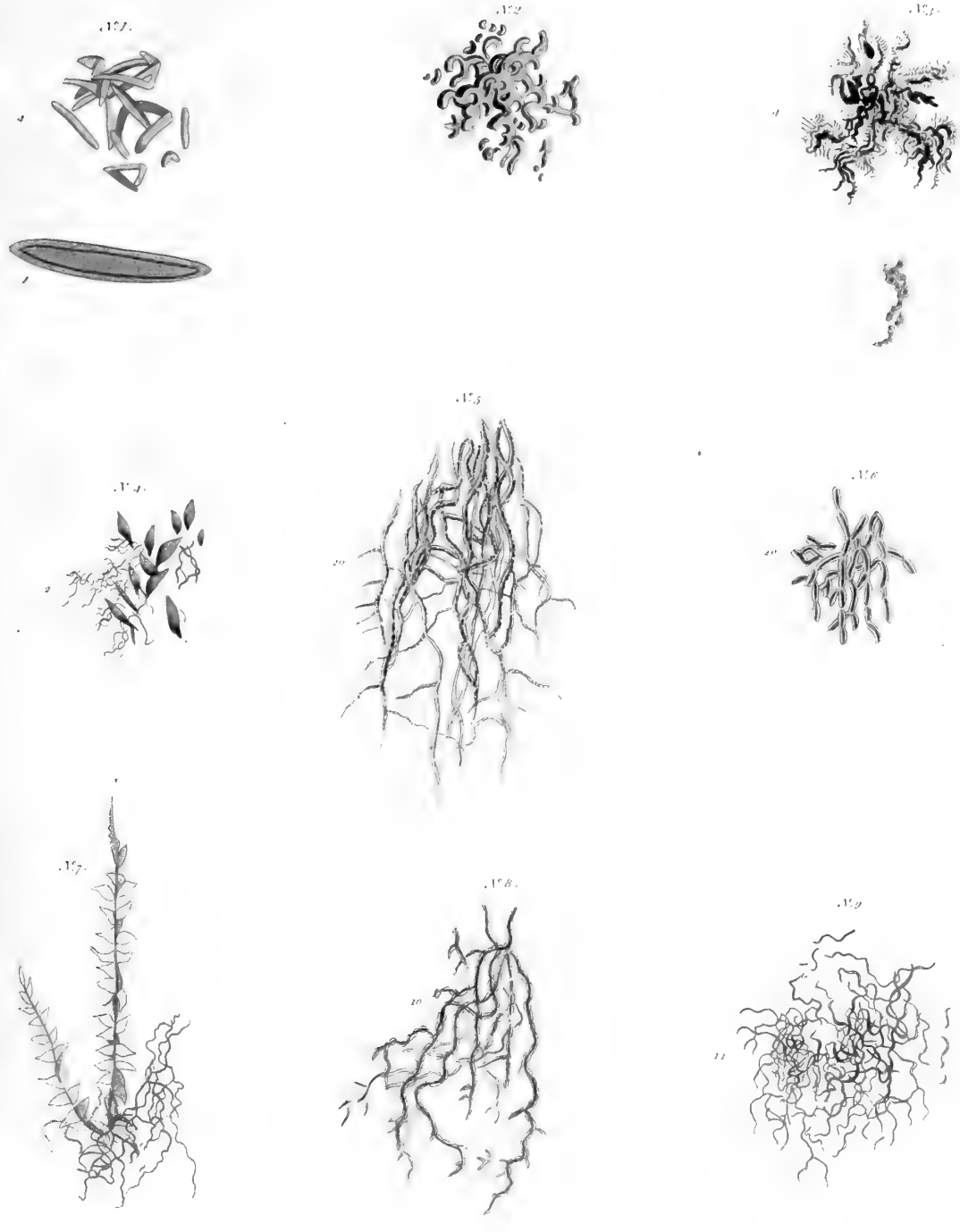

I. MacCulloch. Del.

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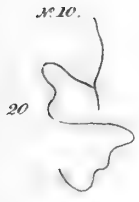

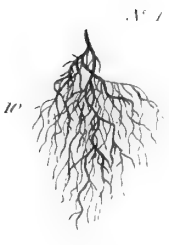

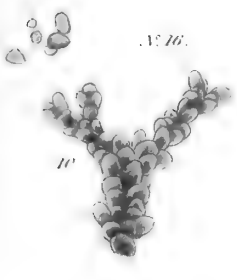

J. Mac Culloch. Del.

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J.M.ᶜ Culloch del.ᵗ

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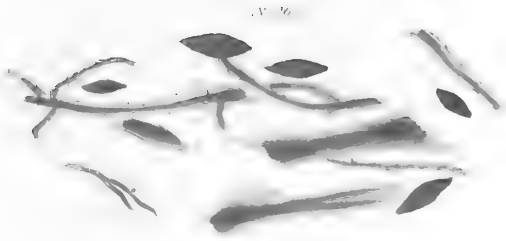
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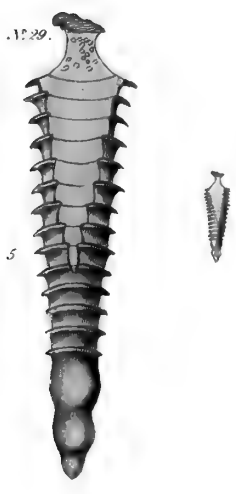
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5

PLATES AND MAPS

IN ILLUSTRATION OF

THE THIRD VOLUME

OF THE

TRANSACTIONS

OF THE

GEOLOGICAL SOCIETY.

LONDON:

PRINTED AND SOLD BY WILLIAM PHILLIPS, GEORGE YARD, LOMBARD STREET.

1816.

EXPLANATION OF THE PLATES.

PLATE 1.

Map of Sky.

PLATE 2.

Fig. 1. Shows the marble limestone of Kilbride incumbent on the syenite, and succeeded by alternations of shell limestone and schist.

Fig. 2. Shows the alternation of marble limestone and shell limestone at Borrereg.

Fig. 3. Shows beds of Lydian stone covered by trap: at Duntulm.

PLATE 3.

Fig. 1. Illustrates the variation of the compass on the summit of Glamich.

Fig. 2 & 3. Show how a mass of trap overspreading a series of flat strata might by the casual wearing away of parts, give the appearance of having been deposited at different eras.

PLATE 4.

Fig. 1. Shows the manner in which the sandstone of Strathaird is stratified.

Fig. 2. A compound trap vein at Strathaird.

Fig. 3. Horizontal strata of sandstone intersected by trap veins: at Strathaird.

Fig. 4. A diagram shewing the supposed geological structure of Sky.

PLATES 5, 6, 7.

Crystals of Uranite from Cornwall.

PLATE 8.

Geological map of the N. E. of Ireland.

PLATE 9.

Shows the geological connexion between the W. of Scotland and the N. E. of Ireland.

EXPLANATION OF THE PLATES.

PLATES 10, 10*.

Sectional views along the N. E. coast of Ireland.

PLATE 11.

Sectional views of Kenbaan head and bay, on a larger scale than in the former plate.

PLATE 12.

Ground plan and section of Birch-hill colliery, near Walsall, Staffordshire.

PLATE 13.

Map of Glen Tilt.

The Map exhibits the general appearance of the rocks which are visible at the surface. These are distinguished by colours, of which an explanation is given in the margin. I may remark that the same colours are used to represent the same substances throughout the whole of the plates belonging to this paper.

The Map does not pretend to give every rock which comes to the surface, since the spaces which many of them occupy are so small as to have rendered such a detail impracticable. I have omitted particularly many of the small masses of quartz rock which are visible on the granite, as they would, instead of elucidating, have obscured the explanation which this map is designed to give. The southern side being of a more simple construction admitted of a more real detail, yet in this also I have not pretended to lay down the perpetual and often minute alternations of the schistose rocks with the limestone, since there would not have been room for this purpose: I have contented myself with indicating them in a general way.

In the method used in colouring, I have defined each colour in those places where the rocks themselves are visibly defined. Where these boundaries are uncertain from the covering of soil or other causes, the colours are undefined. The uncoloured parts which lie near the river are intended to represent the alluvial matter, although there is little doubt that the junction of the limestone and the granite exists below it. I have detailed as well as I could the several points where that junction is actually visible: greater accuracy would have been impracticable on the map which I was obliged to make use of, with which my own measurements were often at variance. But it is a matter of no moment for the purposes of this paper, since its object will be equally accomplished whether there are twelve or thirteen junctions visible, or whether Forest lodge is three or four miles from Gow's bridge. I have only marked one or two masses of porphyry, as a knowledge of their places was of no moment.

EXPLANATION OF THE PLATES.

PLATE 14.

This and the six following plates are intended to represent some of the most remarkable circumstances which attend the junctions of the granite with the stratified rocks. They consist of the most interesting portions, and of those which appeared to be the best calculated for explaining the different appearances which are to be seen at these points. With regard to the method used in sketching them, I must add that they are only eye views. Since the greater number of them are represented as if drawn from a point at right angles to the horizon, when they were necessarily taken at an angle often far less than this, it is plain that they will transgress the laws of perspective. But this will produce no alteration in the view they give of the geological facts, however it may derange their graphic accuracy. I have detailed the portions, most frequently, as if they had been detached, although they form in fact parts of continuous rocks. It is plain, when the magnitude of the objects represented, often extending to 40 or 50 feet, together with the minuteness of the fractures which they exhibit, often descending to the tenth of an inch, is considered, that drawings on so small a scale could not be expected to give an accurate detail of all the points in such a space. The leading features however have been marked with as much accuracy as the nature of the subject admitted, and whatever omissions or alterations may have been made, no liberties have been taken which could in any respect misrepresent the facts described in the paper and visible in the places noted.

At the upper end of this figure the granite appears to alternate with the schist. Tracing it further the true nature of the mixture is evident. The portion was selected to show a fact which has been mistaken for an alternation of schist with granite.

PLATE 15,

Represents a disturbance produced in the usual continuity of the schist and limestone, the schistose beds being abruptly broken off at their lower end. It also shows the detached points and lines of granite which are described in the paper, the limestone at the same time bearing indications of its original laminated structure, although the bed is not only here in a vertical position, but its course is also at right angles to the ordinary course of the beds which constitute the southern side of Glen Tilt.

PLATE 16,

Represents the splitting of the limestone bed into three parts, with the intrusion of two masses of granite. A confusion of the granite, schist and limestone is also visible on one side. It further represents the flexure of the limestone and the red lines of granitic matter running parallel to it, of which detached specimens are in the museum of the Society.

EXPLANATION OF THE PLATES.

PLATE 17,

Represents a more perfect example of the red lines which are found in the limestone, and these serve at the same time as indications of the bending which the limestone has undergone. Minute granite veins resembling in their composition these red parallel lines are found traversing the fragment of schist, which has lost its usual conformable parallelism to the calcareous bed.

PLATE 18,

Is selected as a representation of that utter confusion among the substances contained at the junction which almost eludes the powers of the pencil. It contains examples of all the variations which in the former drawings have been separated from each other, and in addition to those is shown an instance of the compression of the limestone bed.

PLATE 19.

To preserve uniformity in the colours which represent the different rocks I have here also tinged the limestone blue. It is white in nature. It serves to show the entire loss of the stratified character which the limestone so often undergoes in the vicinity of the granite. Specimens from this junction are also in the Society's collection.

PLATE 20.

The sections in this and the next plate are intended to represent the relative positions of the rocks, and they are founded on numerous observations throughout the Glen. The alternations are not laid down as real, nor is there any pretence to conjecture dimensions which could not be measured.

Fig. 1. Represents the case occurring at Gow's bridge where the limestone and schist are found on each side of the river. It may be said that the water has not yet wrought its way to the junction.

Fig. 2. Represents the case which predominates throughout Glen Tilt. The river here divides the stratified rocks from the granite, and has exposed the various junctions which are laid down in the map and described in the paper. It is easy to see how these will sometimes consist of limestone, sometimes of schist or of quartz rock, and sometimes of all the three substances, with the granite.

Fig. 3. Represents the case which occurs at Cairn a'chlachan, as well as in numerous other situations, and it explains the otherwise puzzling phenomenon of the apparent alternations between the quartz rock and the granite. It is easy to see that the schistose strata, once possibly lying much higher on the granite, have remained in some places while they have disappeared in others.

EXPLANATION OF THE PLATES.

Fig. 4. Is intended to represent the probable confusion which exists at the junction of the stratified with the unstratified rock. The drawings of the actual appearances at the junctions which are visible, will show that there is abundant ground for such an imaginary section.

PLATE 21.

Fig. 1. Represents the actual superposition of the rocks at the Criny, serving to justify the ideal sections which have been already given. The rocks being inaccessible are not however measured. Other indications of a similar order occur in different places, but I thought it unnecessary to represent them.

Fig. 2. Is intended to represent the probable appearance of the strata had they been deposited on the granite. Since the same beds of quartz rock, schist and limestone, are parallel among each other, they should if they had been thus deposited been also found parallel to the granite. But the actual appearance is shown in

Fig. 3, Where the strata, sometimes of limestone, sometimes of quartz rock, sometimes of schist, are found in contact with granite.

PLATE 22,

Represents the extraordinary fact occurring near Gow's bridge; the interference of beds of hornblende, schist and marble.

PLATE 23.

Geological map of the South-Western Part of Somersetshire.

PLATE 24.

Fig. 1 & 2. Represent the seeming alternation of red marle and lyas on the coast of Somersetshire.

Fig. 3 & 4. A map and section of part of Lincolnshire.

PLATES 25, 26.

Lord W. Seymour's Clinometer.

Common Trap

Clinkstone Syenitic Trap &c dark colour

Syenite Porphyry &c light colour

Marble Limestone

Limestone and Sandstone with Shells

Sandstone (red) without Shells

Quartz Rock

Micaceous Schist

Argillaceous Schist

SKY.

Raasa

Scalpa

Kylerough

Pabba

Broadford

Altavig Islands

Loch Staffin

Ru Hunish

Duntuilm

Kilmuir

Storr

Ru Bornisdag

Uig

Loch Uig

Portree

Culaster

Penmore

Kingshorough

Snizort

Loch Snizort

Aserib Islands

Vaterrish point

Unish

Aird

Tompan

Ardmore Head

Loch Bay

Steen

Giroban

Dunvegan Head

Loch Follart

Dunvegan Castle

Balmenoch

Balmore

Vilbeig

Durnish

Loch Bracadale

Macleods Maidens

Goprahow head

Loch Harport

Drinoch

Glamag

Glen Elg

Bernera Barracks

Castle na Fuchay

Hyleaken

Ben Ashlut

Loch Hourn

Loch Oranisa

Camiserriss

Knock

Broadford

Strathaird

Loch Slapan

Loch Eyshort

Dunscaich

Torskeviq

Tormore

Talivil

Loch Nevish

Point of Sleat

Loch Scaviq

Loch Eynort

Loch Brittle

Dunan Point

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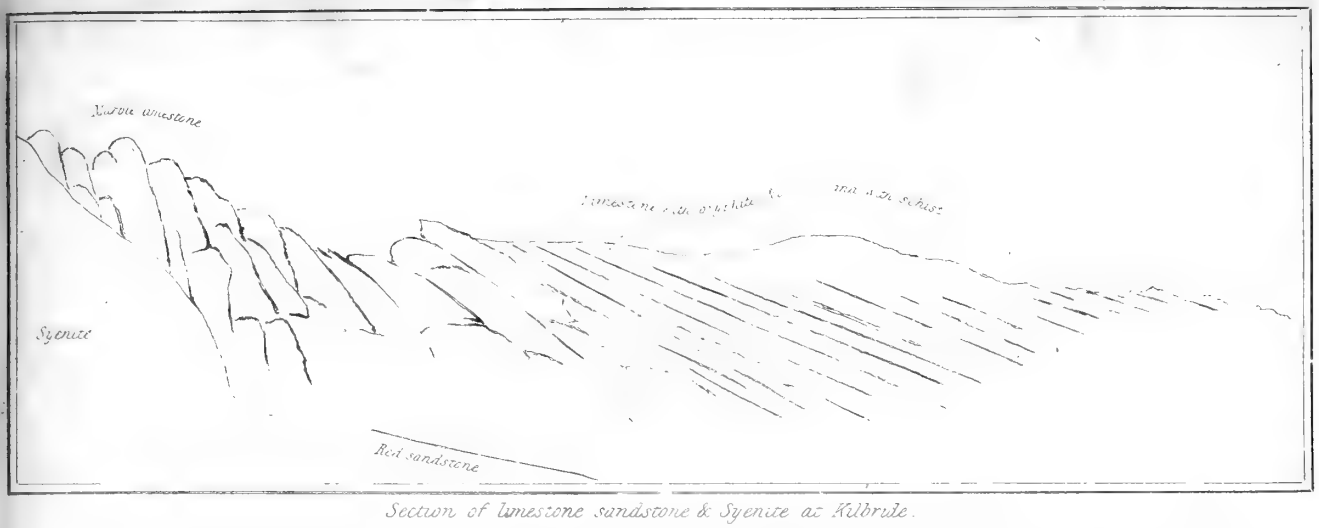
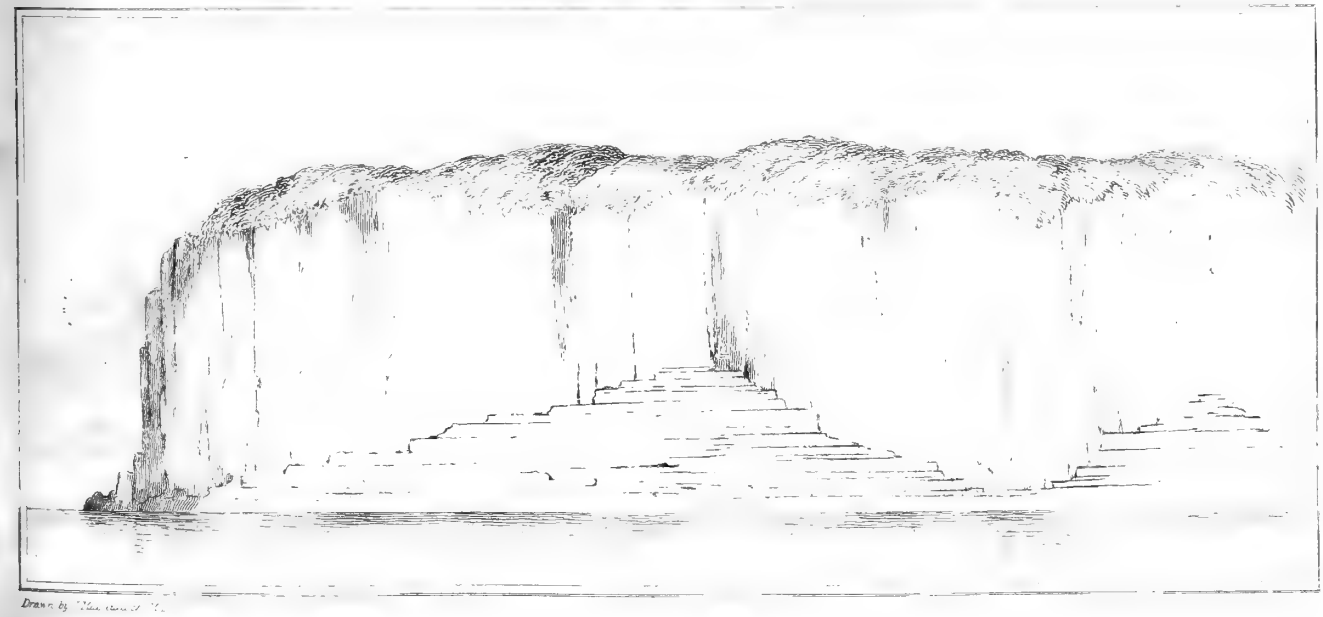


Section of limestone sandstone & Syenite at Kilbride.

Section of the same in another direction prolonged towards Borrereg showing the superpositions of the strata, and an example of alternation between the Shelly & the marble limestone



Position of the Lydian stone under the Trap at Dunsalm.

Positions of the magnetic needle on the summit of Glamich in Sky.

Fig 1

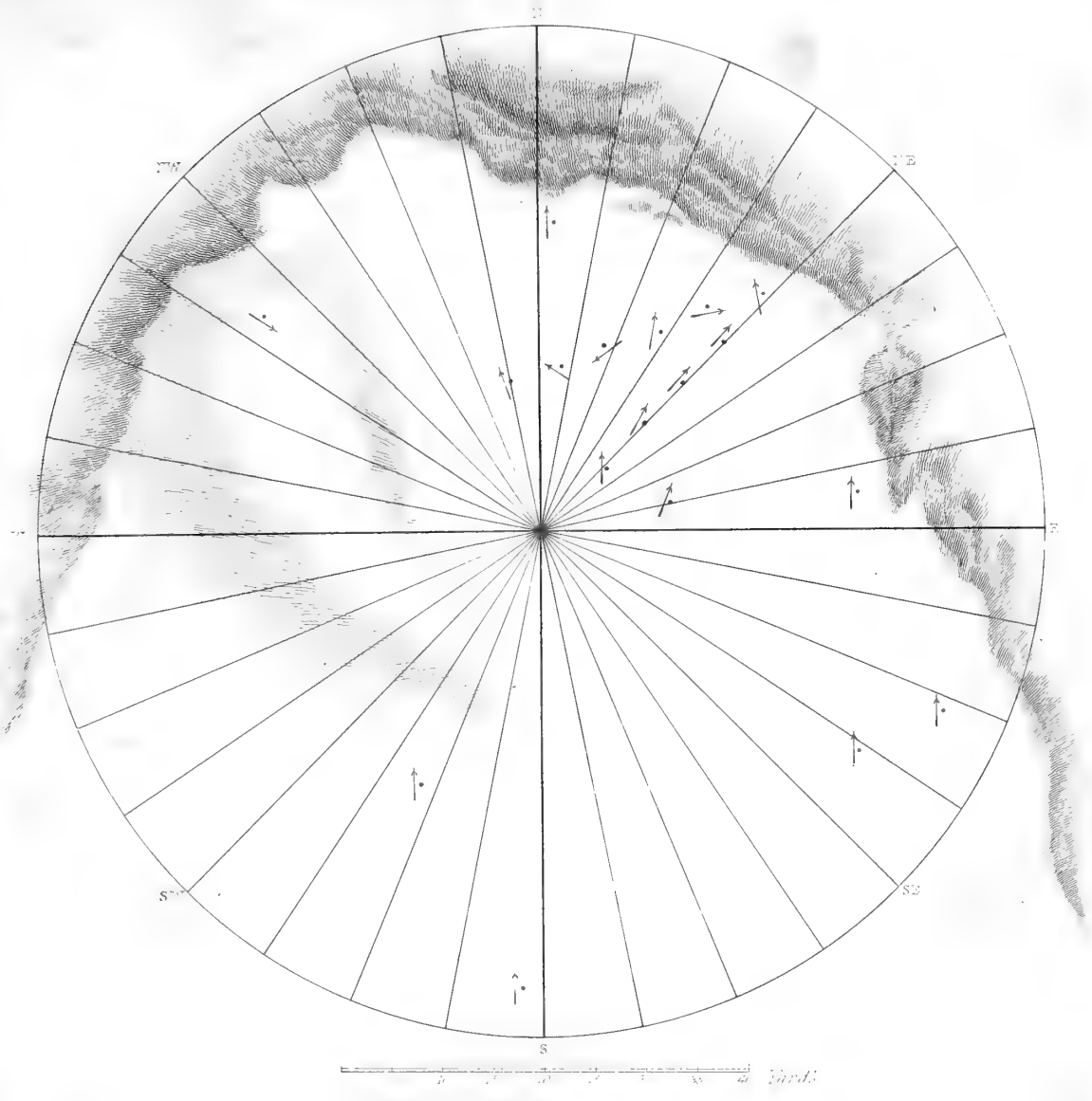


Fig 2

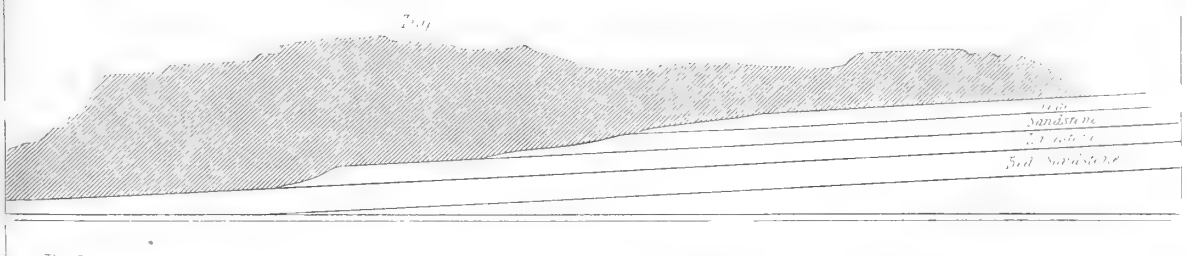
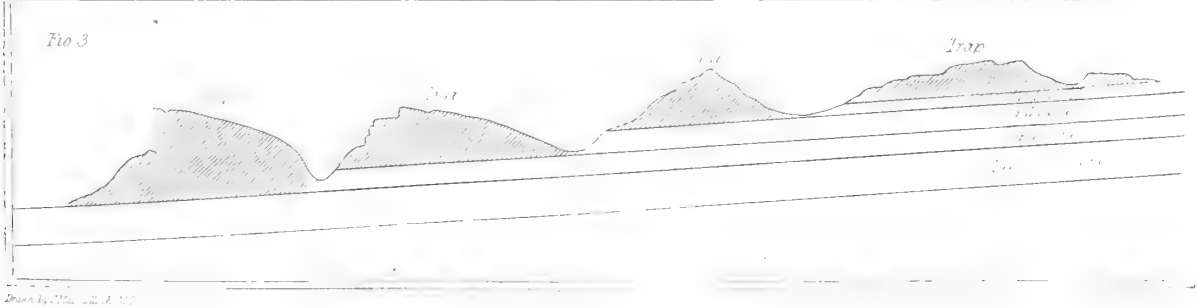


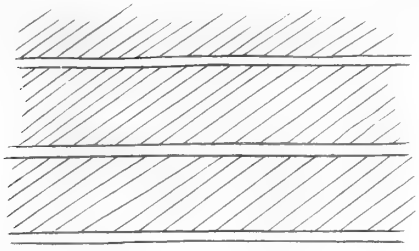
Fig 3



Drawn by Mrs. Hall. F.G.S.

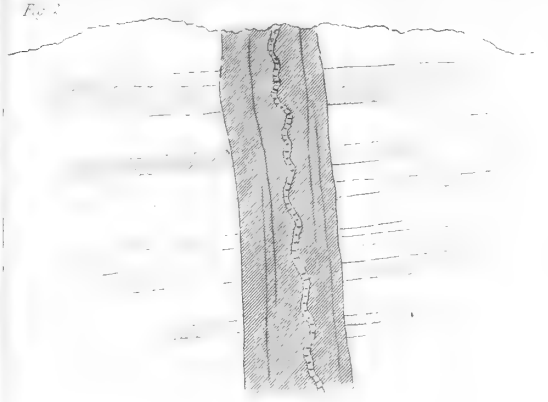
Published by Williams Phillips London

Fig. 1



Sandstone at Strathaird

Fig. 2

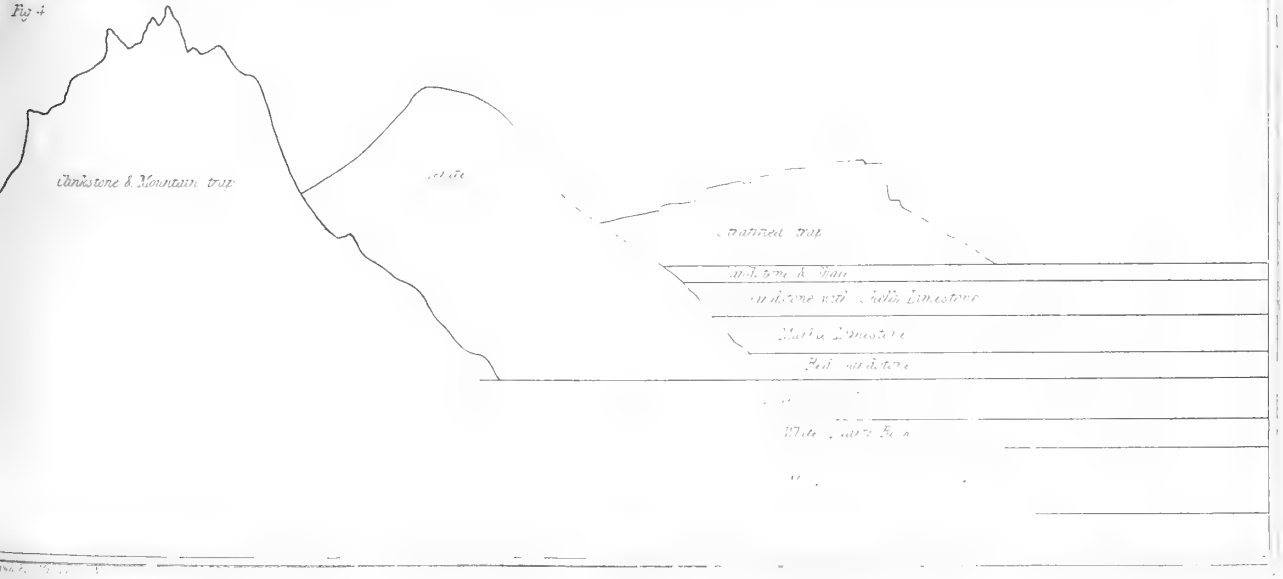


Compound Trap vein at Strathaird

Fig. 3

Sandstone intersected by Trap at Strathaird

Fig. 4



OXYD OF URANIUM

Varieties of the Primitive Crystal.

Fig. 1.

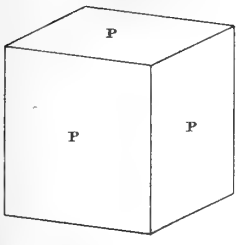


Fig. 2.

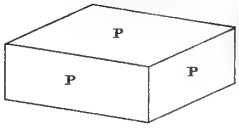


Fig. 3.

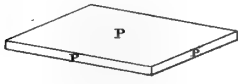
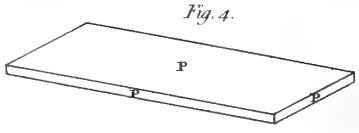


Fig. 4.



First Modification.

Fig. 5.

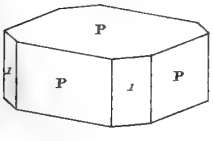


Fig. 6.

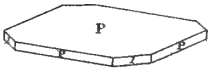


Fig. 7.

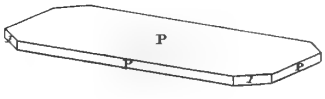
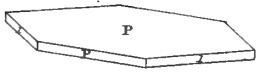


Fig. 8.



Second Modification.

Fig. 9

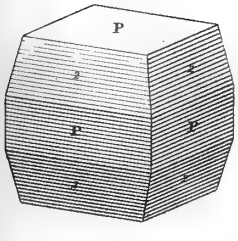


Fig. 10.

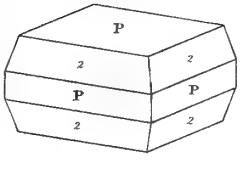
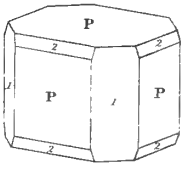


Fig. 11.



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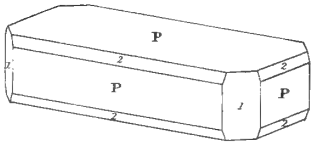


Fig. 13.

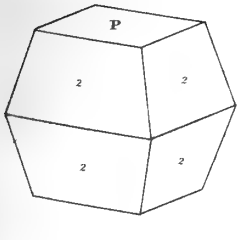


Fig. 14.

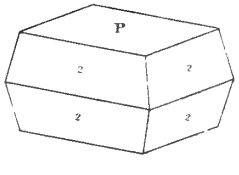


Fig 15

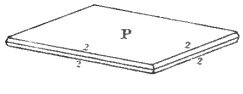
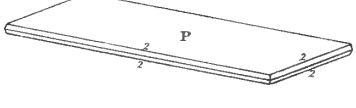


Fig. 16.



Published by W. Phillips, London, 1816.

Engraved by Miss D. Lowry.

OXYD OF URANIUM

Third Modification.

Fig. 17.

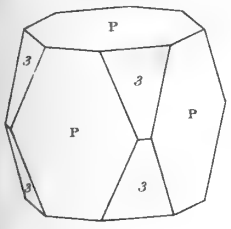


Fig. 18.

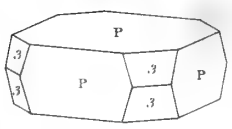


Fig. 19.

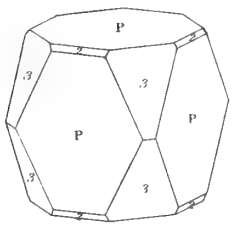


Fig. 20.

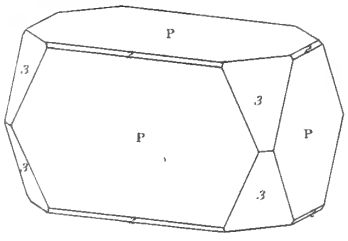


Fig. 21.

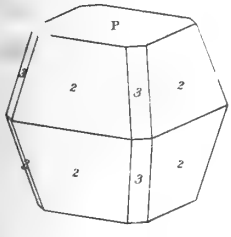


Fig. 22.

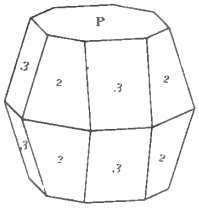


Fig. 23.

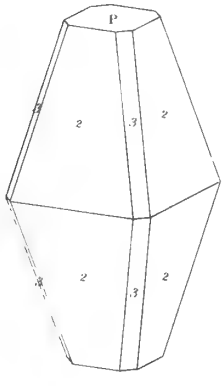


Fig. 24.

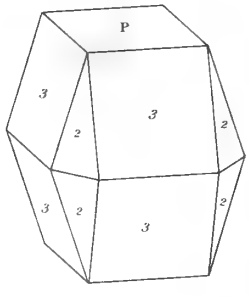


Fig. 25.

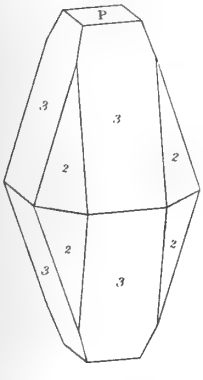


Fig. 26.

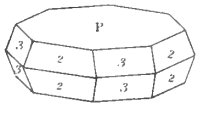


Fig. 27.

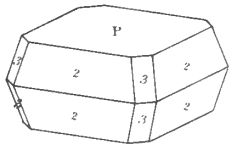


Fig. 28.

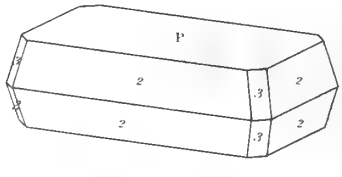


Fig. 29.

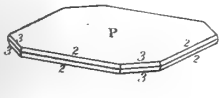


Fig. 30.

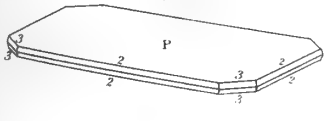


Fig. 31.

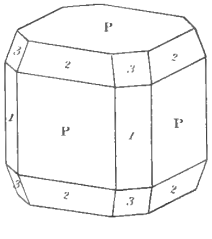


Fig. 32.

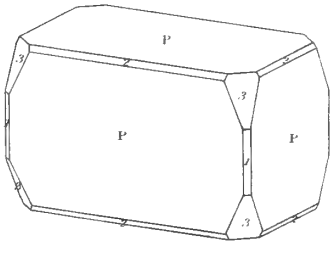
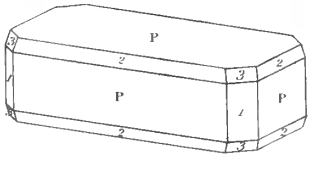


Fig. 33.



Third Modification continued.

Fig. 34.

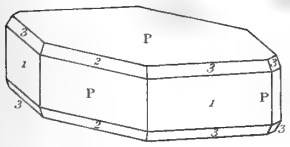


Fig. 35.

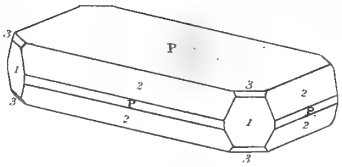


Fig. 36.

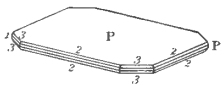


Fig. 37.

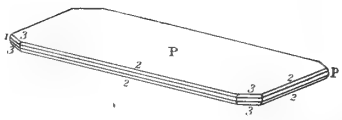


Fig. 40.

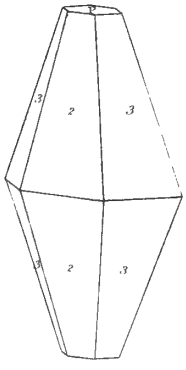


Fig. 39.

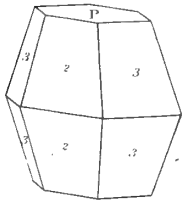


Fig. 38.

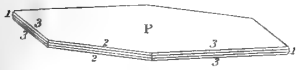
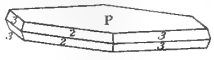


Fig. 41.



Fourth Modification.

Fig. 42.

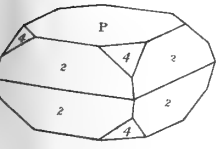


Fig. 43.

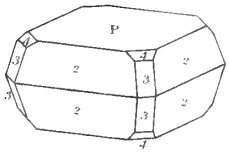


Fig. 44.

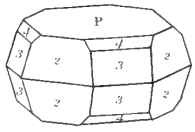
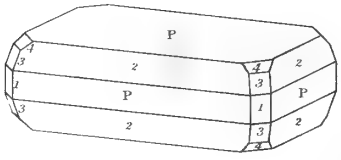


Fig. 45.



Fifth Modification.

Fig. 46.

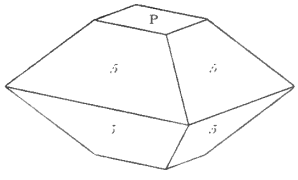
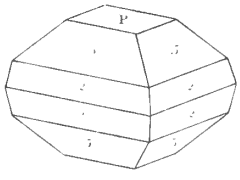


Fig. 47.



Original Map
OF THE N.E. OF IRELAND.

Engraved by J. & G. J. Pickett. Bridgewater Square.

Published by W. Phillips. London. 1816.

Deer park of Glenarm

Glenarm

Bellaire hill

Lyas

Cairnalloch

Red braes of Cairnalloch

Lyas

GERRON POINT

Cruach a crue

Red bay Castle

Lurgethan mountain

Newton glens or Cushendall

Tea buliagh 4 miles inland

Chalk

Old Red Sandstone

Ridge of Kilnaclore

Conglomerate

Distant Mountains

Basalt

Chalk

Slieve-nony

Basalt

Chalk

Vale of Glendun

Chalk

Distant Mountains

Basalt

Hills of Mica Slate

Cushendon Bay

Mica Slate

Ridge of hills principally composed of Mica-slate containing subordinate beds of primitive limestone porphyry Sienite & Hornblende slate

Ardnamoney Point

Mica Slate &c.

Ardnaflash Point

TOR BAY

Basalt

Chalk

Red Sand

TOR POINT

Chalk

Red Sandstone

Mica Slate &c.

Chalk

Red Sandstone

This Sectional View is continued on Plate 10* on a scale of twice the dimension.

Isle of Raghlin.

a b c

a b c

Chalk

Marble

Chalk converted into granular marble

Marble

Index to the colours on this & the two following Plates.

Basalt

Coal Measures

Red Ochre

Red Sandstone

Chalk

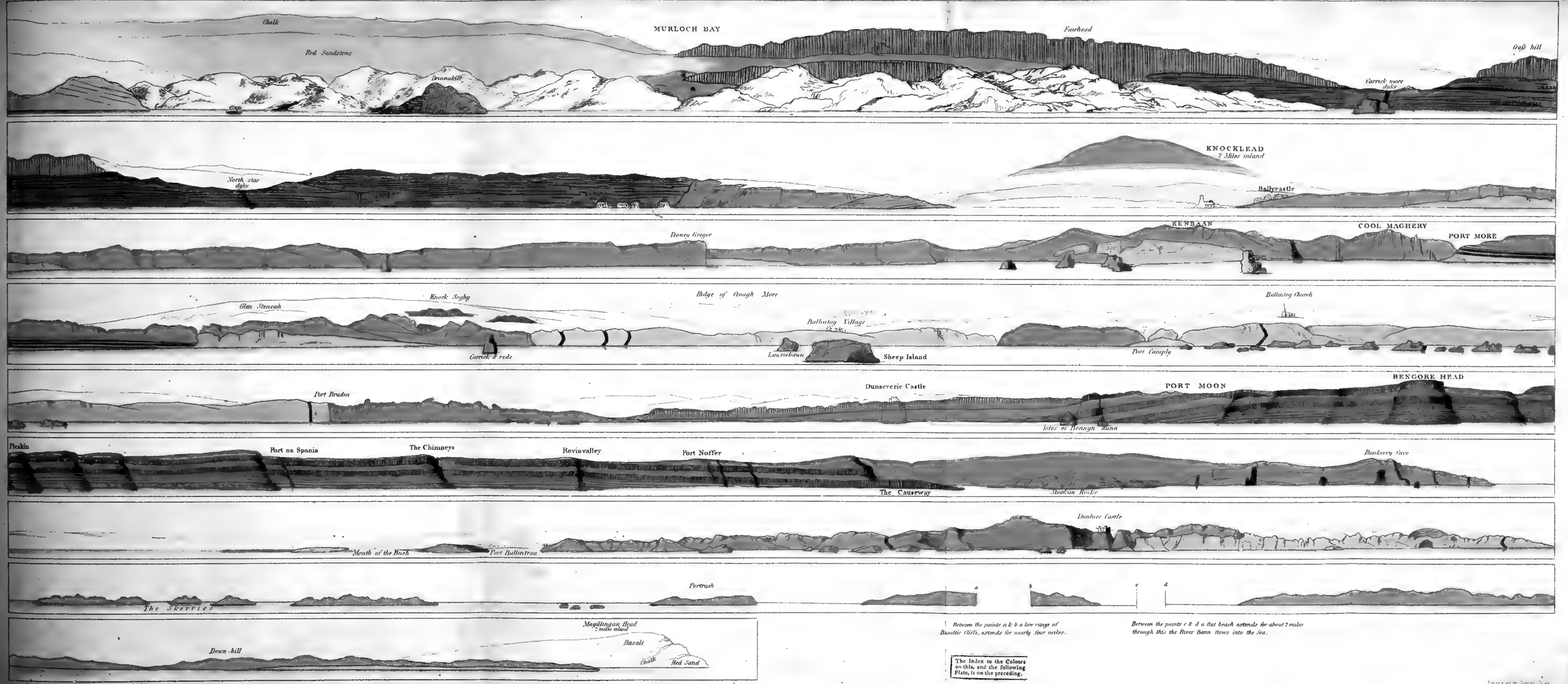
Mica Slate

Drawn from Sketches by Prof. Buckland & the Rev. Wm Conybeare.

Sectional View of the N.E. Coast of Ireland.

Published by William Phillips London 1816.

Etched by G Cooke.



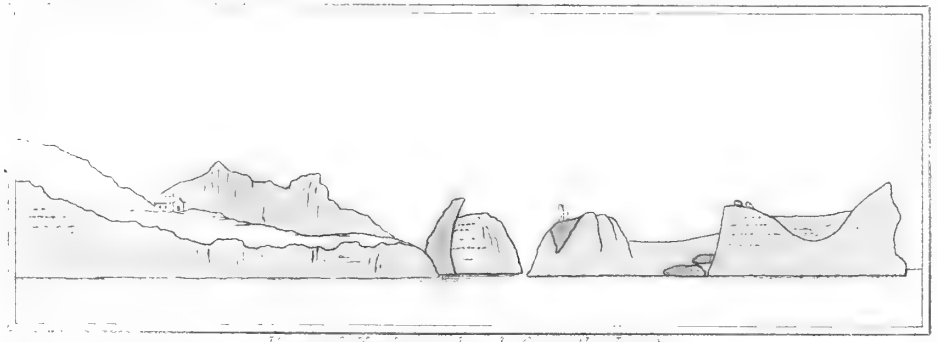
Between the points a & b a low range of Basaltic Cliffs, extends for nearly four miles.

Between the points c & d a flat beach extends for about 2 miles through this the River Bann flows into the Sea.

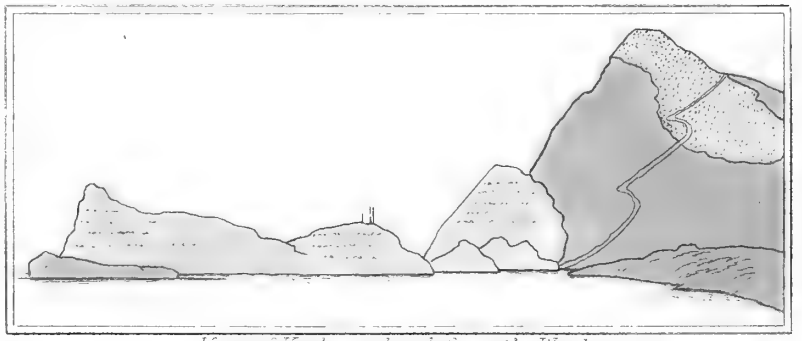
The Index to the Colours on this, and the following Plate, is on the preceding.

Sectional View of the N.E. Coast of Ireland

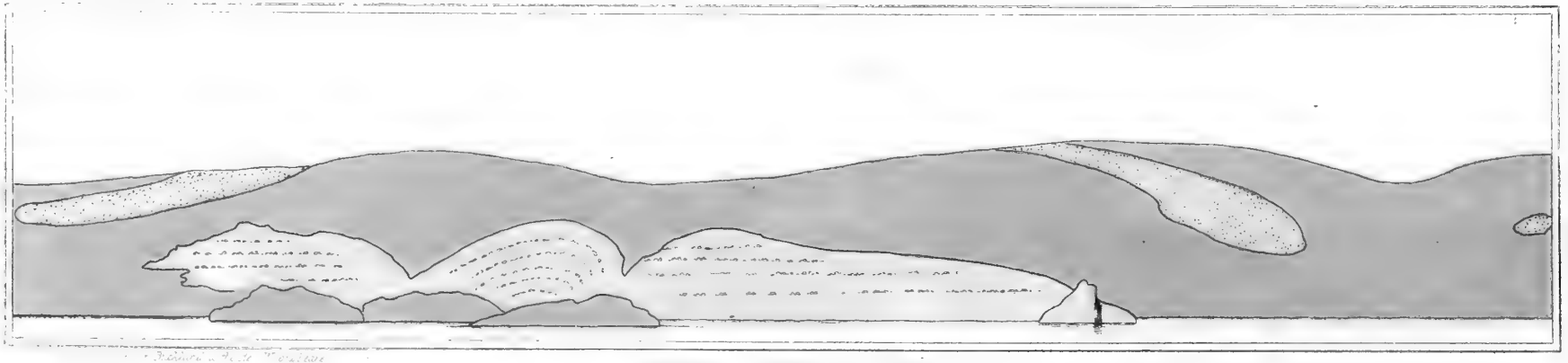
View of Kenbaan cliffs from the extreme point of Kenbaan Head.



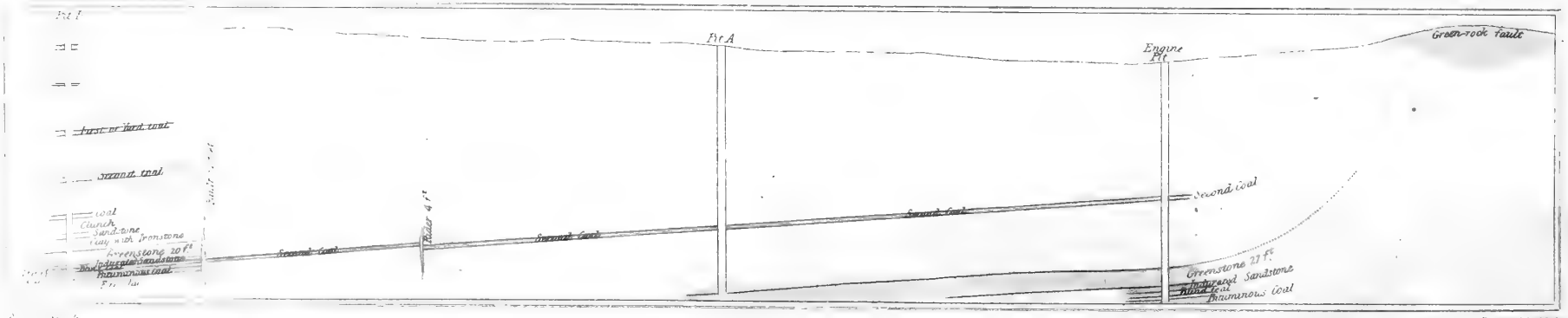
View of Kenbaan head from the East



View of Kenbaan head from the West



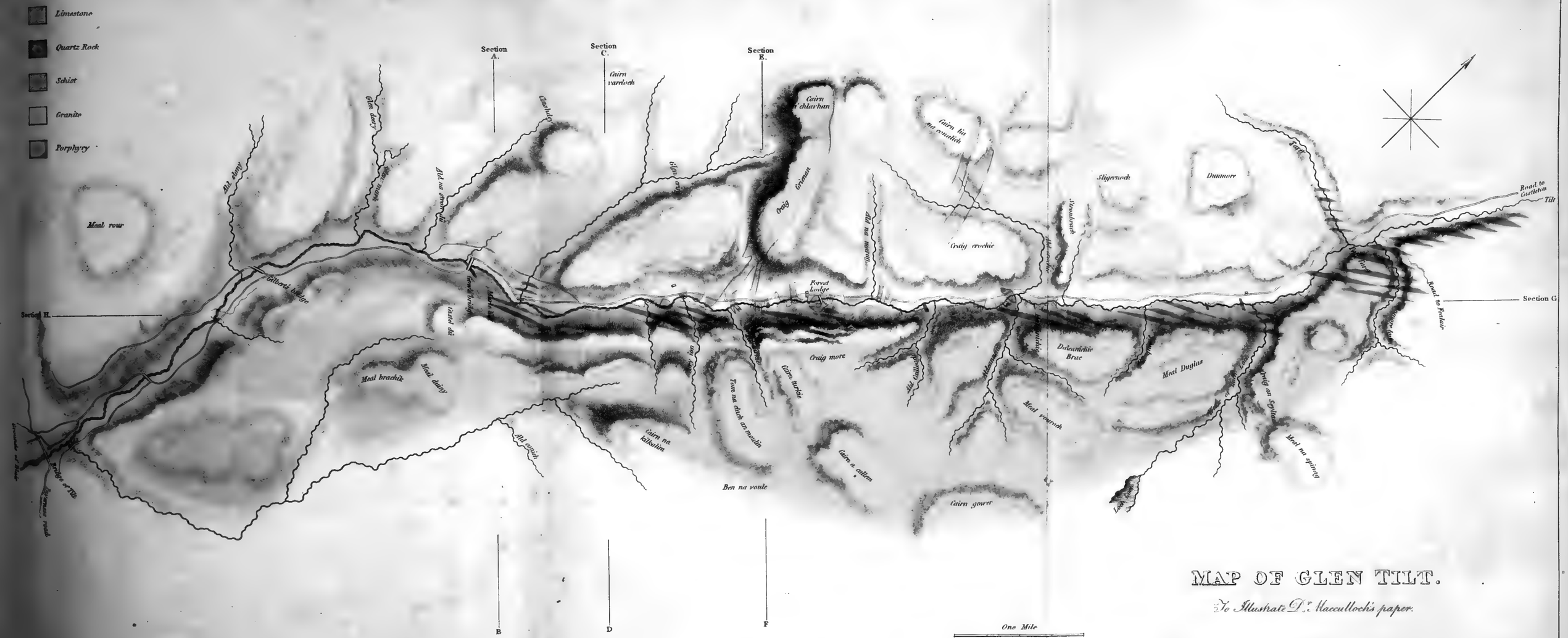
Elevation of Kenbaan cliffs



Engraved by G. Cooke

Ground Plan & Section of Birch hill Colliery.

Published by William Phillips London 1810

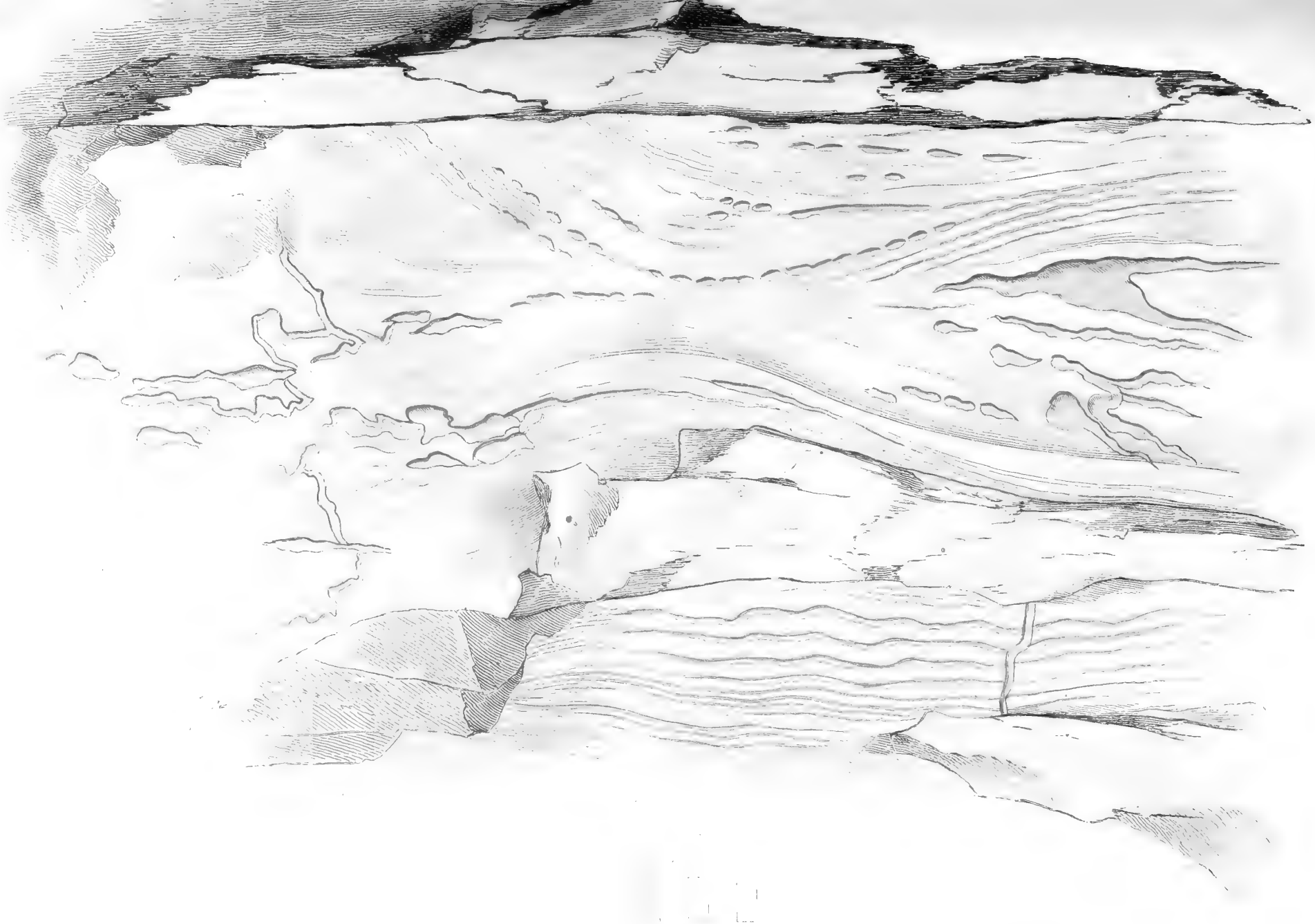


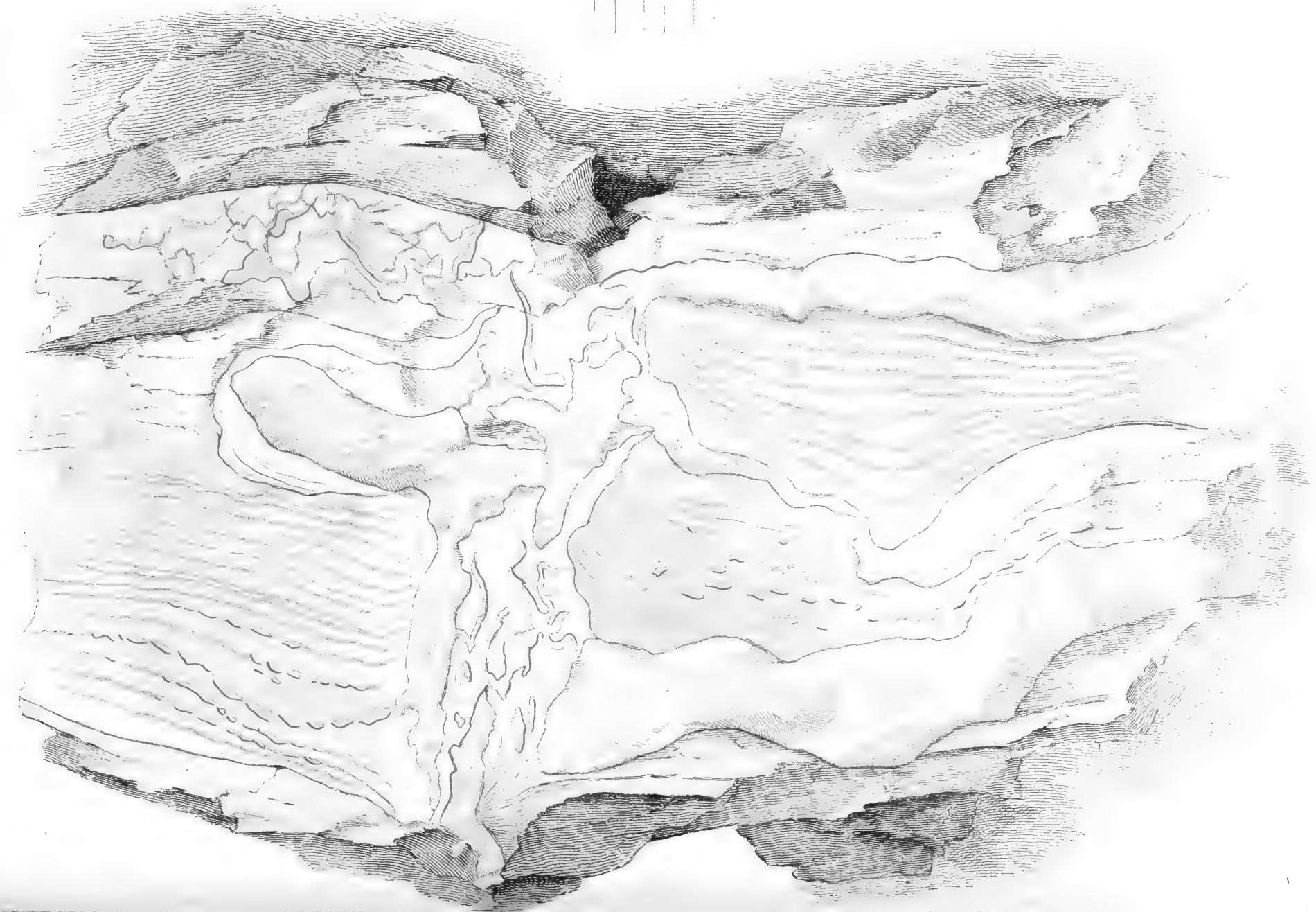
MAP OF GLEN TILT.

To Illustrate Dr. Macculloch's paper.

Published by W. Phillips London 1816.

Engraved by J. Cross, 17 Russell Court.





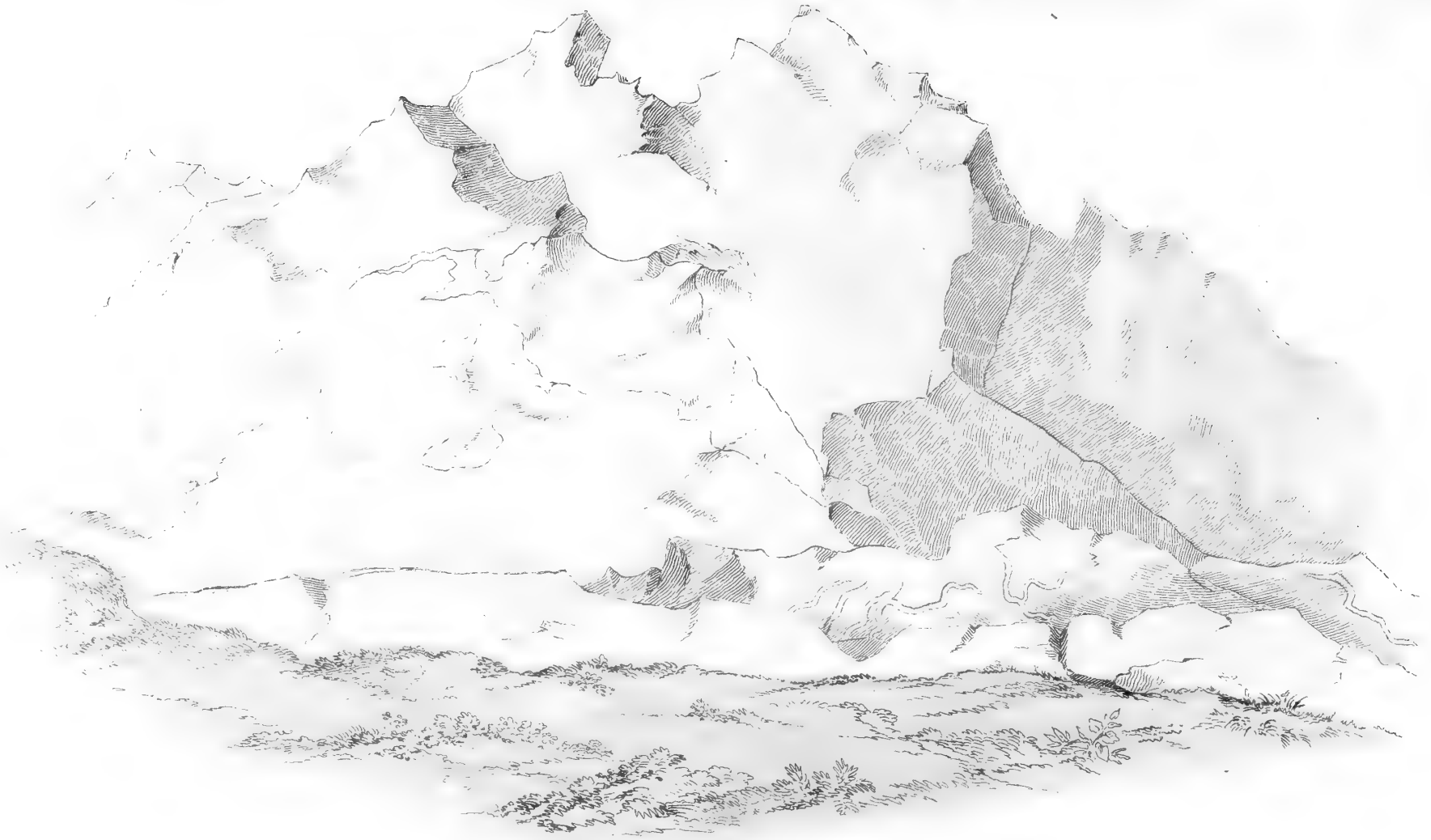
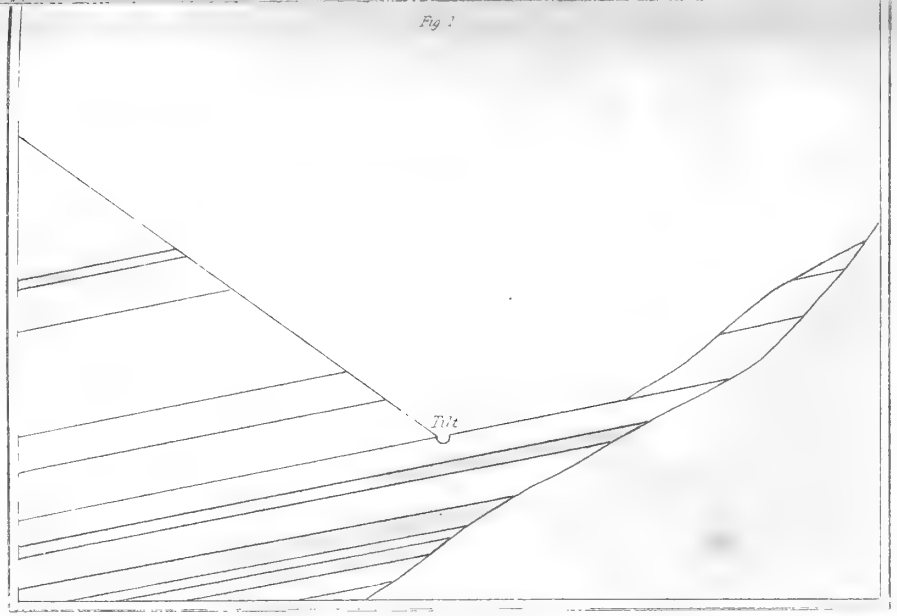
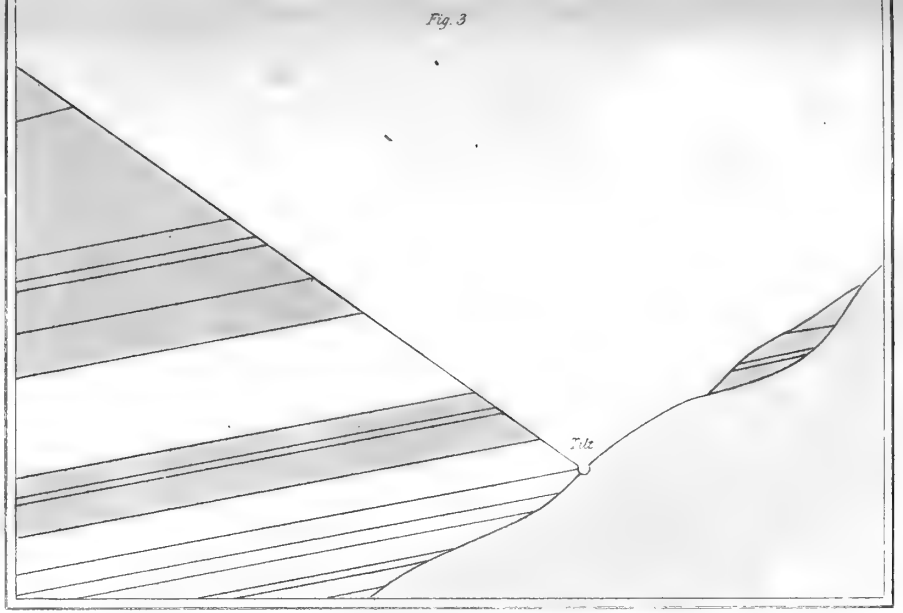


Fig 1



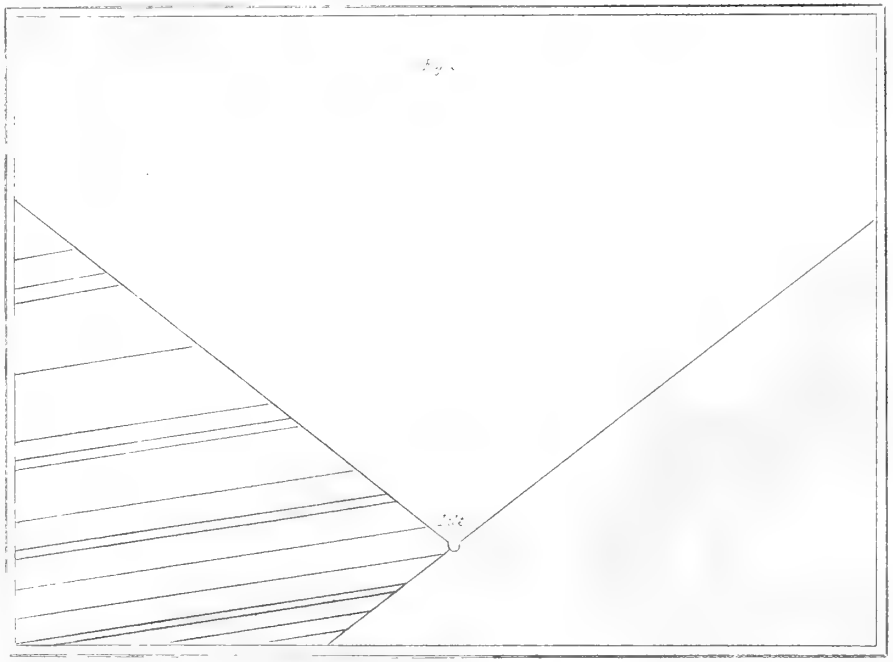
Section at A B

Fig. 3



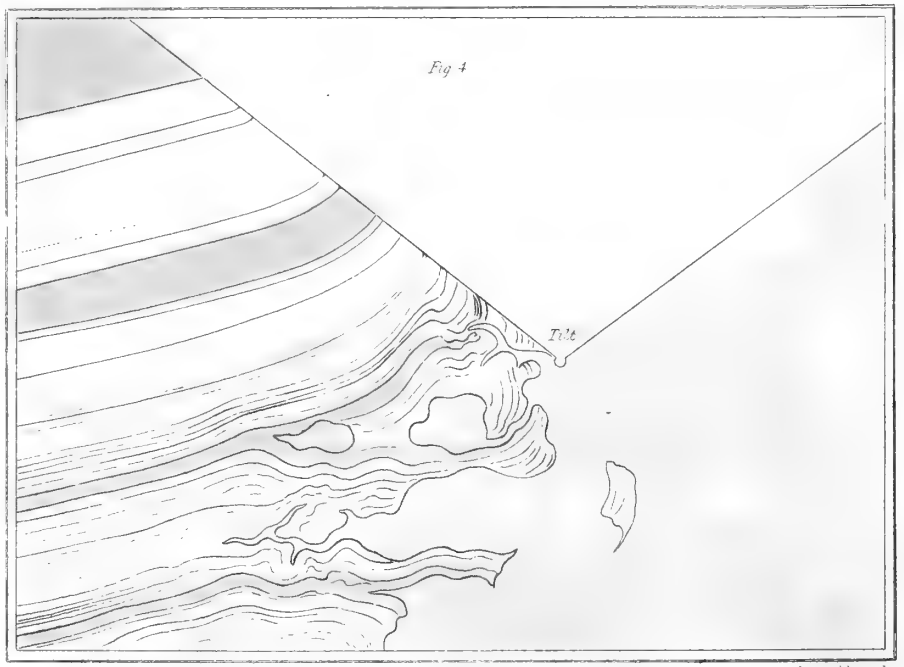
Section at E E.

Fig 2



Section at C D.

Fig 4

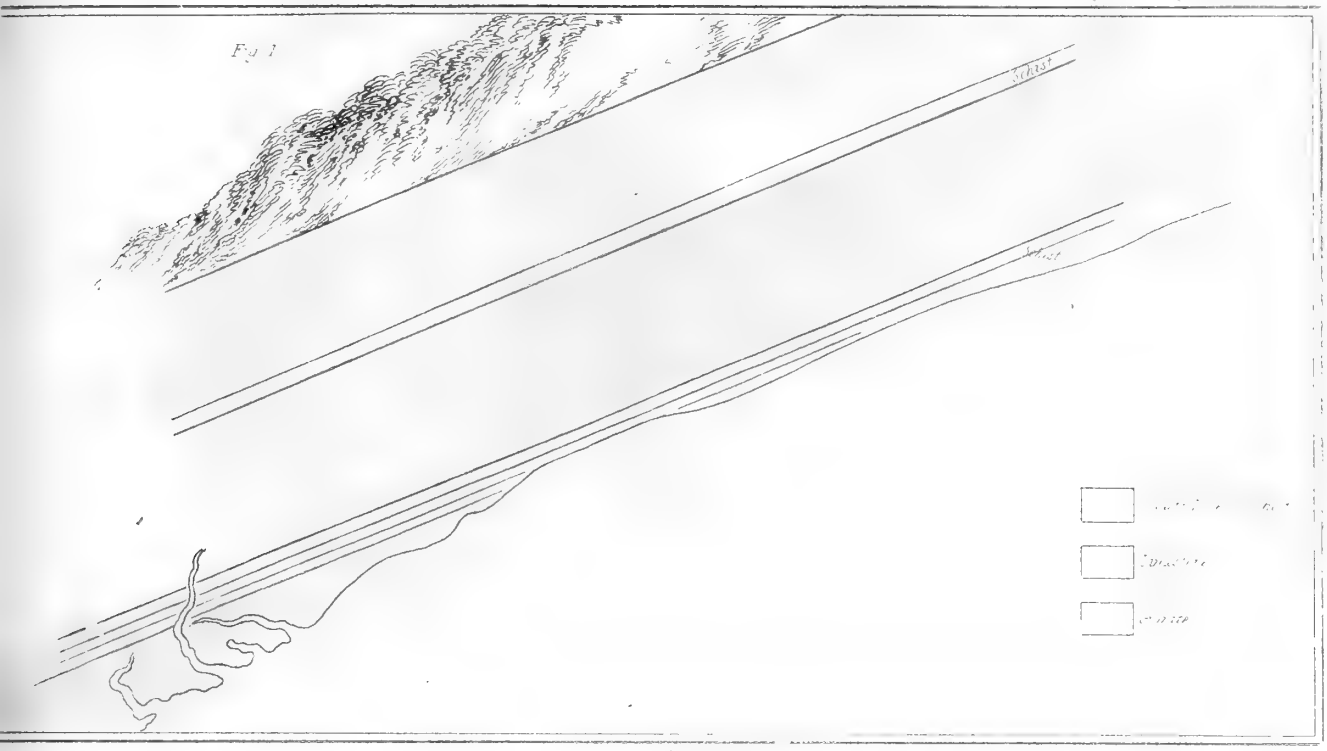


Section at the junction of the Granite & Limestone.

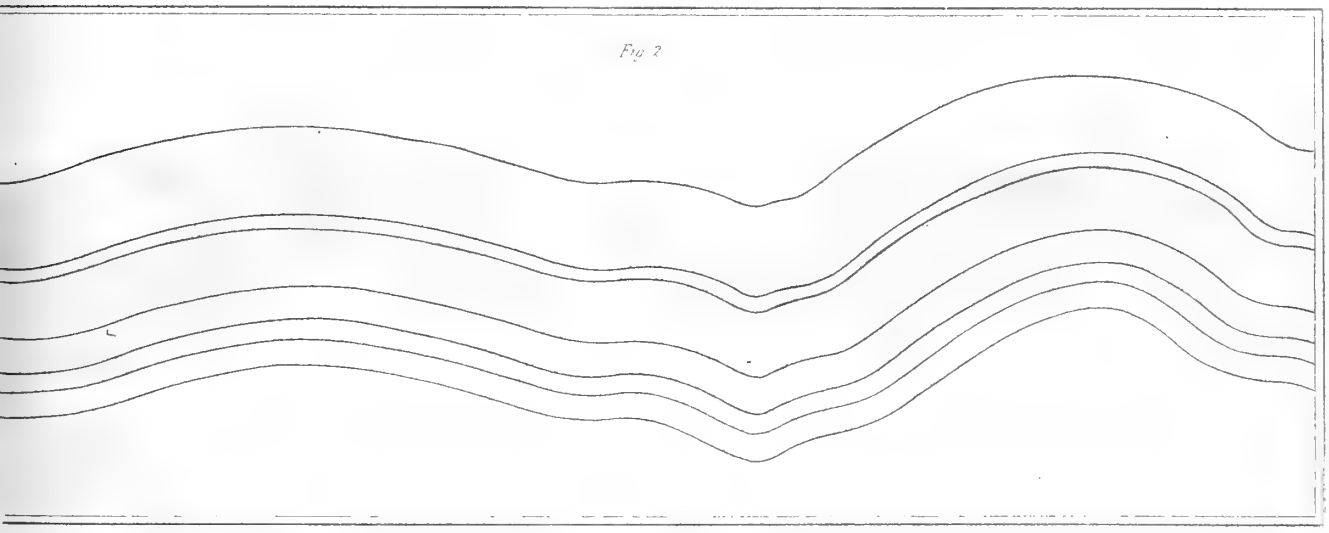
Limestone

Schist & Quartz Rock

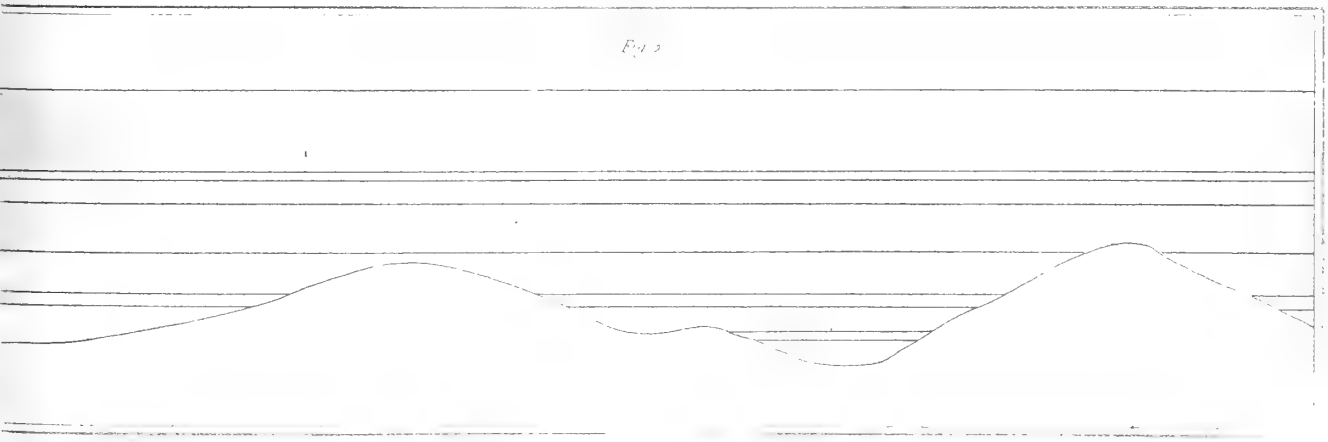
Granite

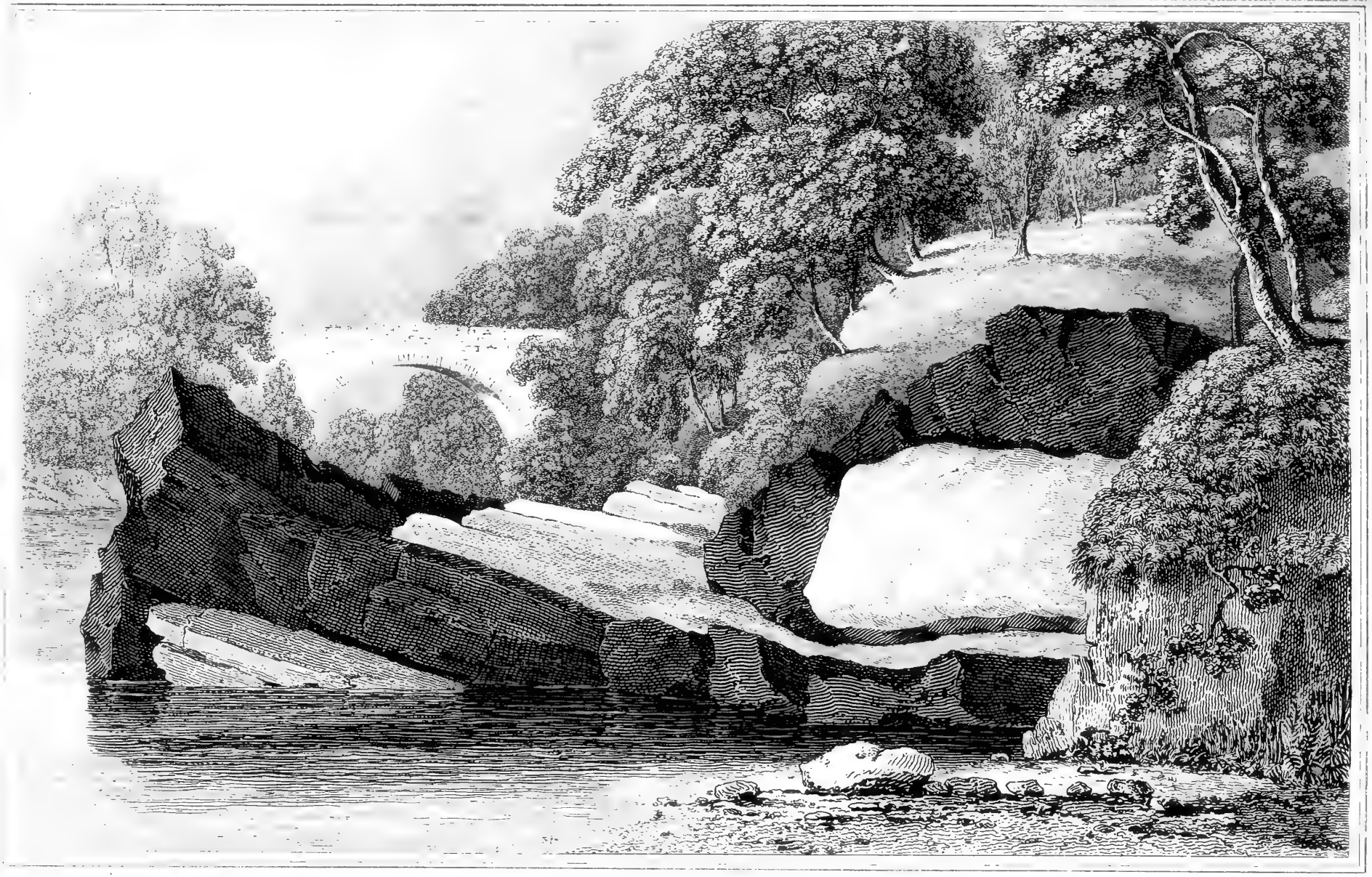


Section at Glen Crany



Section if the Strata had been deposited on the Granite





Engraved by Ebbs

Grauwacke Formation

Conglomerates Sandstones Red Rock &c.

Lyas Strata

Beds of Limestone in Grauwacke Form.

Granite

Limestone of Cannington Park

Water

Marsh and Alluvial Land

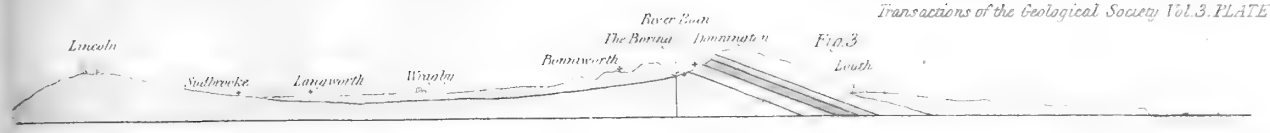
GEOLOGICAL MAP

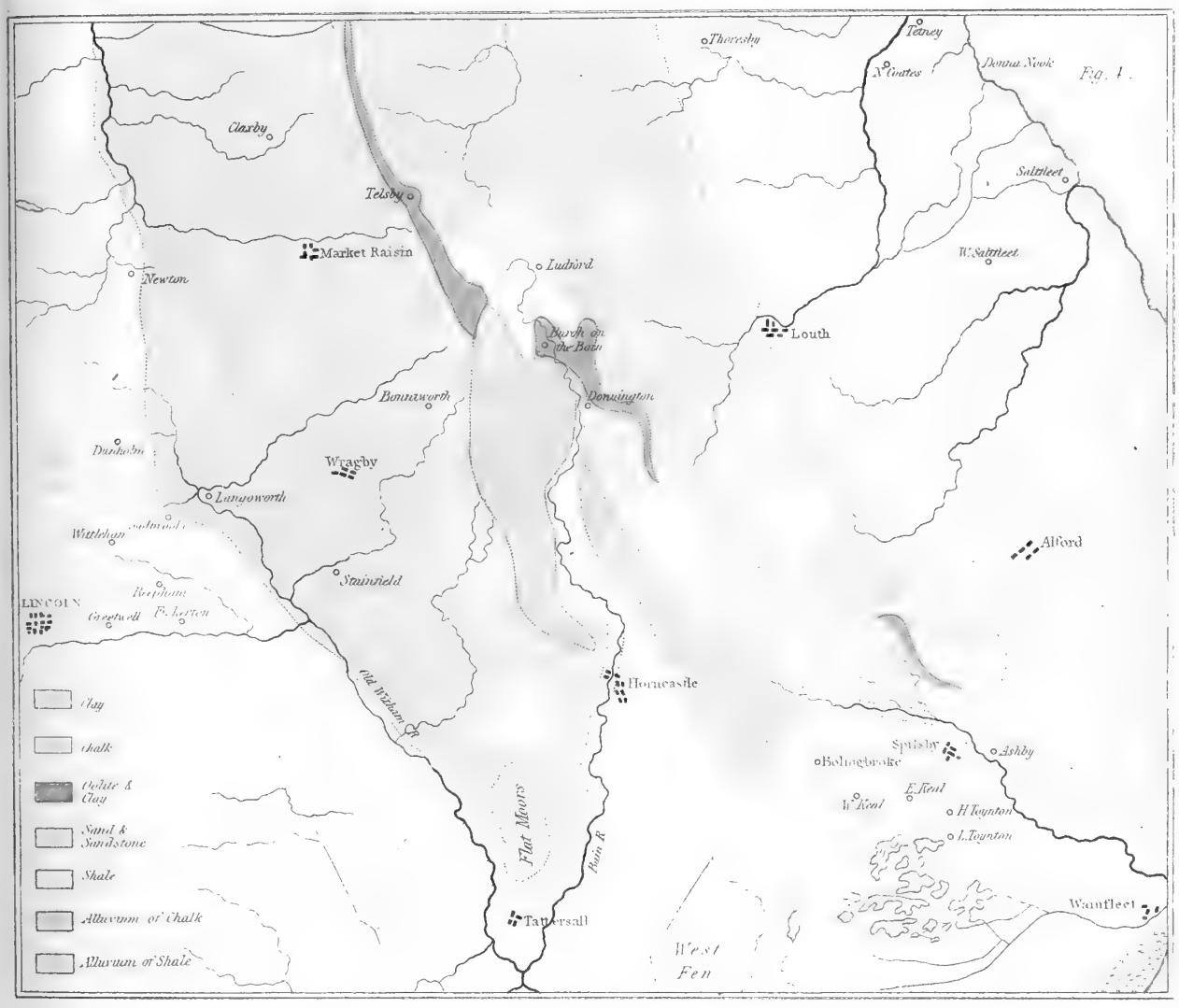
of the SOUTHWESTERN PART *of*

SOMERSETSHIRE.

Published by W. Phillips. London. 1816

Engraved by J. Cross, 17 Russell Court.


Lincoln
Sudbrooke
Langworth
Wragby
River Bain
The Barnaby
Donnington
Bonnaworth
Louth
Fig. 3


Thoresby
Tetney
N. Cotes
Donna Nook
Fig. 1.
Claxby
Saltfleet
Telsby
Market Raisin
Newton
Ludford
W. Saltfleet
Burgh on the Bain
Louth
Bonnaworth
Donnington
Dunholm
Wragby
Langworth
Wittelsea
Alford
Stainfield
LINCOLN
Greetwell
Fl. Lerton
Old Wickham
Horncastle
Spilsby
Ashby
Bolingbroke
W. Keal
E. Keal
H. Toynton
L. Toynton
Flat Moors
Bain R.
Wainfleet
Tattersall
West Fen
Clay
Chalk
Oolite & Clay
Sand & Sandstone
Shale
Alluvium of Chalk
Alluvium of Shale

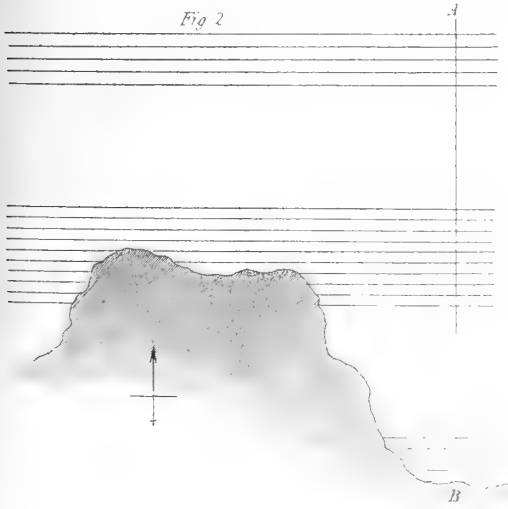
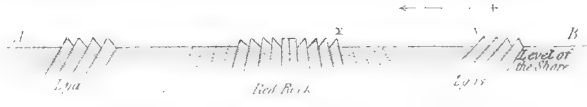
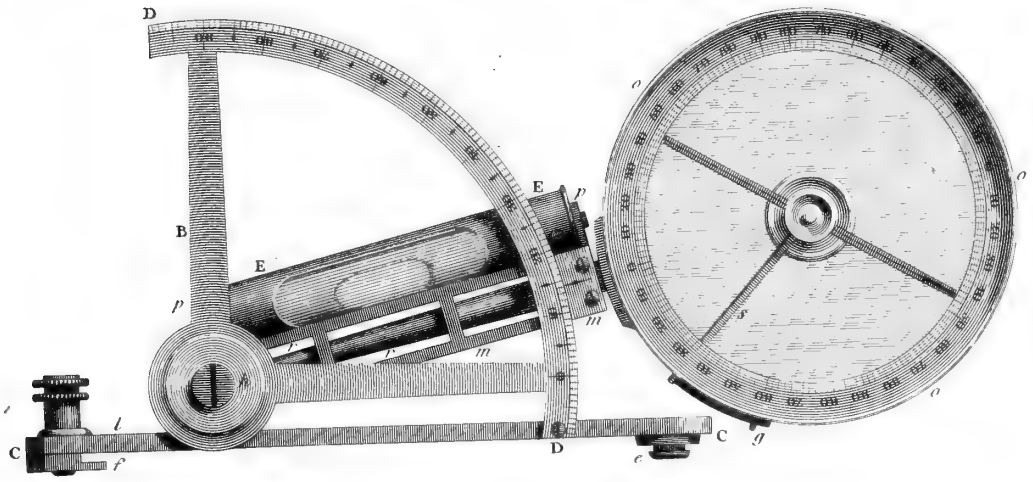


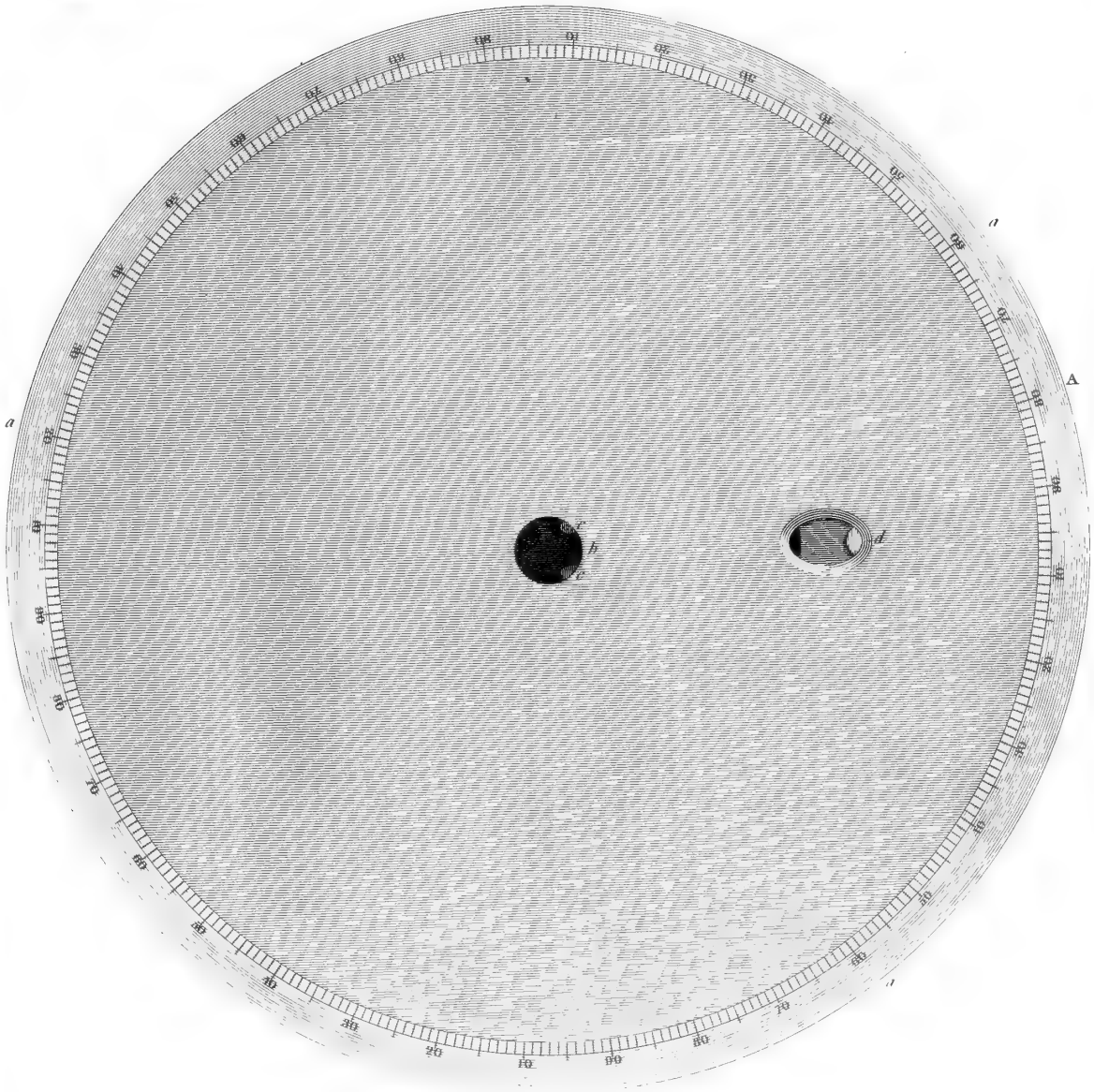
Fig. 2
A
B

Fig. 4


A
B
Lias
Red Rock
Lias
Level of the Shore

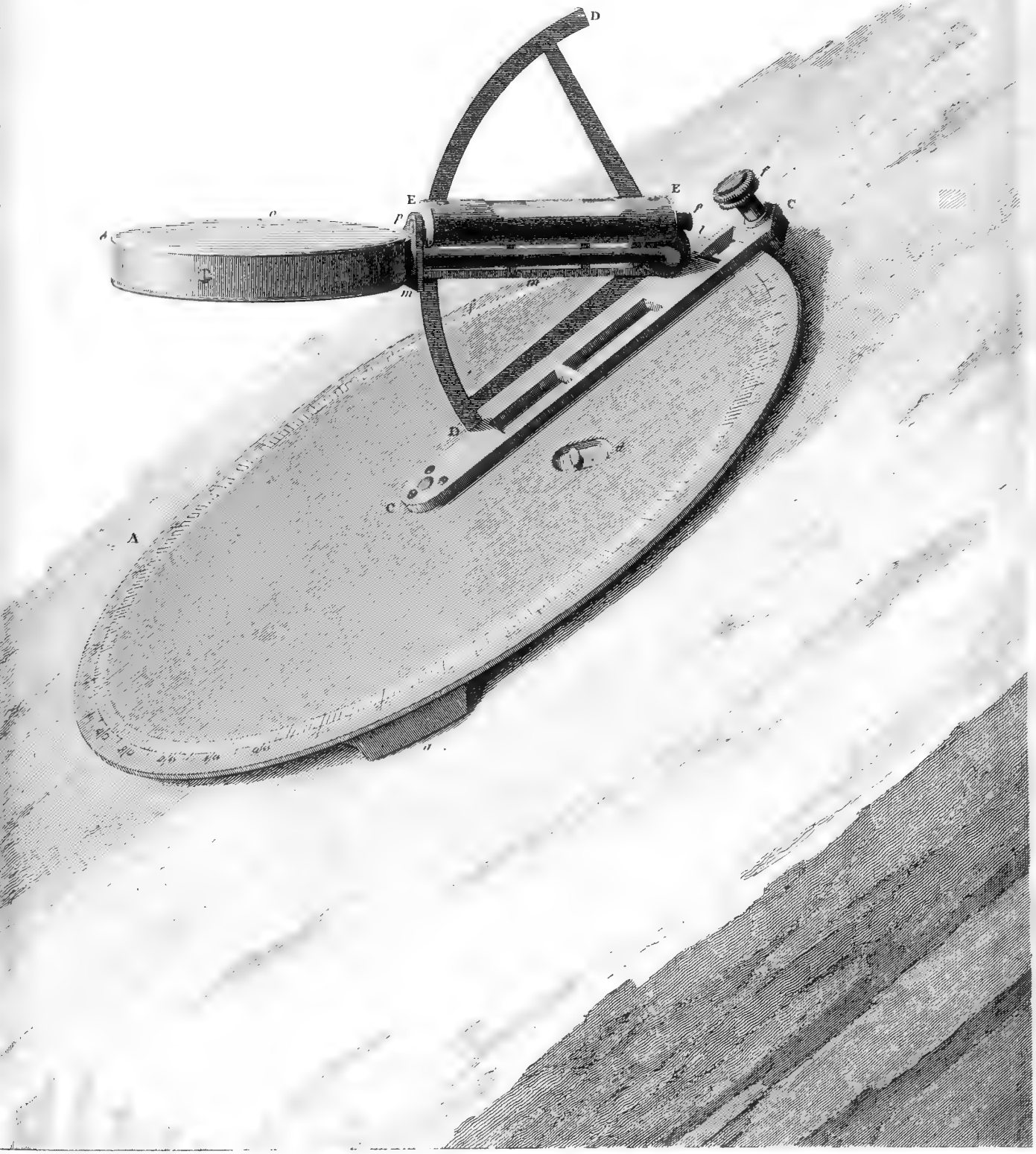
CLINOMETER





Published by W. Phillips London 1816

CLINOMETER



Published by W. Phillips, London 1816.

PLATES AND MAPS

IN ILLUSTRATION OF

THE FOURTH VOLUME

OF THE

TRANSACTIONS

OF THE

GEOLOGICAL SOCIETY.

LONDON:

PRINTED AND SOLD BY WILLIAM PHILLIPS, GEORGE YARD, LOMBARD STREET.

1817.

EXPLANATION OF THE PLATES.

PLATE 1.

Map of Northumberland and Durham, to illustrate Mr. Winch's paper. The colouring points out the different rocks. The contact of that series called the Leadmine measures or Mountain limestone with the red marl or sandstone to the westward of Temming towards Brampton is not accurately ascertained, but a little to the south-east it has been traced by Professor Buckland from Melmerby to Murton, and is laid down in the map accompanying his paper (Plate 5.) The letters U and D, placed against the common slip dykes of the coal measures denote that the strata are elevated or depressed on that side by the number of fathoms marked after the letter.

PLATE 2

Is a figure of the fossil Fish, apparently belonging to the genus Chœtodon, found in the magnesian limestone at Low Pallion, as mentioned in page 9.

PLATE 3.

Is a plan, communicated to the Society by Mr. Hill of Newcastle, of the Dyke in Walker Colliery, taken at the level of the High Main Coal, 100 fathoms from the surface. The sectional lines, AA and BB, mark the situation of horizontal drifts that have been cut through the dyke, the particulars of which are given in page 22.

PLATE 4.

Fig. 1. Shows the manner in which the magnesian limestone overlies the Coal measures at Whitley quarry near Cullercoats. The ninety-fathom Dyke is seen passing through the Coal measures, and the limestone appears deposited in a hollow or trough upon them in a manner that shews it to be of a subsequent age, as the former are much dislocated by the dyke, while the latter is not at all disturbed. See page 4.

Fig. 2. Is a sectional view of the Dyke at Walbottle Dean, described page 23

EXPLANATION OF THE PLATES.

PLATE V.

The Map represents the country described in Professor Buckland's paper; in it are marked the lines of the sections, No. 2 & 3.

The sectional figures are imaginary, and intended to shew the supposed relative position of the strata.

No. 1. Shews the abutment of the red sandstone against the ends of the lower strata of the escarpment, as it is seen both on the north of Melmerby and south of Dufton. The letters A. B. C. point out the abrupt contact of the sandstone against the greenstone and slate. The letters C. D. E. shew its similar position in regard to the lower strata of the great limestone series.

No. 2. Shews the position of the strata in the line marked on the map from Hartside Fell to Ousby, where (at A.) the sandstone is seen abuting against the disturbed and nearly vertical limestone and coal measures, which form a low scar in that part.

No. 3. Represents the strata in the line marked No. 3. on the map, and the beds of stratified entrochal limestone mentioned in p. 114, are seen on the west of Keisley Pike dipping rapidly under the sandstone.

No. 4. Represents the section of the strata as seen in the cliffs from Whitehaven to St. Bees head, where the sandstone is seen lying on the magnesian limestone which is deposited on the coal measures. Mr. Winch, at page 4, mentions that the magnesian limestone is seen also at Whitley quarry lying upon the coal measures.

The dark spot in the red sandstone points out the situation of a gypsum quarry.

London: Printed, by W. Phillips, George-yard, Lombard-street.

EXPLANATION OF THE PLATES.

PART II.

PLATE 6.

Veins of granite and porphyry traversing the schist of Cruachan.

Fig. 1. Passage of porphyry veins through schist already traversed by veins of granite.

Fig. 2. A similar circumstance, representing at the same time the parallel and adjoining position of two veins of differently coloured porphyries.

PLATE 7.

Plan and Sections of the mine of Huel Peever, shewing the interruptions that have occurred to the veins in that mine. The ground plan, Fig. 1. represents the effects produced by the cross courses intersecting the veins that run in the direction of east and west. The transverse section, Fig. 2. shows the interruptions among themselves of the veins that run in an east and west direction, occasioned by the various degrees of inclination of their underlie. The tin vein is intersected by the copper vein, and they are both again affected in a similar manner by the two slides.

The longitudinal section is explained, p. 144.

PLATE 8.

Tunnel of the Tavistock Canal.

The various beds and lodes met with in working through the hill are here represented, as well as the number of shafts sunk in the process of making the Tunnel.

PLATE 9.

Map of Sky, described p. 156.

PLATE 10.

Agate pebbles from the hill of Kinnoul in Perthshire.

Fig. 1. Represents a hollow nodule containing small chalcedonic stalactites. It is placed in the same position which it appears to have occupied in the rock where it was formed. On considering its construction and comparing it with those of stalactitic caverns on a large scale, it will appear probable that after the deposition of siliceous matter which now forms the exterior crust had taken place, the process of infiltration became limited to its upper part. Thus the superior pendents were formed, while the dropping of the chalcedonic solution from their points has produced the corresponding stalagmite below. Where the infiltration has been most easy the stalactite and stalagmite have met, while the total suspension of the process in another part, has left a portion of the cavity unoccupied. It is easy to comprehend how such a nodule might be found filled with water, or how it might be occupied with quartz crystals instead of chalcedony. It is equally easy to see, that it might under certain circumstances give access to a solution of carbonated lime, in which case the interior would be occupied by a calcareous crystal; a circumstance extremely common. The crystal in such a case would either be found independent within the cavity, or filling up the whole vacuity, according to the length the process had been carried; both of which varieties are well known to mineralogists.

Fig. 2. This example presents a variety of the same process very common in the chalcedonic nodules of Faroe. The stalactite in this example is tortuous, and the bottom of the cavity is filled with horizontal layers of the same substance. Where these specimens are found to consist of parallel laminæ perforated by stalactitic forms, whether straight or crooked, they present a very mysterious aspect, but their formation is easily explained in the same way. The stalagmite in this case assumes the same diffused flat form that calcareous ones often do in large caverns, while as it continues gradually to rise it surrounds and entangles the dependent bodies without losing its parallelism, until the whole cavity is filled and consolidated into one mass.

Fig. 3. This figure represents one of the more obscure cases that occur in the chalcedonic nodules of trap. It may perhaps be explained by supposing that the straight parallel layers were first formed till one half of the cavity was filled, and that the layers parallel to the cavity, which appear above, had been deposited afterwards by the more tedious process to which the ordinary concentric nodules owe their existence. The cavity then remaining has been filled by quartz from a change of character in the percolating solution.

Fig. 4. The same process appears to have been carried on in this specimen, with the variation only that the whole of the upper and last remaining cavity has been filled by the concentric layers.

PLATE 11.

This plate represents a fragment of the rock of Kinnoul, including the junction of the schist and the trap. The vesicular cavities are seen running in lines parallel to the laminæ of the schist, and increasing in size and number where they approach to the trap. The contortion of the laminæ is also represented at the points where the two rocks unite, and in the same place the appearance of a detached fragment is visible. There is unquestionable proof of the existence of such detached fragments in many cases, as they may be found entirely surrounded by the trap, and only discoverable after breaking it. The conversion and prolongation of the schist into ramifying veins is also shown, the schistose structure disappearing shortly after the change takes place.

PLATE 12.

Forms of crystals to illustrate Mr. Phillips's paper on the Measurement of Primitive Crystals by the reflecting goniometer.

PLATE 13.

Map and Sections of the Plastic Clay District on the south-east of London.

The colours represent, 1. Chalk. 2. The formation of Plastic clay. 3. That of the London clay. 4. The tract of Marshes lying along the banks of the Thames—the flat grounds of Southwark, St. George's fields, Battersea and Chelsea, are coloured as belonging to this district, since they appear to have remained in the state of unreclaimed marshes even within the period of historical record: beneath a great part of this district lie the remains of an extensive forest, (vide page 304).

The numbers marked upon the map denote various points, where either natural sections are exhibited or where pits have been opened.

1. Marks the section ascertained by Sir Christopher Wren while laying the foundations of the new Cathedral of St. Paul; see Parentalia and page 287 of this volume.
2. The Tunnel at Rotherhithe or Redriffe; see the section as given in Mr. Webster's paper on the Strata lying over the Chalk, Geol. Trans. vol. ii. page 197. It should be observed that the section of the southern shaft only is there given. In the northern a thickness of nearly forty feet of the London clay was exhibited, in consequence of the dip of the strata in that direction.
3. Between Camberwell and Peckham. Here the shelly beds of the Plastic clay have been found in digging wells at the depth of thirty feet. At New Cross, near this point, they are found at the surface.

4. The pits at Loam Pit hill, described at page 285 of this paper: a section of these pits is represented in this Plate, No. 2.
5. Pits of sand and chalk on Blackheath hill.
6. The cavern beneath the point at Blackheath. This is an extensive adit driven into the substratum of chalk.
7. Sand pits in the middle of Blackheath; these are situated in the upper sands of the plastic clay formation. In the year 1803, an extensive excavation which had formerly been made into these strata was laid open; it was supposed to extend to the chalk beneath, but the roof fell in and the passage became choaked up before it had been explored.
8. On the south-east of Montpelier Row, Blackheath, a pit was opened in the plastic clay, by Mr. St. Leger, in 1805, and manufactured into various articles of pottery. The shelly beds occurred in this pit.
9. Slope of the hill on the north of Vanburgh fields, east of Greenwich. Here the shelly beds of the plastic clay are visible.
10. A chalk pit at the foot of Charlton hill.
11. Extensive sand pits near Charlton Church. This is the inferior sand of the plastic clay; the shelly beds are seen covering it. The section precisely agrees with that of the great Woolwich pits.
12. A chalk pit at the foot of the hill.
13. The great sand pits of Woolwich. The section they present is described page 284, and represented in this plate, No. 3. About a hundred yards on the east, the excavation is continued into the substratum of chalk.
14. Here an abrupt declivity beneath the Marine barracks at Woolwich presents a good natural section of the shelly beds of the plastic clay.
15. The gravel pit at Plumsted, mentioned in Mr. Parkinson's paper on the Vicinity of London. Geol. Trans. vol. i.
16. A deep shaft sunk into the substratum of chalk; mentioned at page 290 of this paper.
17. A pit in the London clay with Septaria; near the rise of Shooter's Hill; see page 290.
18. Chalk pits in the bottom of the ravine between Plumsted and Wickham.
19. Well on Boston heath, mentioned page 291 of this paper.
20. Bridgend place } Localities where the shelly beds of the plastic clay have
21. Near Bexley } been dug into.
22. A deep shaft sunk into the substratum of chalk and there communicating with horizontal adits. There are many such in the woods about Crayford and Dartford heath.
23. Green Street Green } In these localities the characteristic shells of the
24. Cockleshell bank } plastic clay formation are abundantly found; they
25. Betsham. } are particularly described in Thorpe's Costumale Roffense and Hasted's History of Kent.
26. Near Bromley. Here the shells of the plastic clay occur.

27. Sundridge Park. Here are the remarkable pits of indurated shelly gravel, described by Mr. Parkinson, Geol. Trans. vol. i. and p. 299 of this paper.
28. Between Sundridge Park and Camden Place, in the bottom of the valley, is a chalk pit covered with inferior sand of the plastic clay formation.

SECTIONS.

All these sections have been constructed on double scales, viz. a larger scale for the heights or vertical distances and a smaller for the horizontal distances.

No. 1. General Section from Redriffe Tunnel to Knockholt beeches.

This is carried along the line of section marked in the map. The scale for horizontal distance is nearly the same as in the map. The colours also are the same, with the exception that the thick stratum of white sand which forms the lowest member of the plastic clay formation, is here distinguished from the other members of that formation by dotting it.

No. 2. Section of the pits upon Loam Pit Hill, see page 285. The strata are here coloured after nature; their resemblance to those of Alum bay in the Isle of Wight will instantly strike the eye on comparing this section with that accompanying Mr. Webster's paper, Geol. Trans. vol. ii.

No. 3. Section of the Great Sand Pits at Woolwich; described page 284. This section agrees with the preceding in its scale, in its colouring, and generally in the strata which it exhibits; but the partial changes which occur in different points of the same deposits will be likewise observed in comparing them together: the direct distance of these pits from those of Loam Pit Hill is rather more than three miles.

PLATES 14, 15, 16, 17, 18, 19, 20, 21, 22.

Views, Maps, and Sections to illustrate Dr. Mac Culloch's paper on the Parallel Roads of Glen Roy.

Plate 14. A view in the upper part of Glen Roy, representing the terraces and the character of the valley at its commencement. The slope on the right of the picture is part of one of these terraces.

Plate 15. A view lower down, representing the coincidence between the terraces and one of the *lines*. The entrance of Glen Turit is seen in the distance.

Plate 16. A view from near Glen Fintec, comprising that part of the valley where the most perfect and uninterrupted continuity of the several *lines* is visible. On the hill which forms the distances of the picture they are also most perfect in their dimensions and forms.

Plate 17. A view lower down the valley. It serves to represent among other things the disappearance of a *line* where no assignable reason for its absence exists.

Plate 18. Sketch of the ground explanatory of the several appearances described in the paper. The cross lines refer to the sections in Plate 21. The upper part represents such profiles of the *lines* as seemed most necessary for the elucidation of the subject.

Plate 19. A Map, which serves to represent the several vallies that communicate with Glen Roy at the altitude of its *lines*. It also points out the communication which it would have with the sea were it now filled with water to the level of its uppermost *line*, the colour indicating both.

Plate 20. A Map, for the purpose of pointing out on a larger scale the communications of Glen Roy with the vallies in its vicinity that bear the marks of the lines.

Plate 21. Sections referred to in Plate 18.

Plate 22. Ideal sections referring to the circumstances represented in Plate 19.

PLATE 23.

Porphyritic veins traversing the schist of St. Agnes in Cornwall, described in the Rev. J. J. Conybeare's paper, page 401.

Fig. 1. Is a view of Cligga Point, the promontory of which is formed of granite resting upon the schist. The vein of elvan is seen passing through the schist dipping at a smaller angle than that of its stratification.

Fig. 2 & 3. Are different examples of the veins of elvan in the schist, representing some of the irregularities that characterize them.

PLATE 24.

Appearance of the Paramoudra, and of other siliceous veins and nodules in chalk.

Fig. 1. Part of a vertical section of a chalk pit, near Moira, shewing in their relative proportions the chalk alternating with flinty nodules, with three specimens of Paramoudræ in their matrix.—(Scale half an inch to a foot).

Fig. 2. Specimen of a Paramoudra from the same place, presented by Dr. Bruce to the Museum at Oxford.

Fig. 3, 4, 5, 6. Other specimens seen in the same chalk pit near Moira.—(Scale of Nos. 2, 3, 4, 5, 6, an inch and a half to a foot.)

Fig. 7. Fragment broken from a Paramoudra inclosing a small cluster of hexagonal cells, supposed to have been accidentally introduced from some extraneous body. (The drawing is magnified much beyond the natural size.)

Fig. 8. Veins of plated flint at Hurley Bottom, near Henley, cutting the beds of chalk and flinty nodules. (See Note, page 417.)

Fig. 9. Veins of flint cutting the chalk at Rottingdean, with strata of plated and nodular flints in the same section of the cliff.—The lines represent strata and veins of plated flints. The dots express siliceous nodules. (See Note, page 417.)

PLATE 25.

Fossil Shells found in the slate of Tintagel and of Snowdon.

PLATE 26.

Represents a Shifted vein in the Limestone, with explanatory diagrams.

Fig. 1. Represents a fragment of the millstone with the present appearances of the disjoined parts of the vein.

Fig. 2. An attempt to replace the vein in its original position. The dotted lines, which represent the directions taken by the separated parts of the vein, also indicate the intervals of the laminæ to the sliding of which the present appearances must be attributed. The want of parallelism in their relations is intentional, for the purpose of gaining sufficient space to represent each part distinctly.

Fig. 3. Represents a similar vein traversing a number of parallel laminæ, in its natural position.

Fig. 4. The same vein after the motion of the laminæ, with the effects that would follow both in its own appearance and in the shape of the including rock.

PLATE 27.

Chlorite crystals and vegetable remains in quartz and chalcedony.

Fig. 1. Shews the vermicular accumulations of chlorite crystals which occur in quartz.

Fig. 2. The same magnified.

Fig. 3. Supposed from its structure to be a conferva :—in a chalcedony.

Fig. 4. Another similar substance in a similar situation.

PLATE 28.

Fig. 1. Shews the veins of granite passing into the schist in the Mourne Mountains. The upper, or lighter tinted part represents a portion of the granite which forms the summit of the mountain, the lower dark part the schist, into which the veins of granite run. At the mouths of the veins are sometimes seen small insulated pieces of the schist.

Fig. 2. Shews the peculiar disposition of the colouring matters in the killas rock at the Gun Wharf, Plymouth Dock, described in Dr. Mac Culloch's paper, page 399.

DURHAM
(and)
NORTHUMBERLAND.

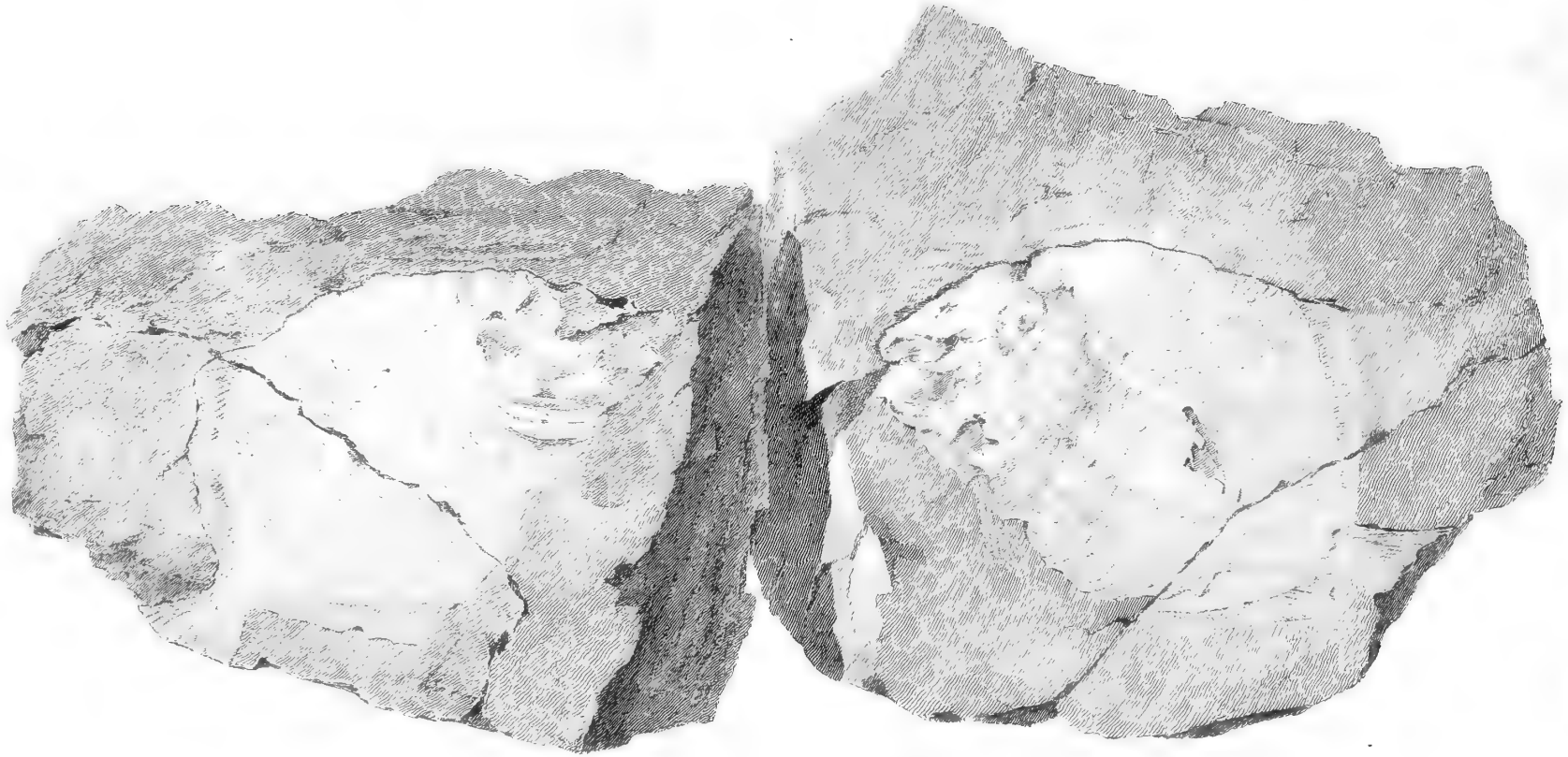
Scale

Red marl or new red sandstone
Magnesian limestone
Coal measures
Coal pits
Faults
Mountain limestone or Lead measures
Lead veins
Lead mines
Trap
Trap dykes
Old red sandstone
Greywacke slate
Primitive range

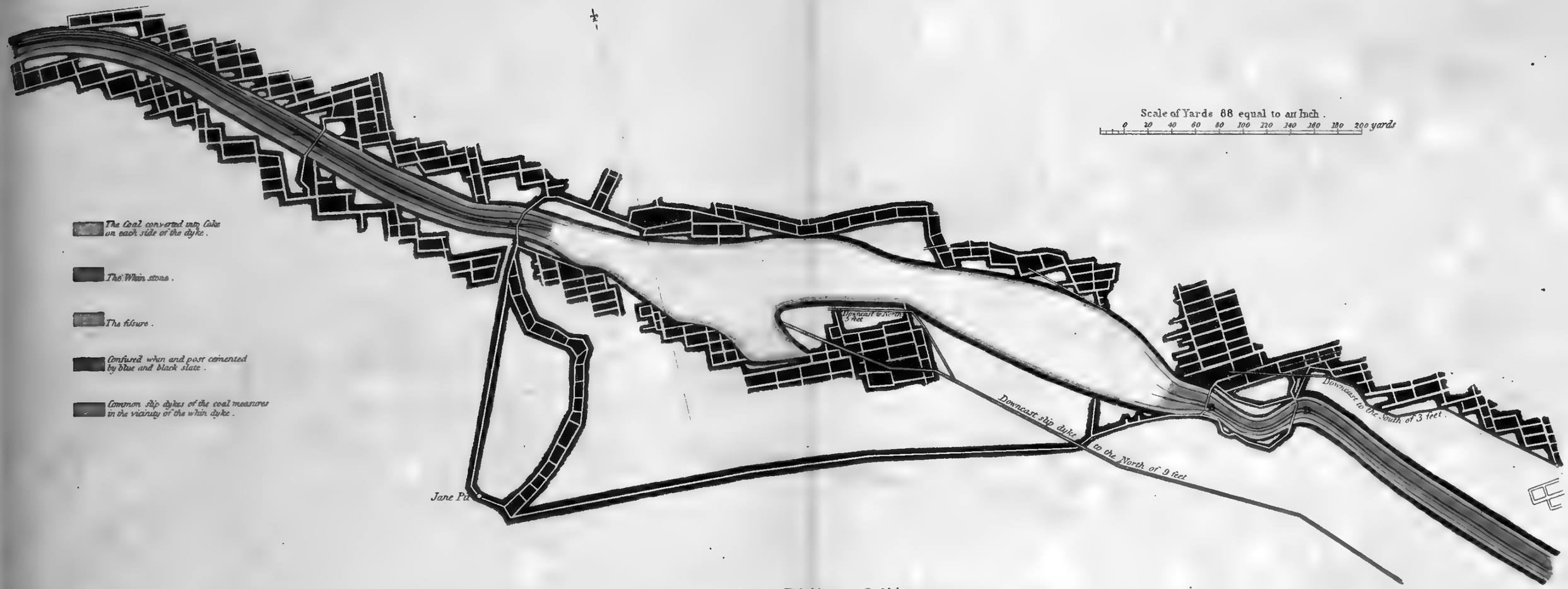
Transactions of the Geological Society Vol. 2. Plate 1.

Published by W. Phillips London 1816.

Engraved by J. Cross 17 Russell Court.

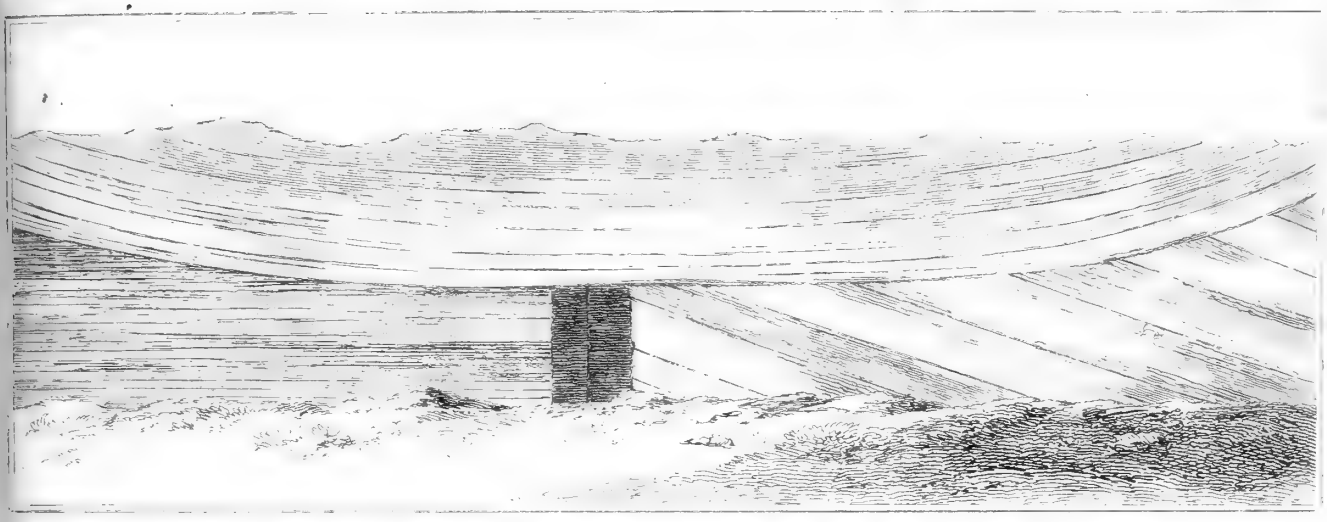


Fossil Fish found in the Magnesian Limestone at Low Pallion.

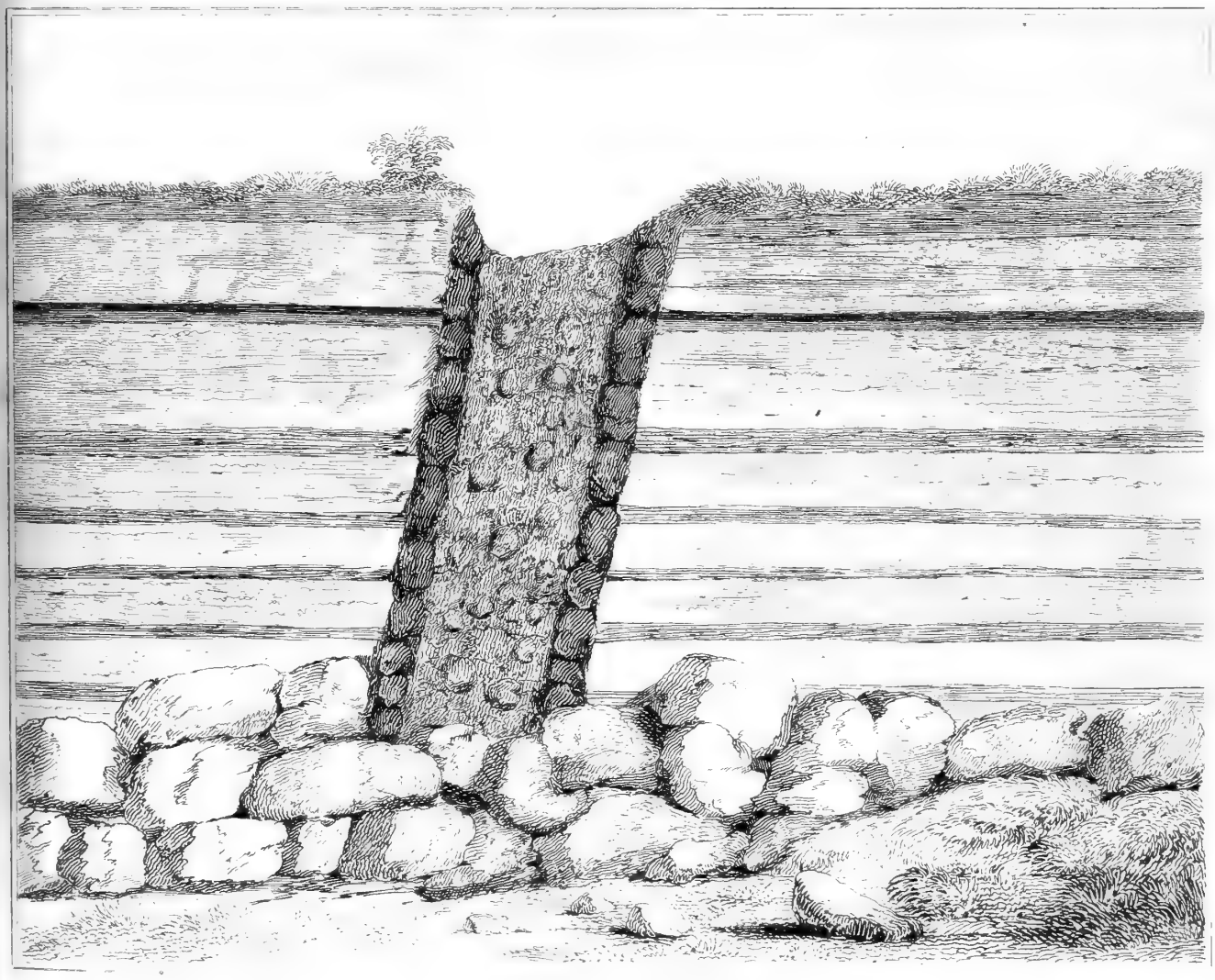


Plan of the Dyke in Walker Colliery.

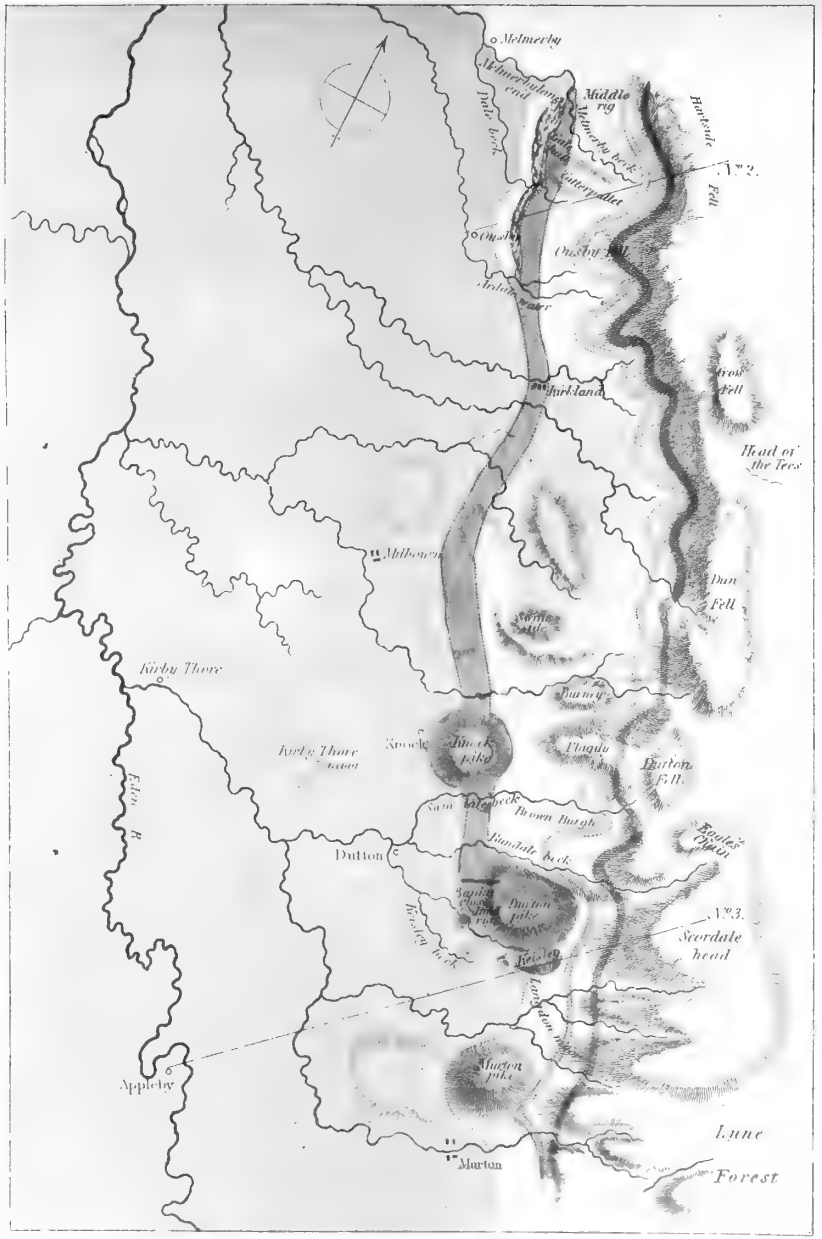
London, Published by W. Phillips, 1816.

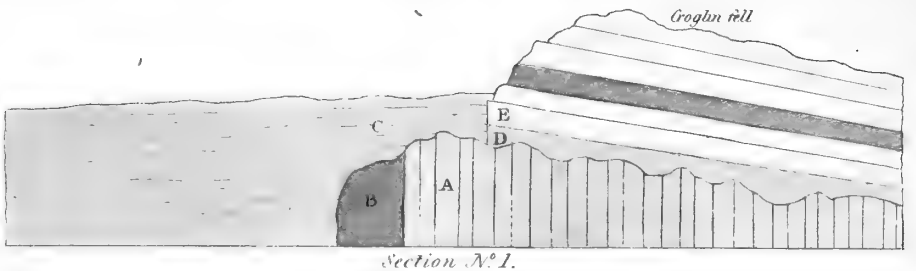


Position of the magnesian limestone overlying the coal measures at Whitley quarry.



View of the Dyke at Walbottle Dean





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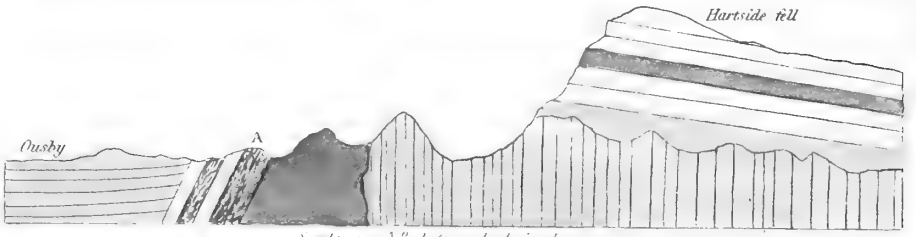
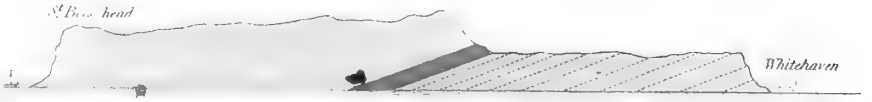


Section Nº 2. (marked in the map.)

Section Nº 3. (marked in the map.)



Section Nº 4.

New red sandstone
Magnesian limestone
Coal measures
Shattered & Vertical coal & grit & lime
Limestone alternating with grit & Shale
Whin sill
Old red sandstone
Grauwakke slate
Trap & greenstone
Mica slate
Granite

Drawn & Engraved by Wm. Smith &c.

Map and Sections of the Country between Melmerby and Murton.

Published by William Phillips London 1810

Fig. 1

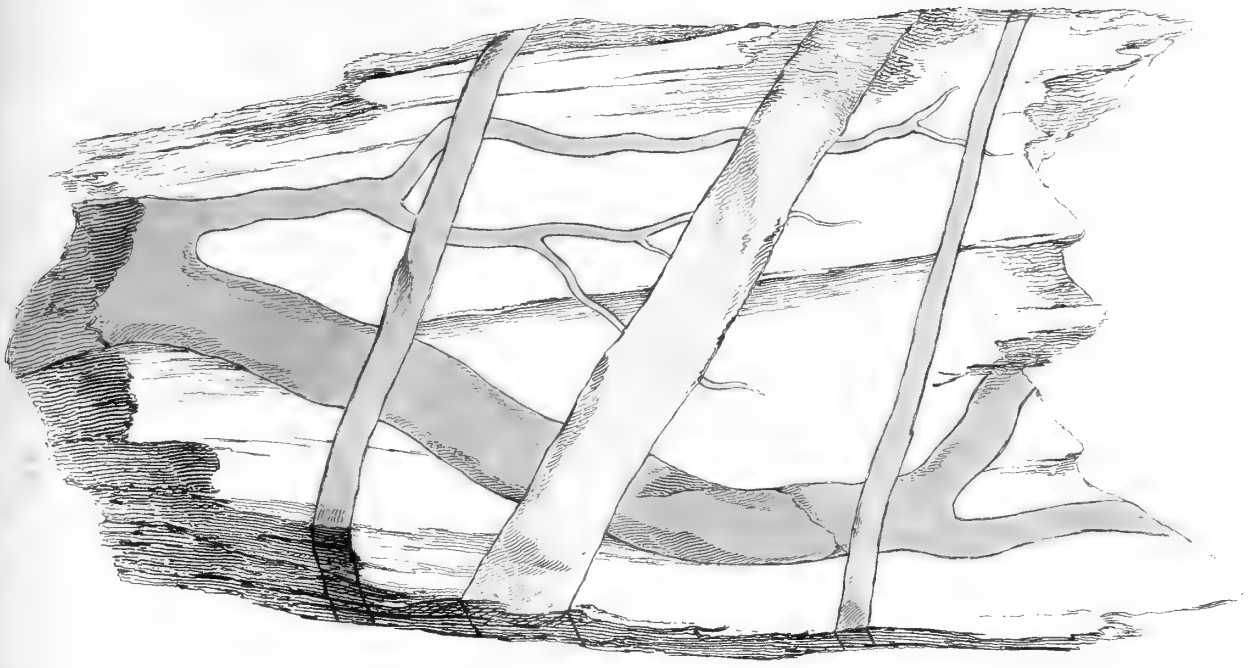


Fig. 2

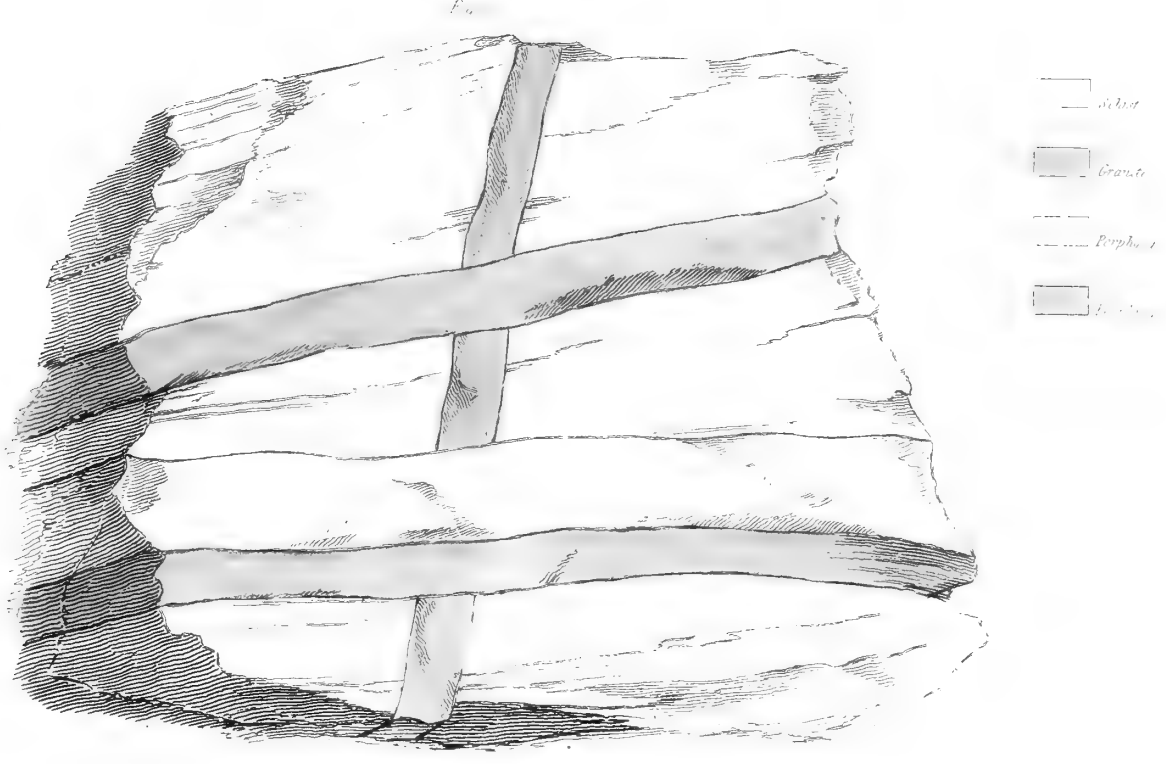
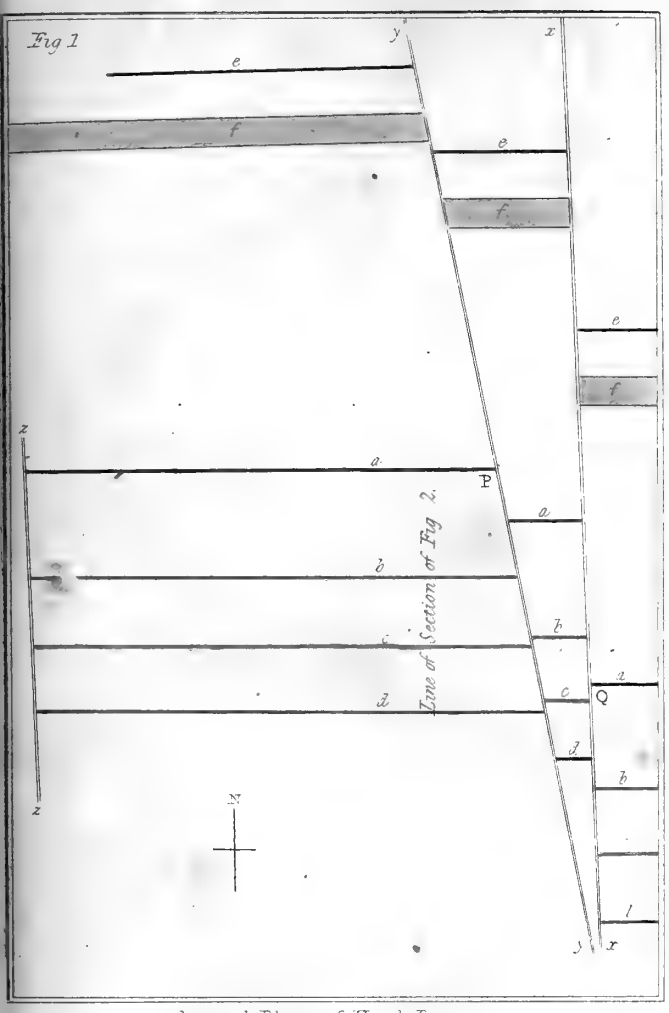
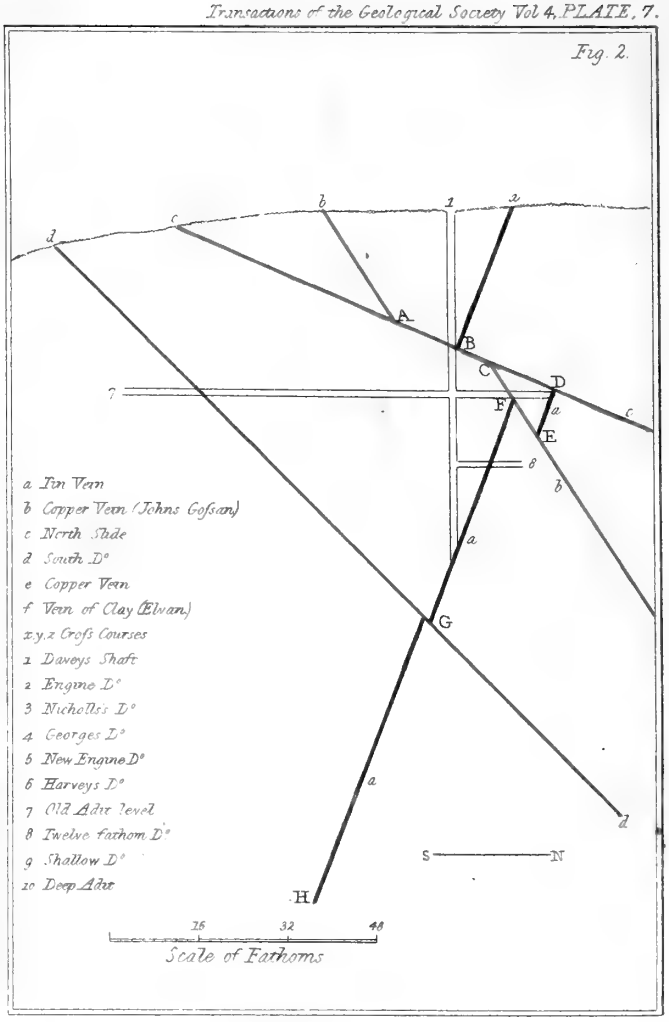


Fig 1



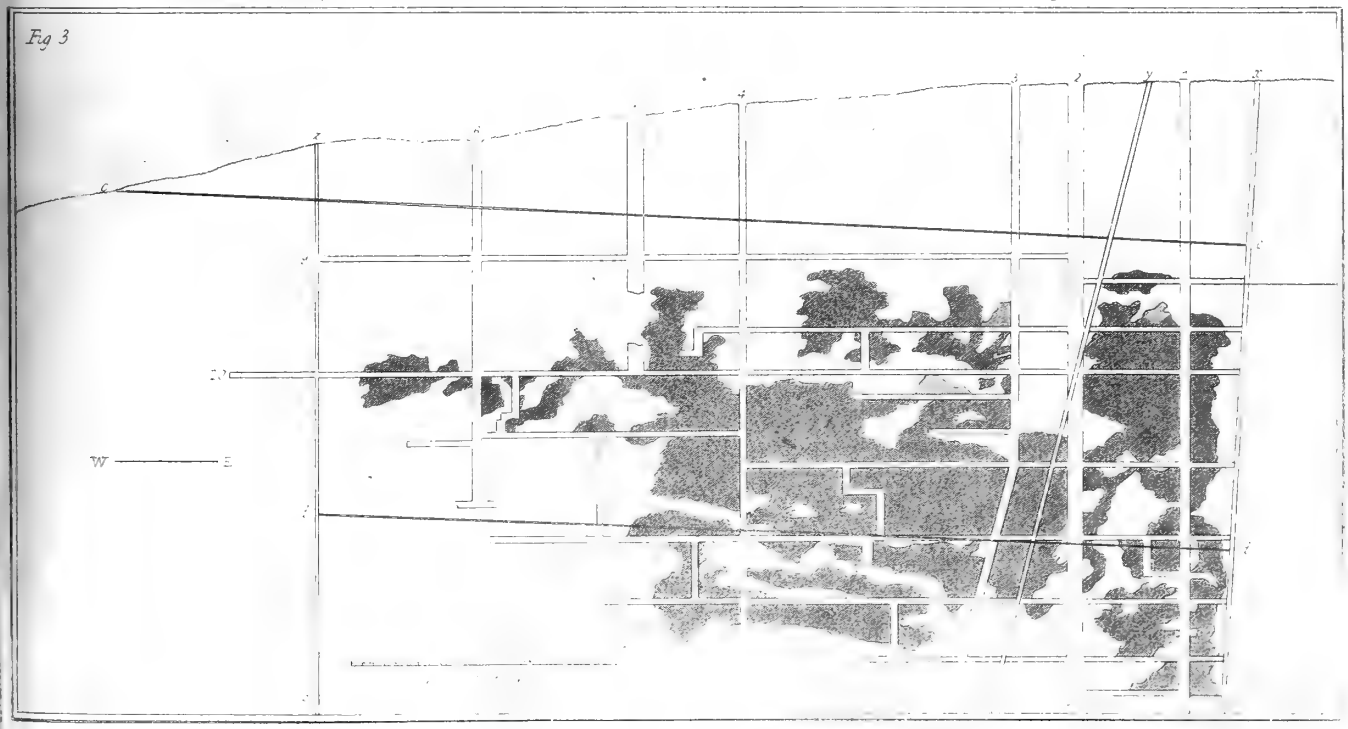
Ground Plan of Huel Peever

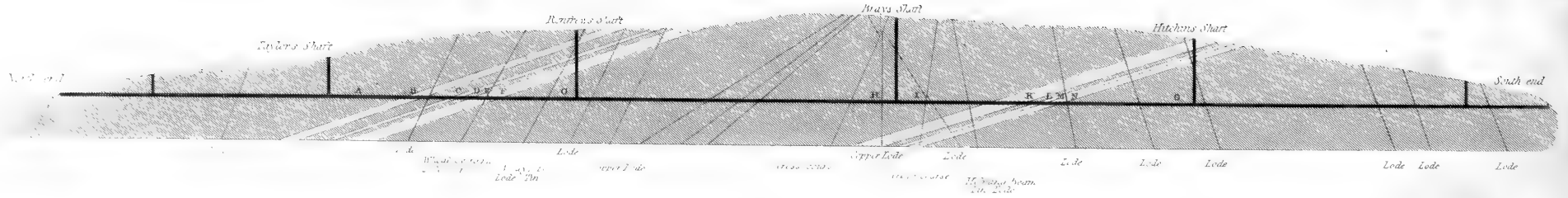
Fig. 2.



Transverse Section, of Huel Peever

Fig 3





Section of [illegible] on the Tunnel of the Tavistock Canal, in the County of Devon.

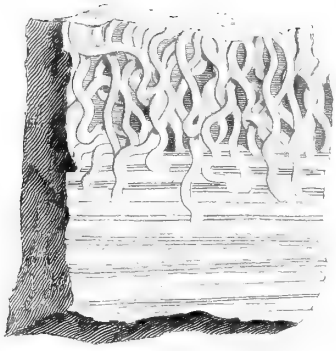
SKY,
With the
ADJOINING ISLANDS.

Hypersthene rock
Various Trap
Syenite, claystone &c.
Gr. limestone & shale
Marble Limestone
Lias, sandstone & shale
Upper sandstone
Red sand. blue & lt. schist
White quartz rock
Gneiss
Chlorite schist
Porphyry

TROTTERNISH
VATERISH
MINGNISH
BRACADALE
LOCH SNIZORT
LOCH FOLLART
RONA
RASAY
LONGA
SCALPA
PABBA
SOA I.
STRATHAIRD
LEAT
Point of Sleat
Scale of Miles
Published by W. Phillips, London 1817.

N°1

N°2



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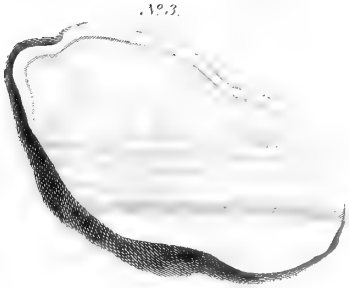

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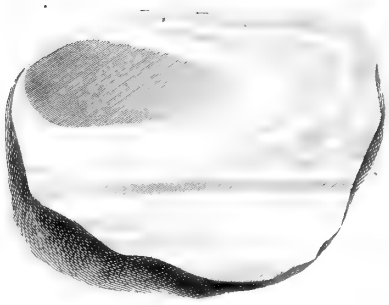


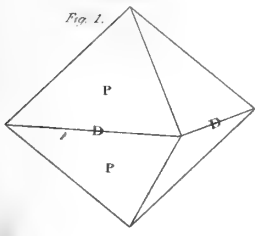
Agate Pebbles from the Hill of Kinnoul.

Drawn

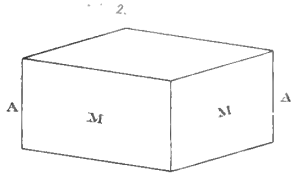
Junction of the schist & trap, with the prolongation of the former into veins, in the Hill of Kinnoul.

PRIMITIVE CRYSTALS.

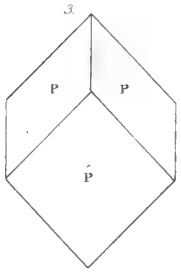
Oxide of Tin
Zircone
Fig. 1.



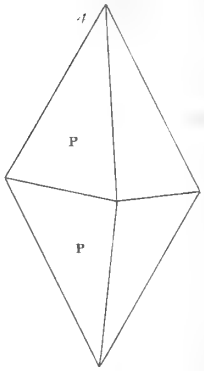
Sulphate of Barytes.
Sulphate of Strontian.
Staurotide.
2.



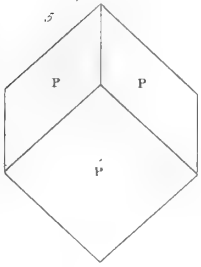
Corundum.
Specular Iron.
3.



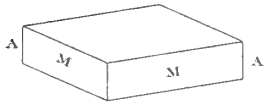
Anatase
4



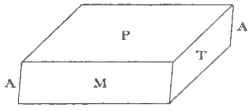
Quartz
5



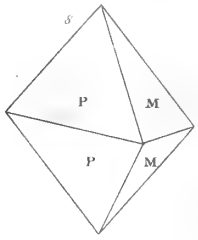
Diopside
6



Cyanite
7

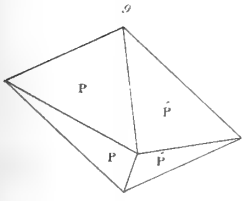


Carbonate of Lead.
8



Sulphate of Lead

9



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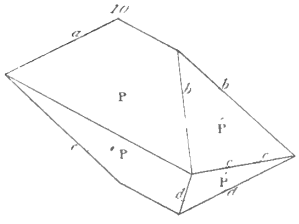

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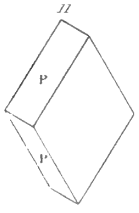

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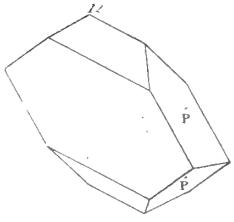

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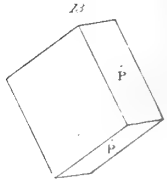

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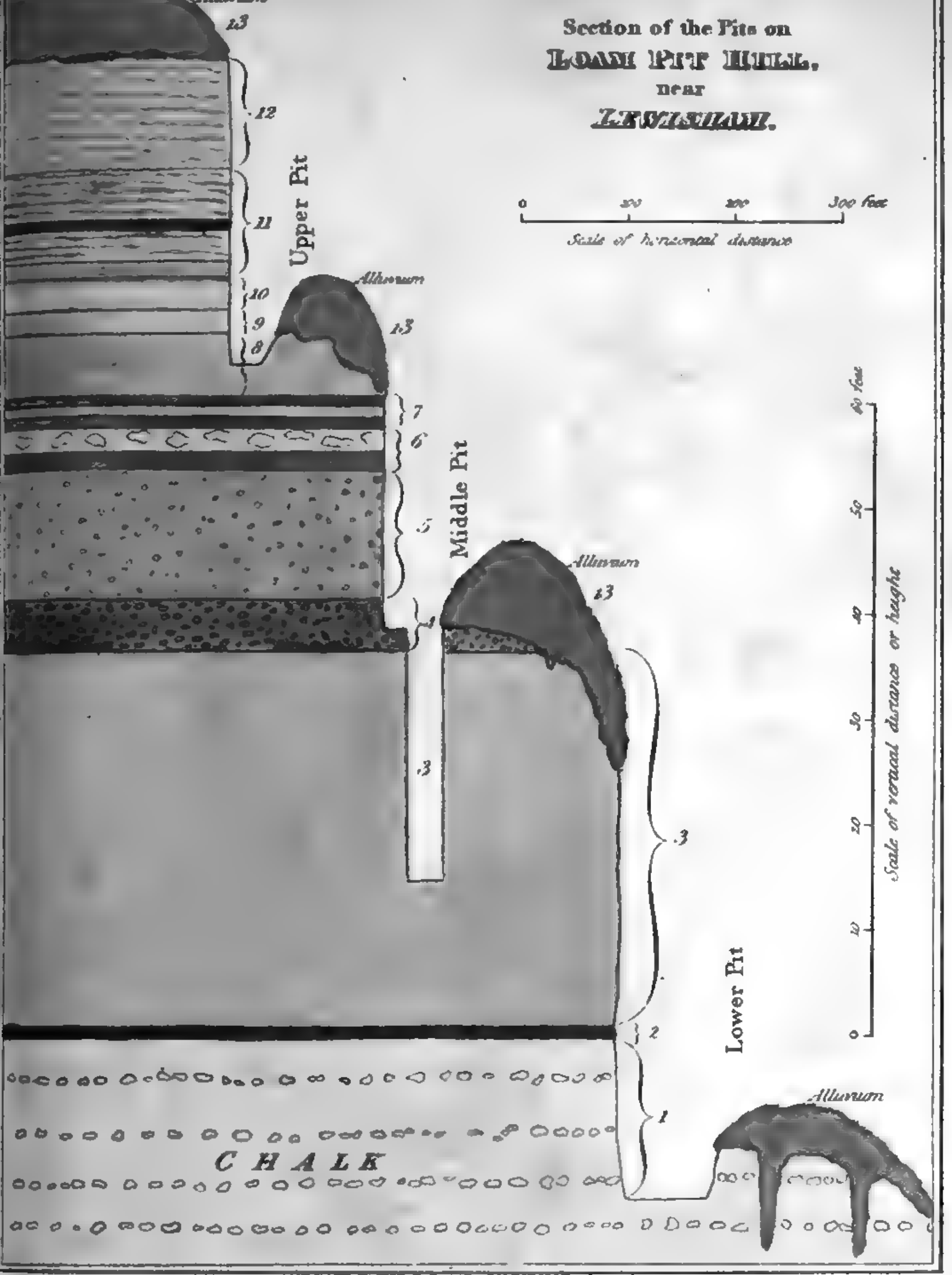

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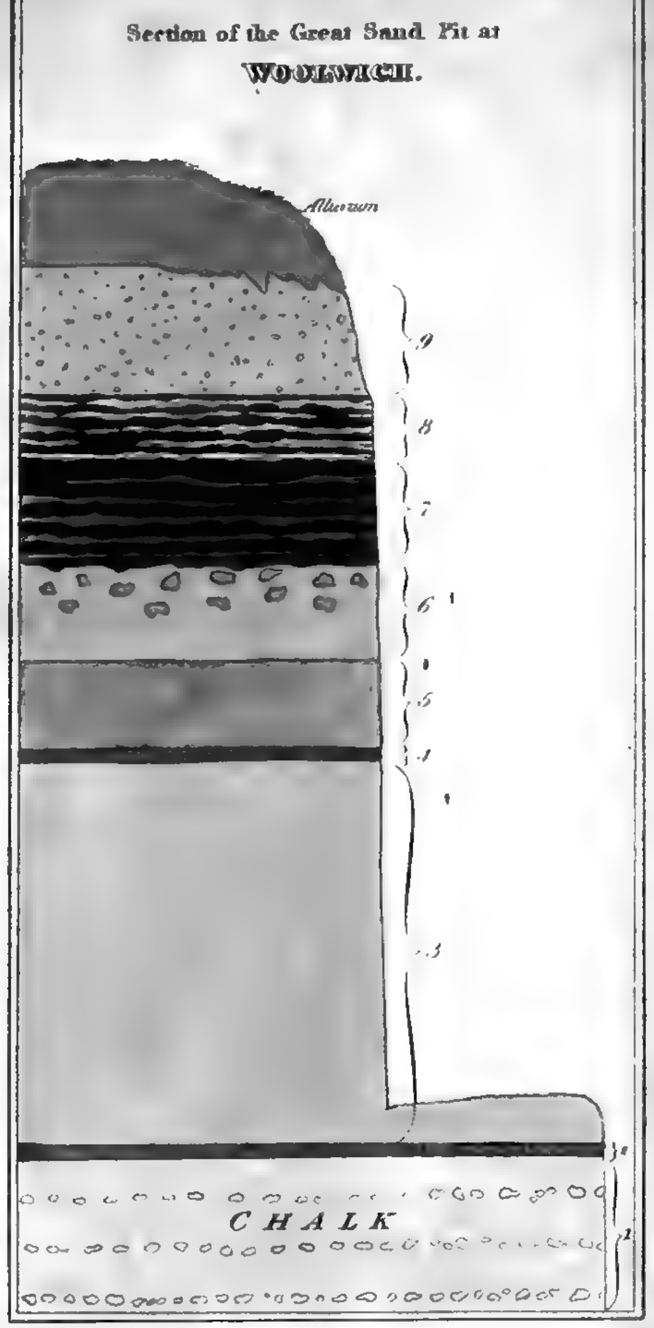

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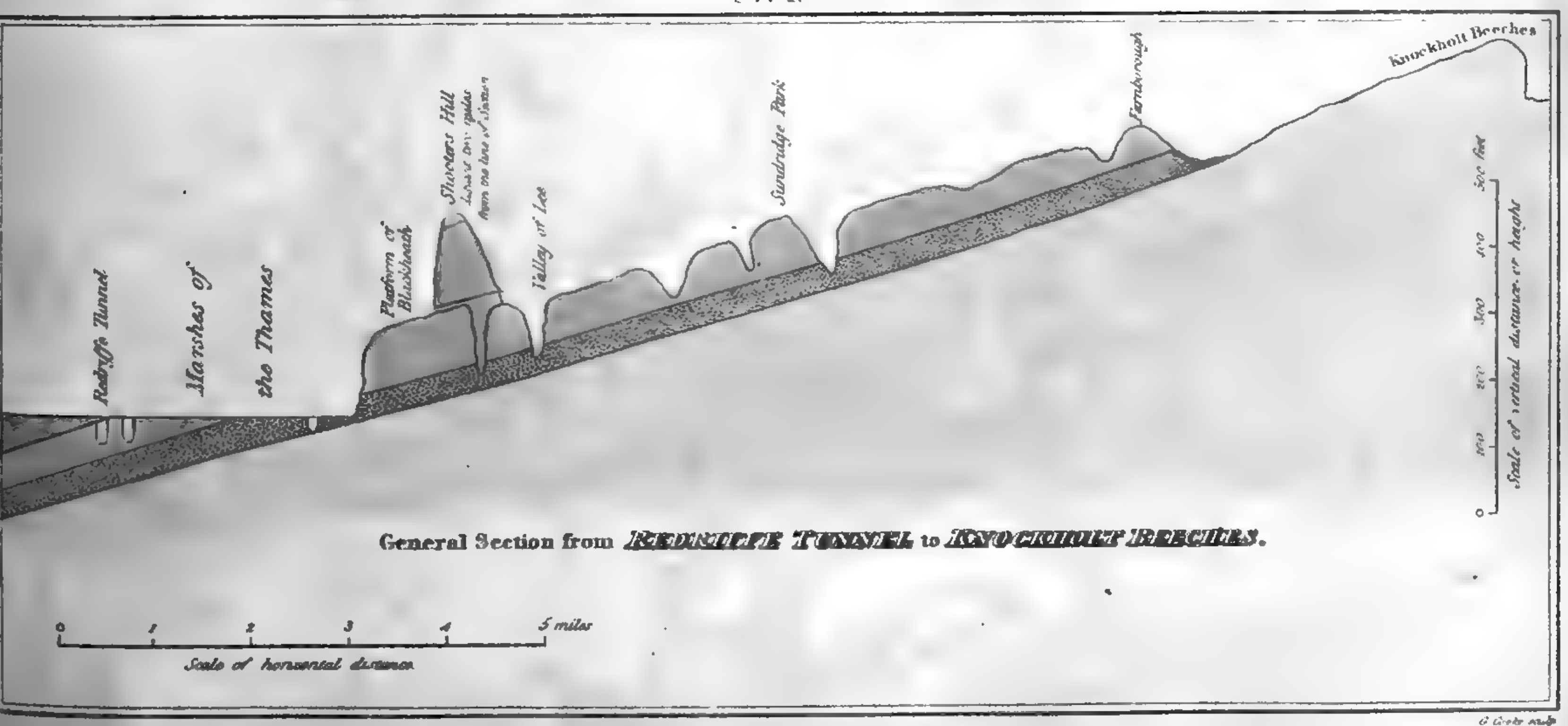
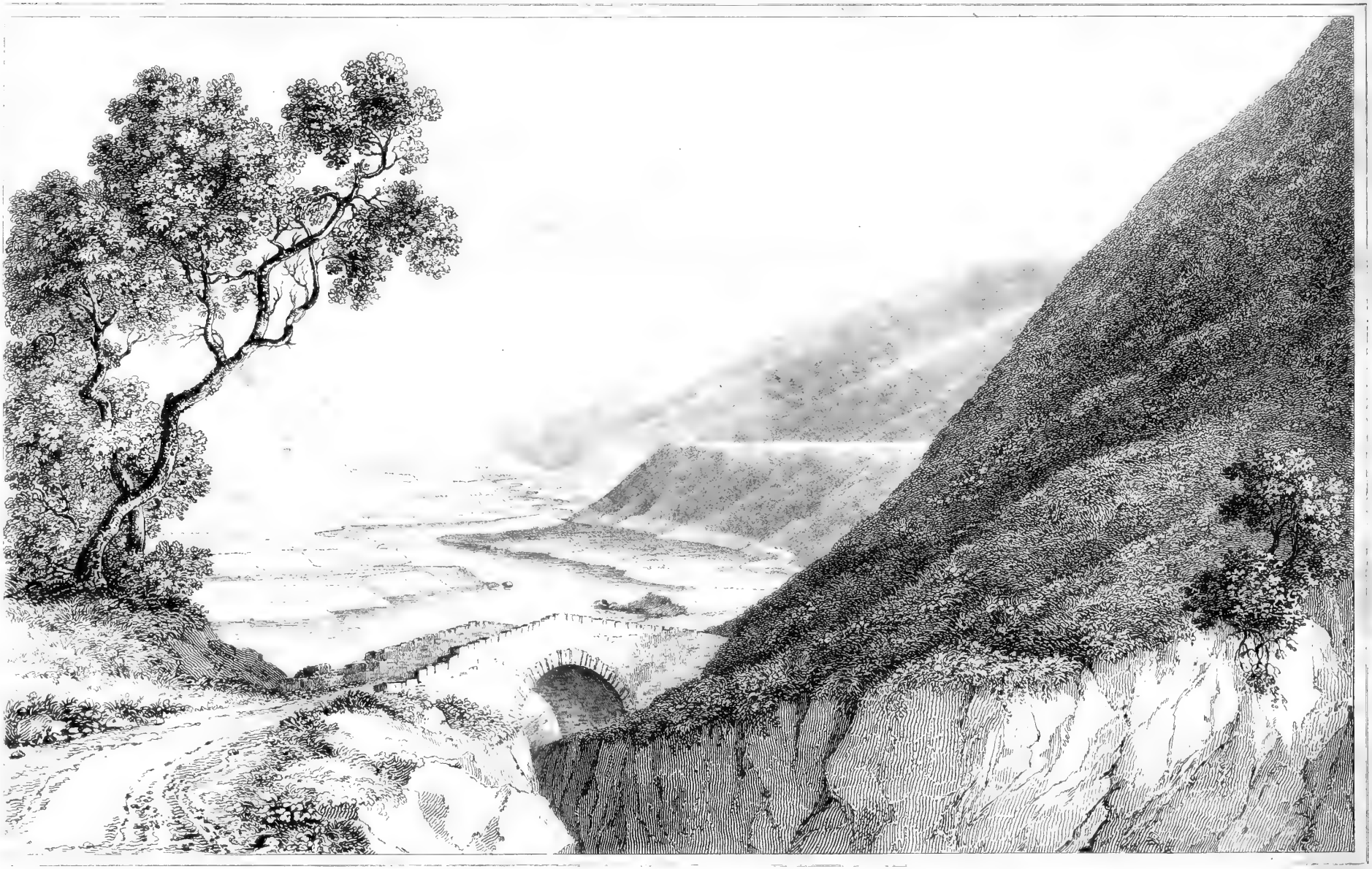


General Section from REDRIFFE TUNNEL to KNOCKHOLT BEECHES.

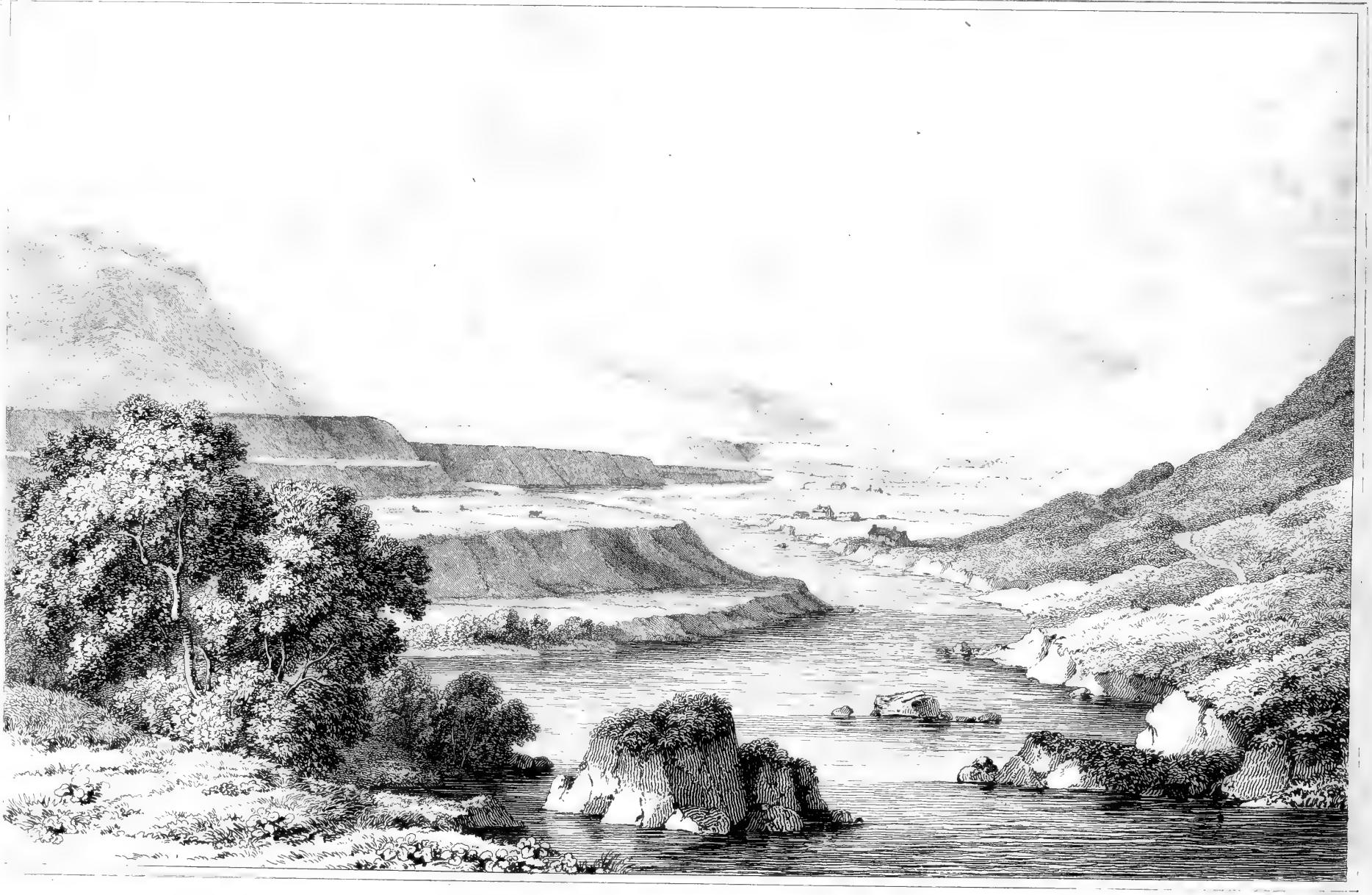
London Clay — Plastic Clay, Sand and Gravel beds — White Sand — Chalk

MAP & SECTIONS OF THE PLASTIC CLAY DISTRICT NEAR LONDON.



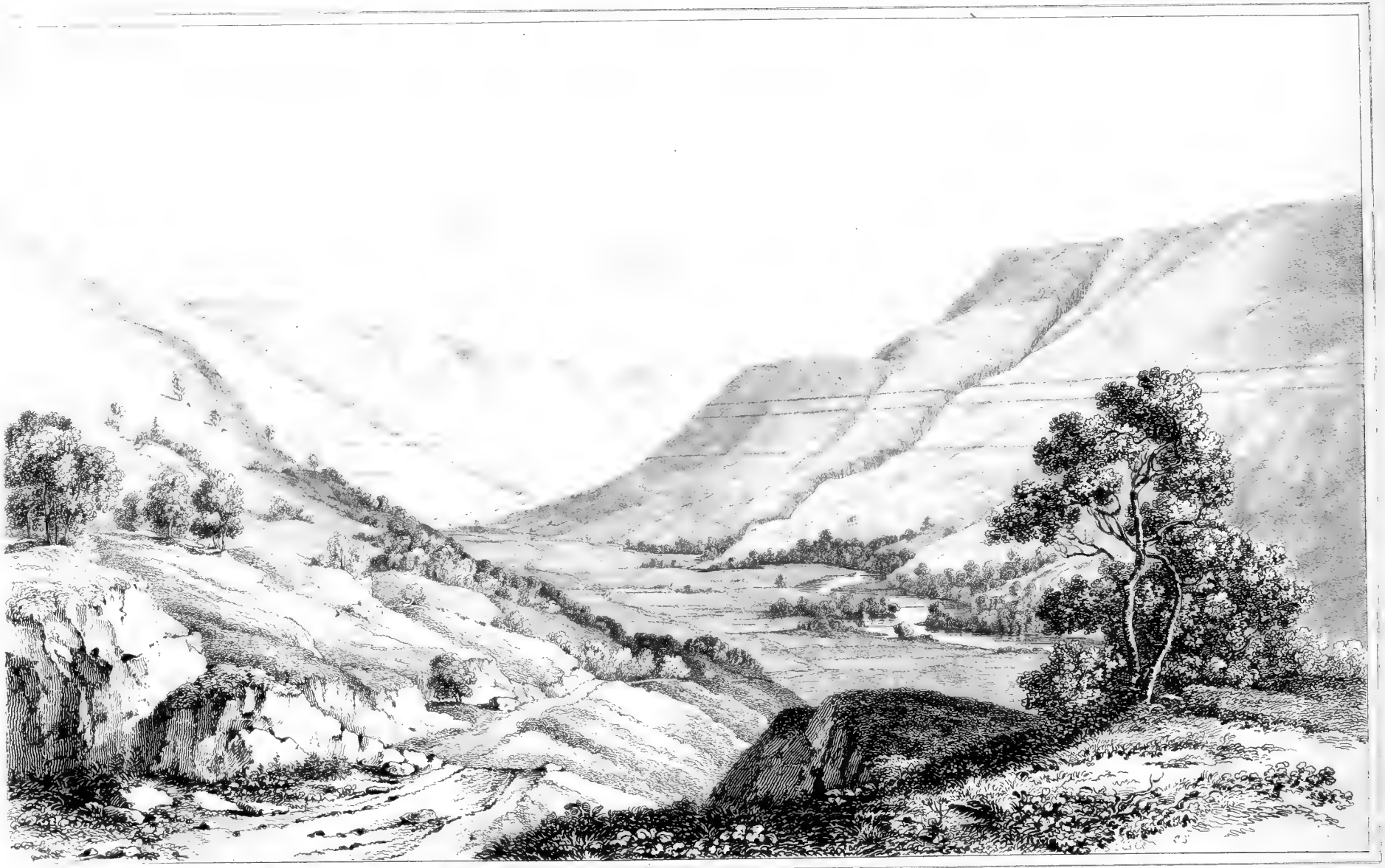
VIEW of the TERRACES at the top of GLEN ROY.

Published by W. Phillips London 1817.



Engraved by C. Cooke.

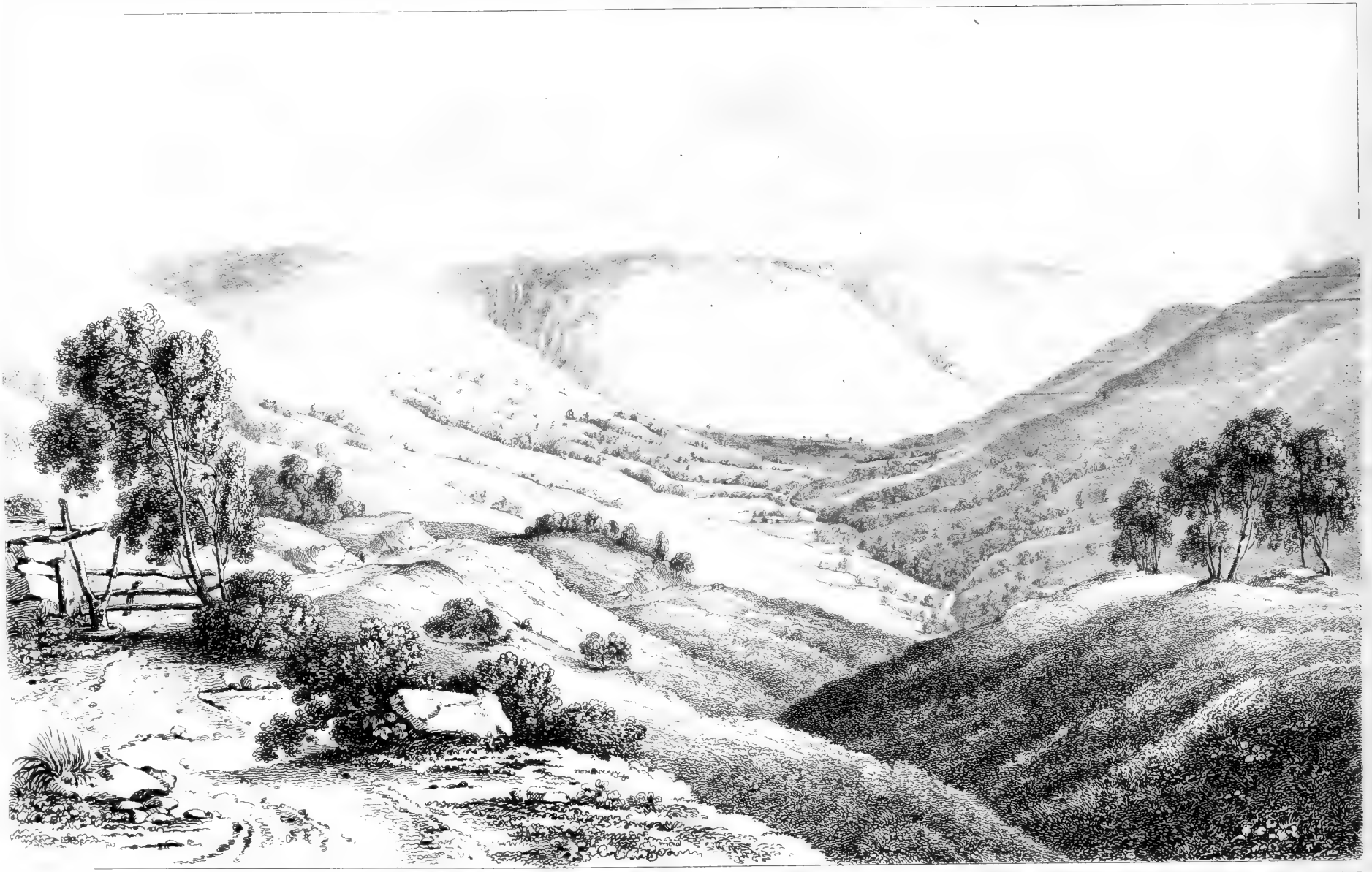
VIEW of the entrance of GLEN TURIT & of the commencement of the LEVELS of GLEN ROY.



Engraved by G. Cooke

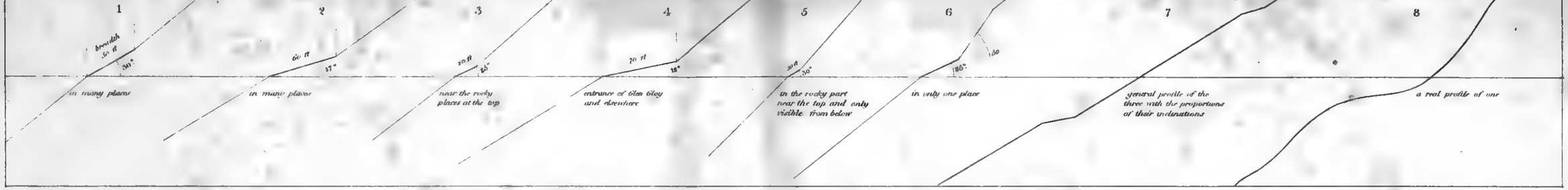
VIEW in GLEN ROY taken near GLEN FINTEC.

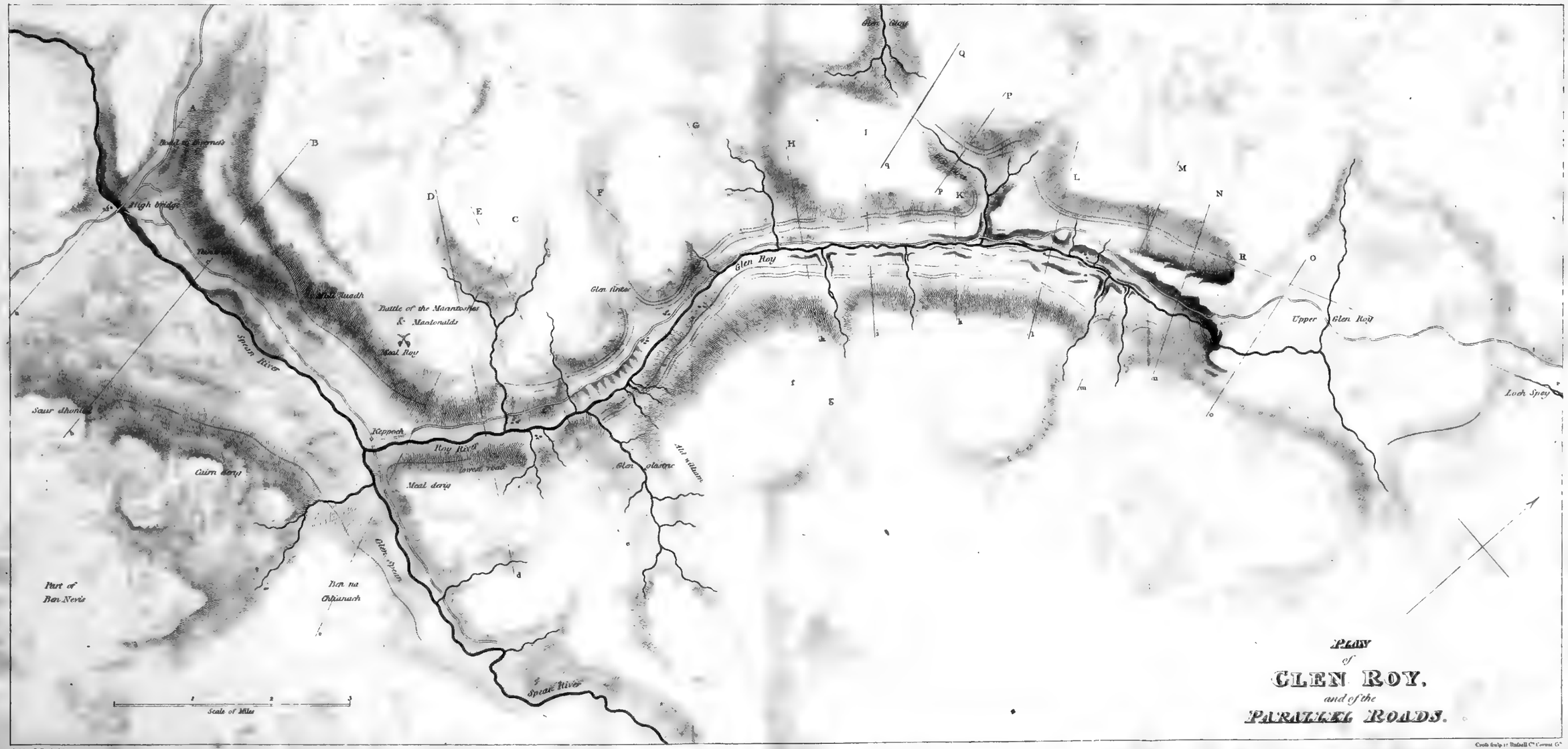
Published by W. Phillips London. 1817



VIEW in GLEN ROY taken from below GLEN FINNEY

Profiles of the Lines with the relations which their inclinations to the Horizon bear to the declivities of the Hills.





PLAN
of
GLEN ROY,
and of the
PARALLEL ROADS.

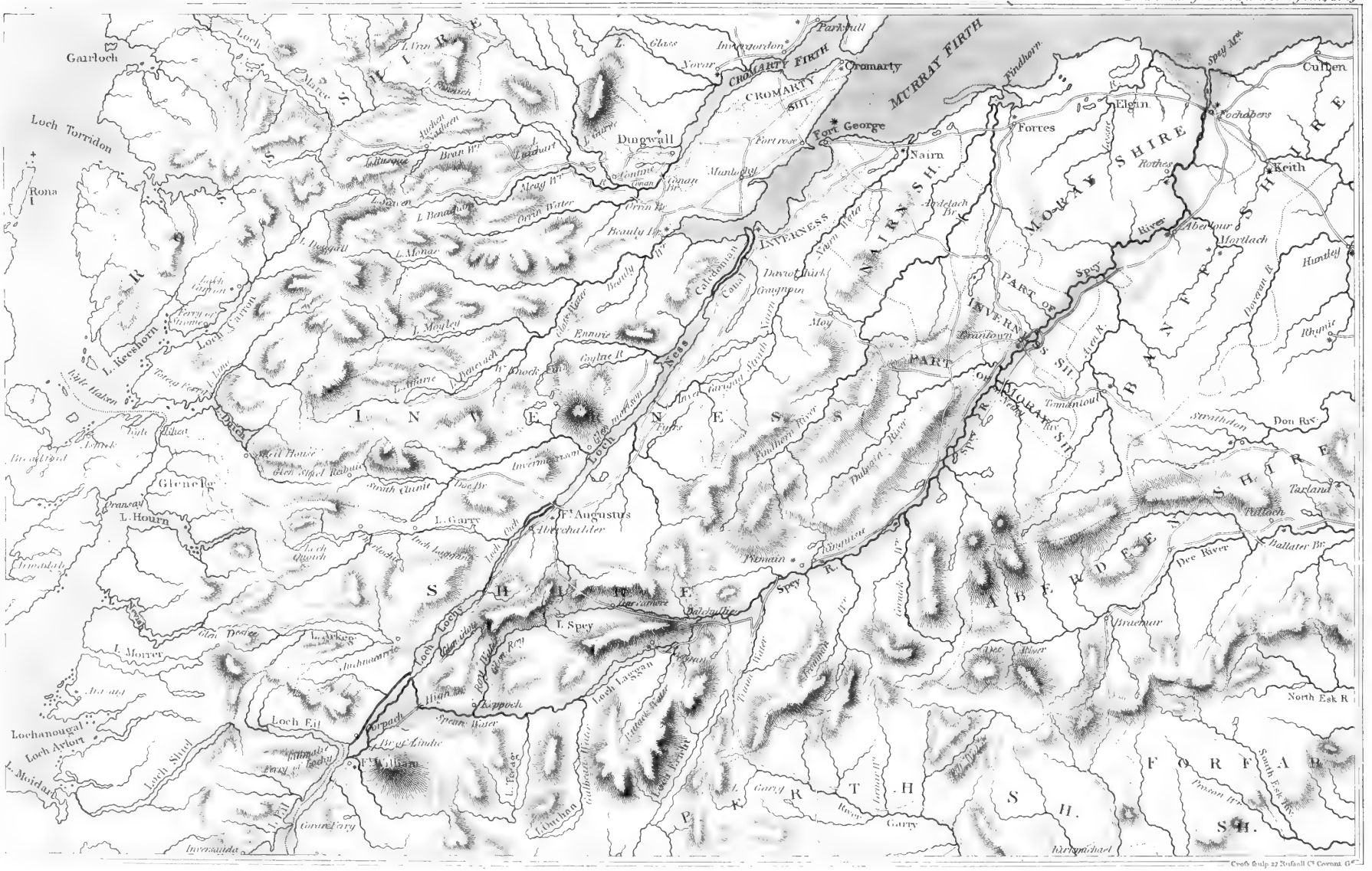
I Mac Culloch del.

Cook sculp. 17 Bridell Ct Covent Gn

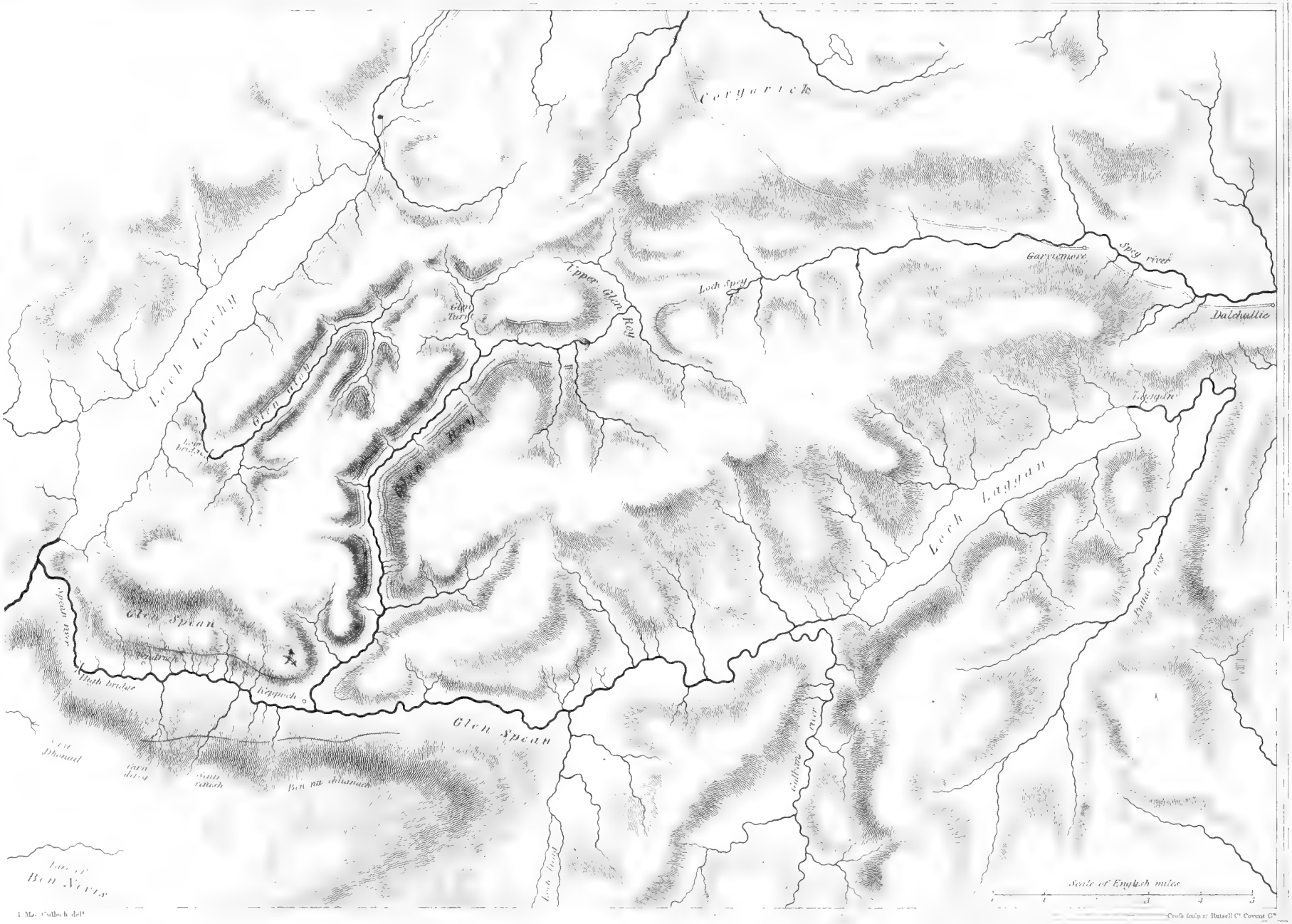
Published by W. Phillips London 1817.

MAP Shewing the Connections of GLEN ROY with the SEA.

Transactions of the Geological Society Vol. 4. Pl. 29.



Published by W. Phillips London 1815.



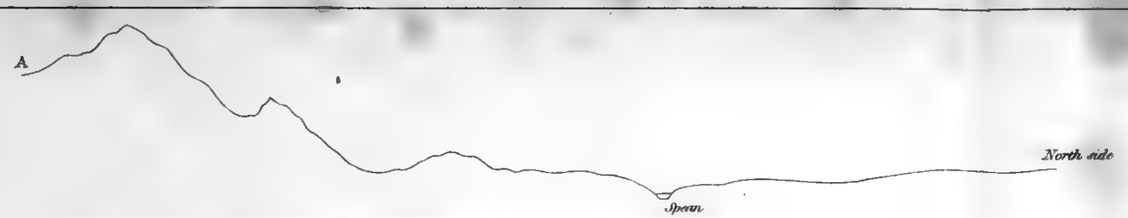
J. Mc. Culloch del.

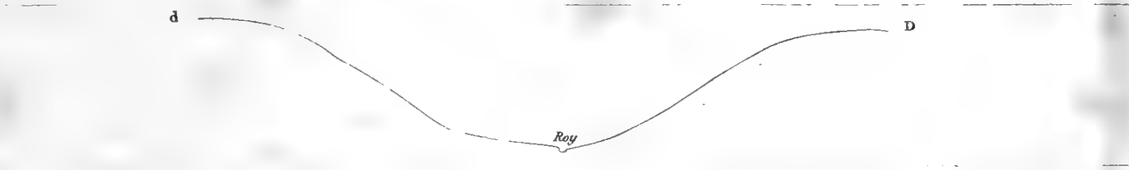
Cross sculp. 57 Russell Ct. Covent Gn.

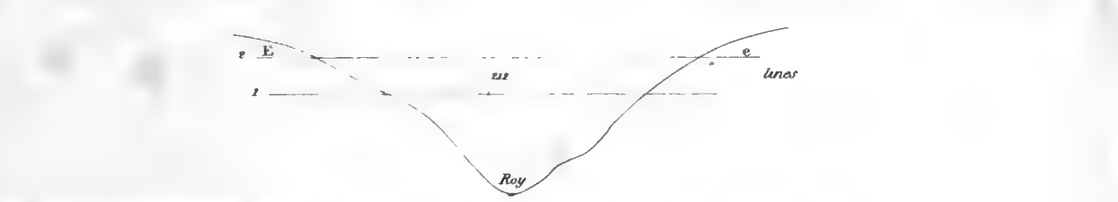
Published by W. Phillips London 1817.

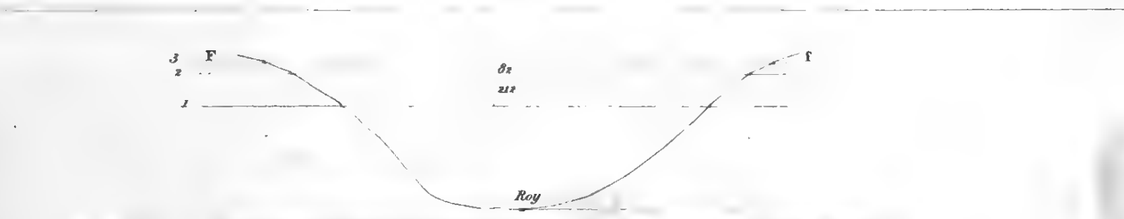
Sections referred to in the plan of Glen Roy.

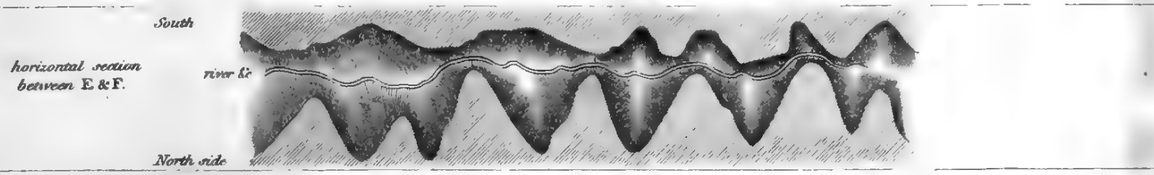
Transactions of the Geological Society Vol. 4. Pl. 21.

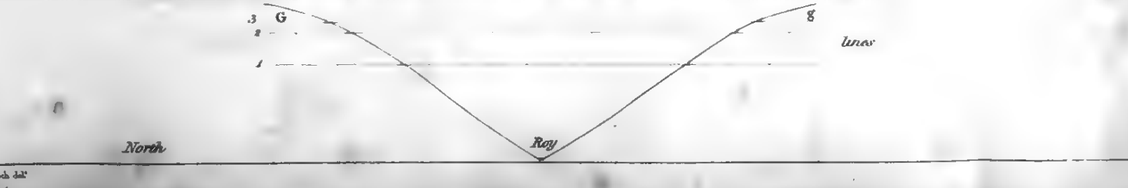


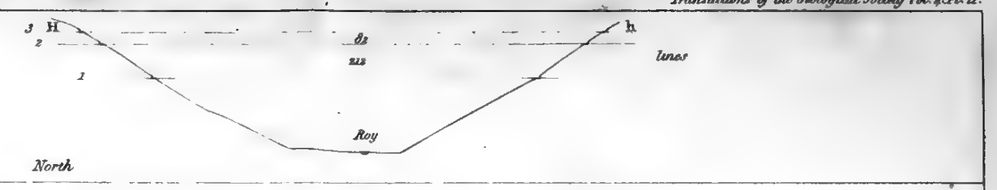


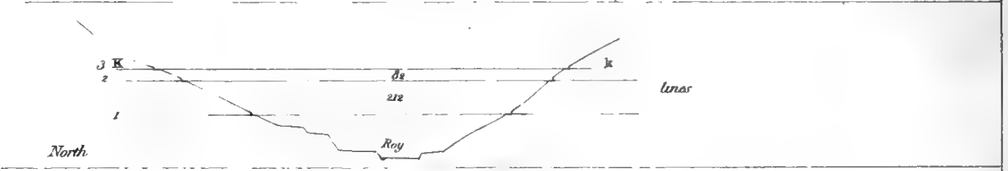


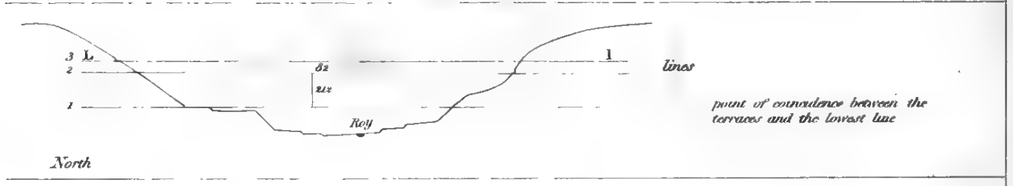


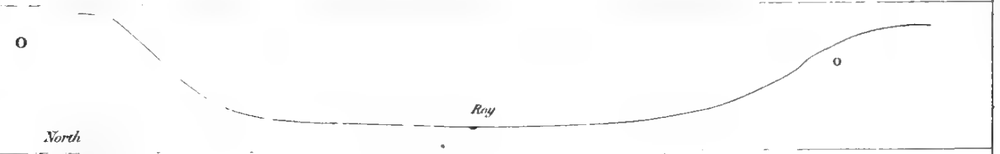


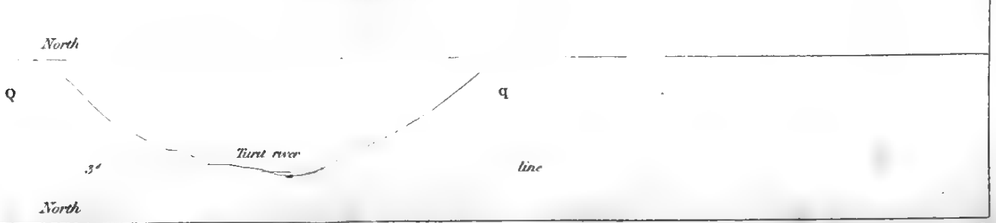












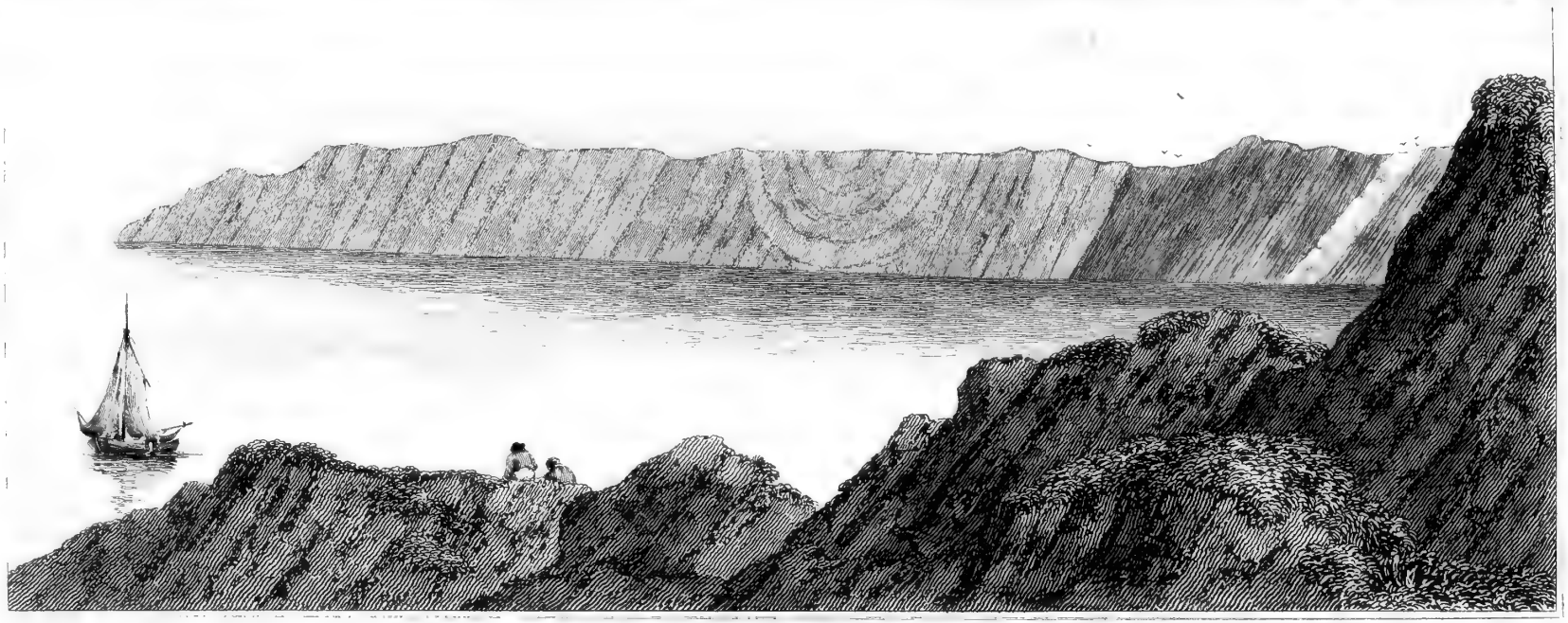
I Mc Culloch del.
Published by W. Phillips, London 1817.
Croft Sculp 27 Russell Cr Covent Gr.

Curvilinear Sections from Glen Roy to the Sea &c.

Transactions of the Geological Society Vol. 4. Pl. 11.

Section on the Line R. from top of Lower Glen Roy to Loch Spey.

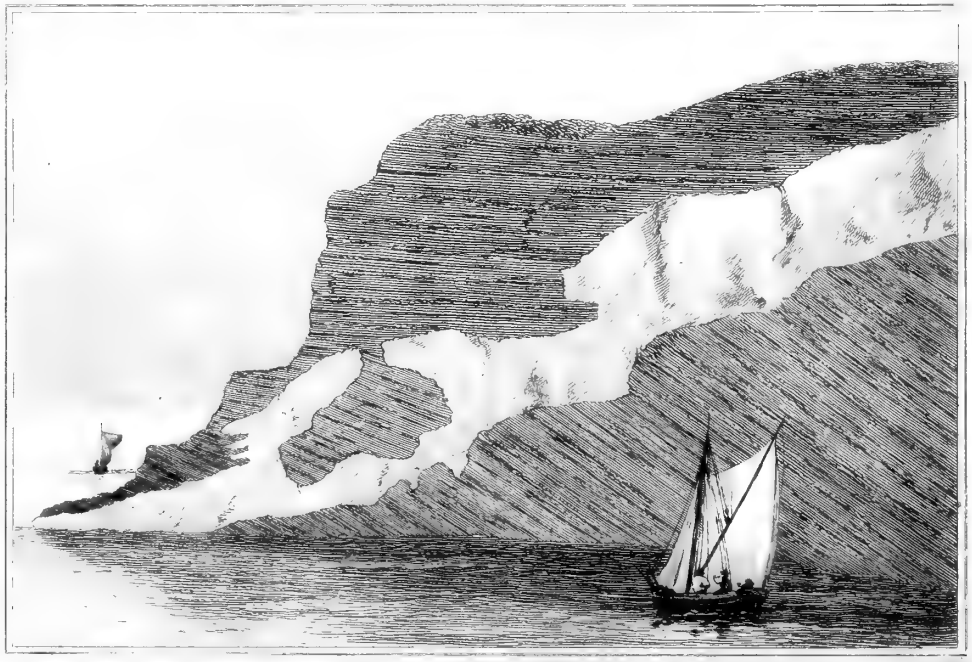
J. Mac Culloch del.
Cook, Sculp. 27 Rathbone Pl. Covent Gn.
Published by W. Phillips, London 1817.



Cligga Point, 4 Miles East of St. Agnes Cornwall, north coast

Granitic Rock resting on Killas forms nearly the whole promontory *** Killas* **** Dyke of Porphyritic Elvan traversing the Killas

Eastern View of the third Cove East of St. Agnes.



Eastern Promontory of the first Cove East of St. Agnes.

Porphyritic Veins in the Killas Rocks of St. Agnes, Cornwall.

Fig. 1.

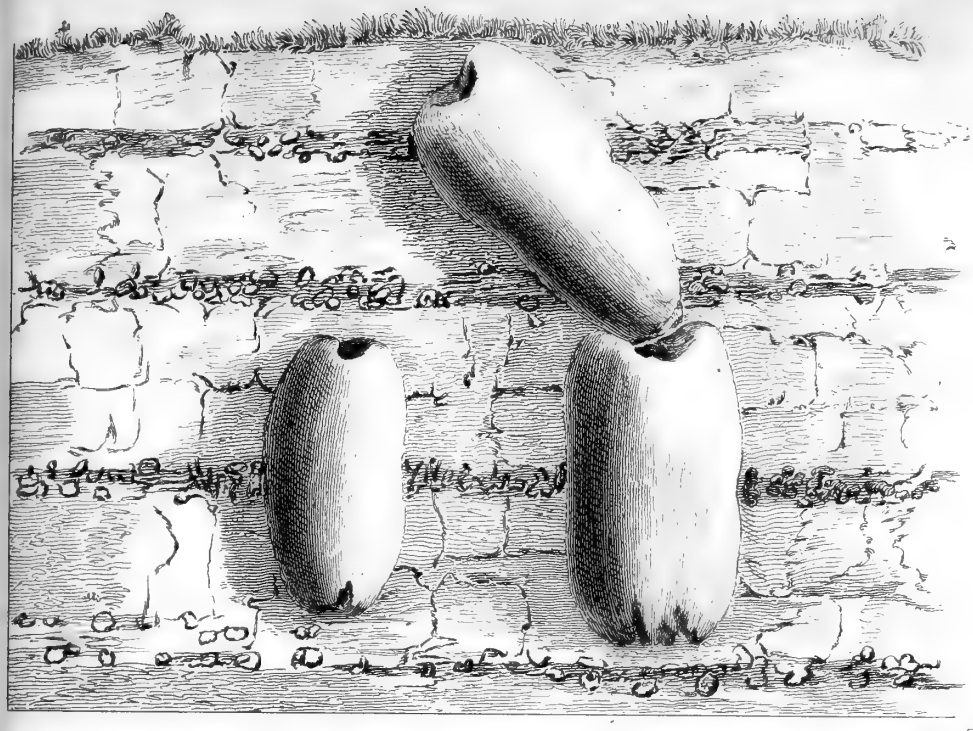


Fig. 2

Fig. 3.

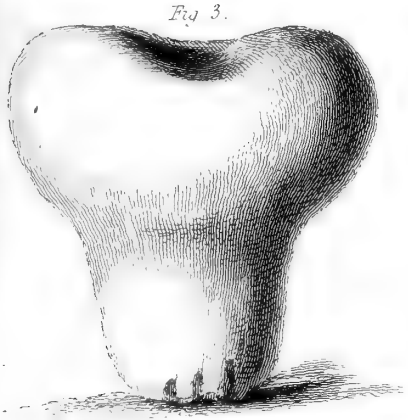


Fig. 4.

Fig. 5.

Fig. 6

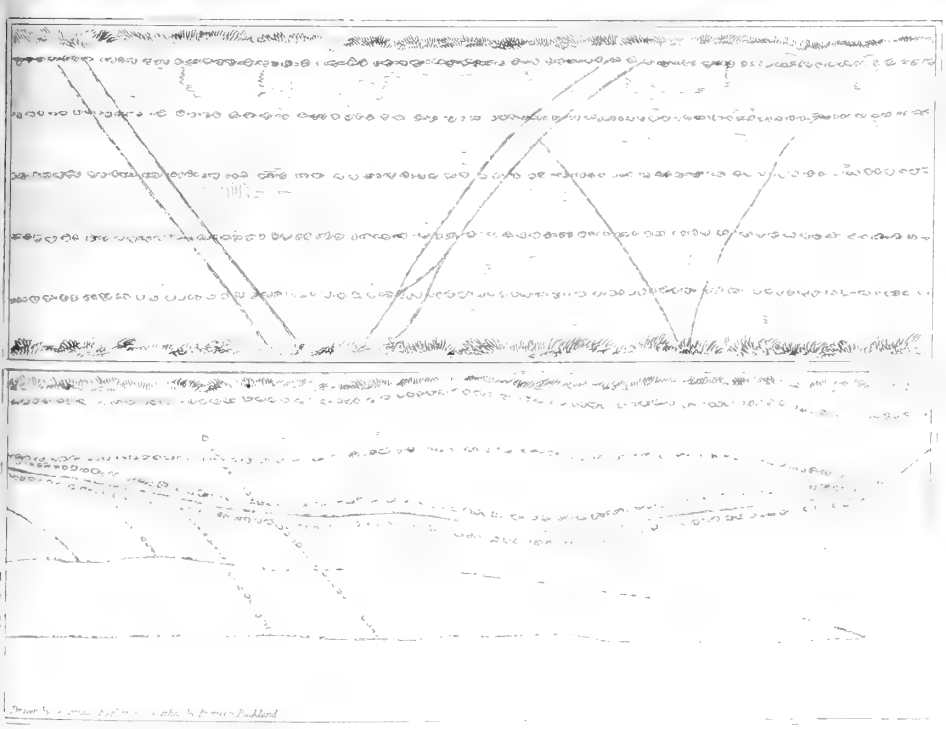


Fig. 7

Impression of the Pinnularia and other siliceous nodules at Vesey &c. &c.

Fossil shells in the slate of Tintagel, Cornwall

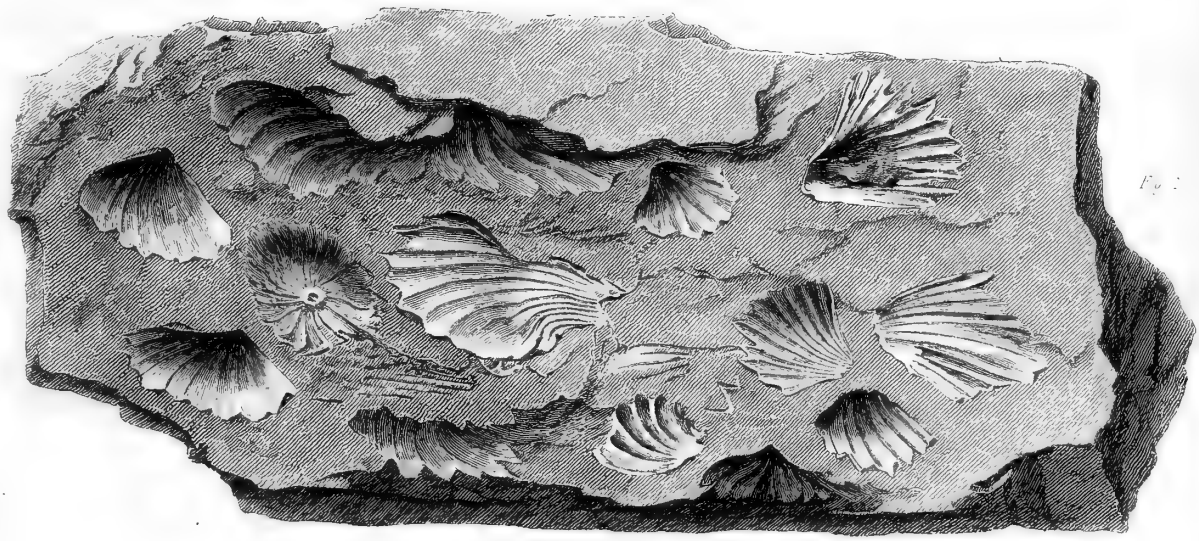


Fig. 1.

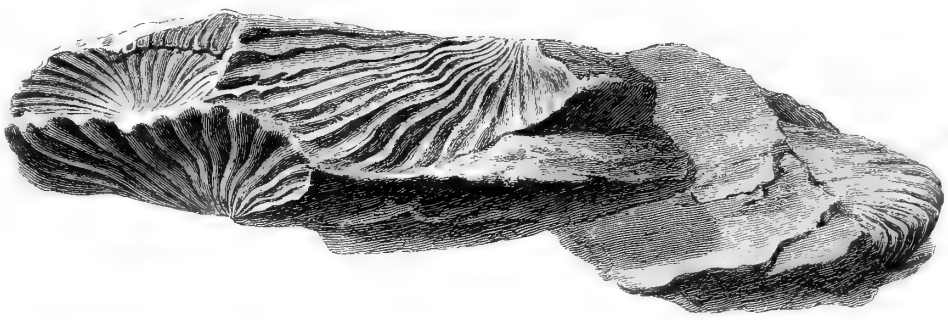


Fig. 2.

Fossil [illegible] in Slate [illegible]

Fig. 1

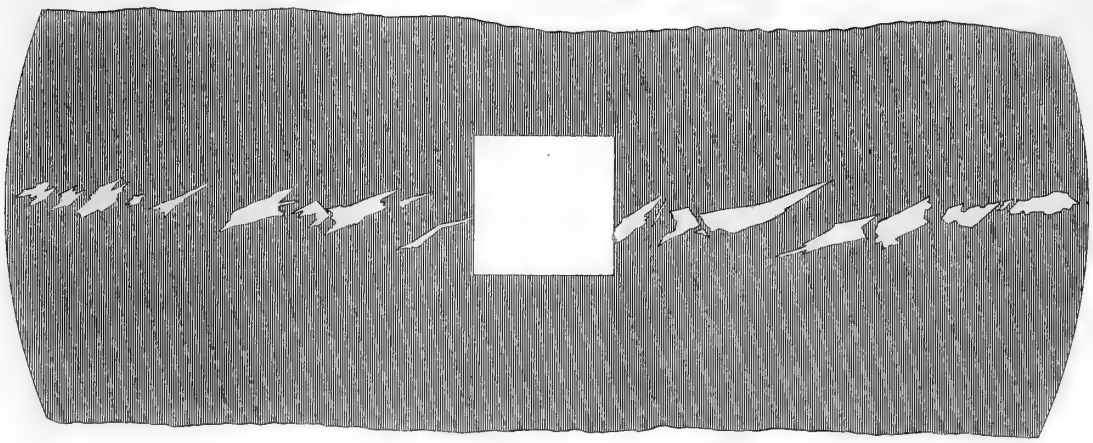
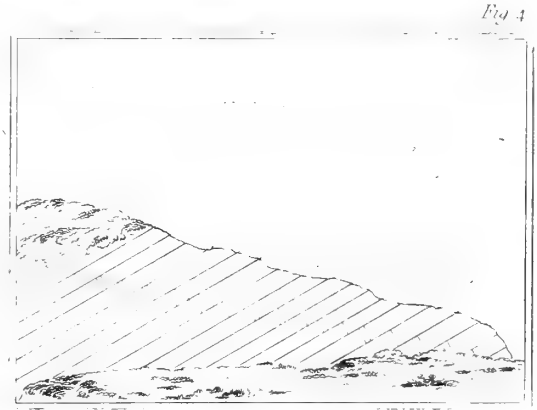


Fig. 2

Fig. 3

Fig. 4



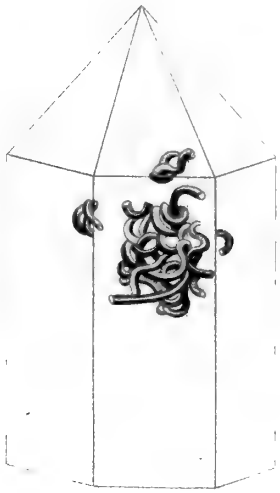


Fig. 1.

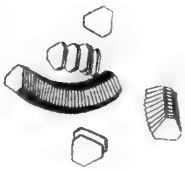


Fig. 2.

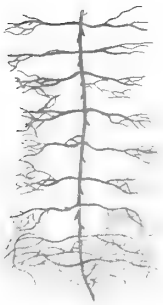


Fig. 3.

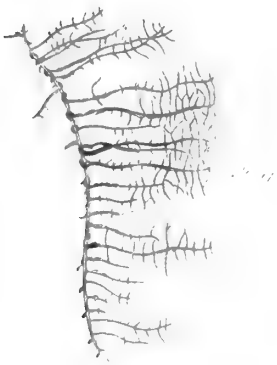


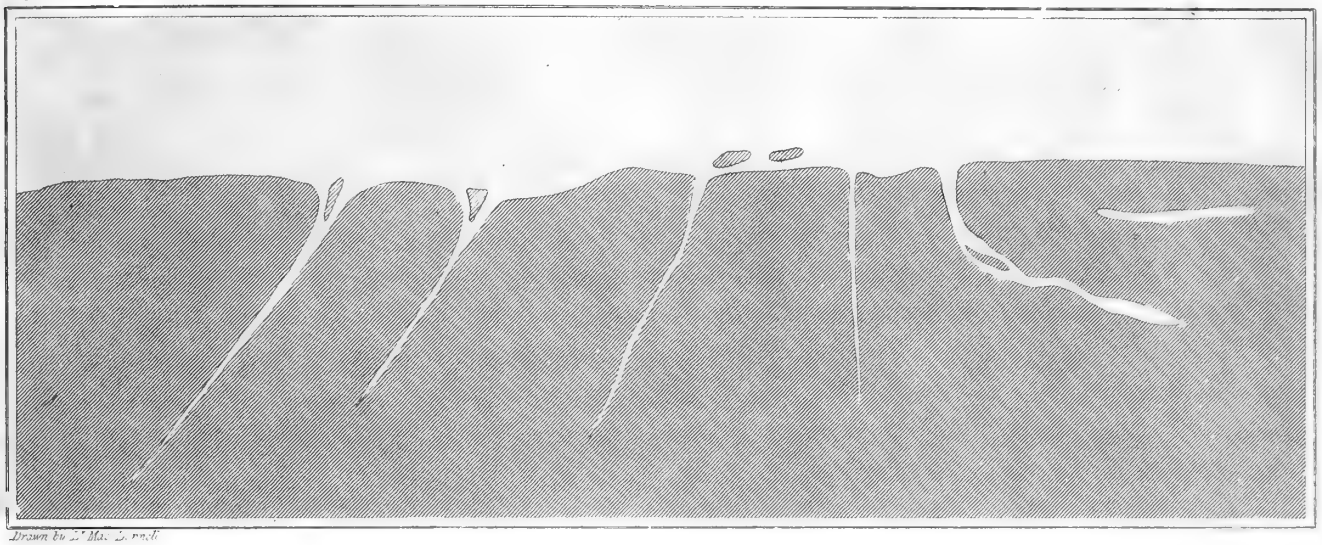
Fig. 4.

Drawn by J. Mac Culloch, M.D.

Engraved by Js. Basire.

Published by W. Phillips, London. 1816.

Fig 1

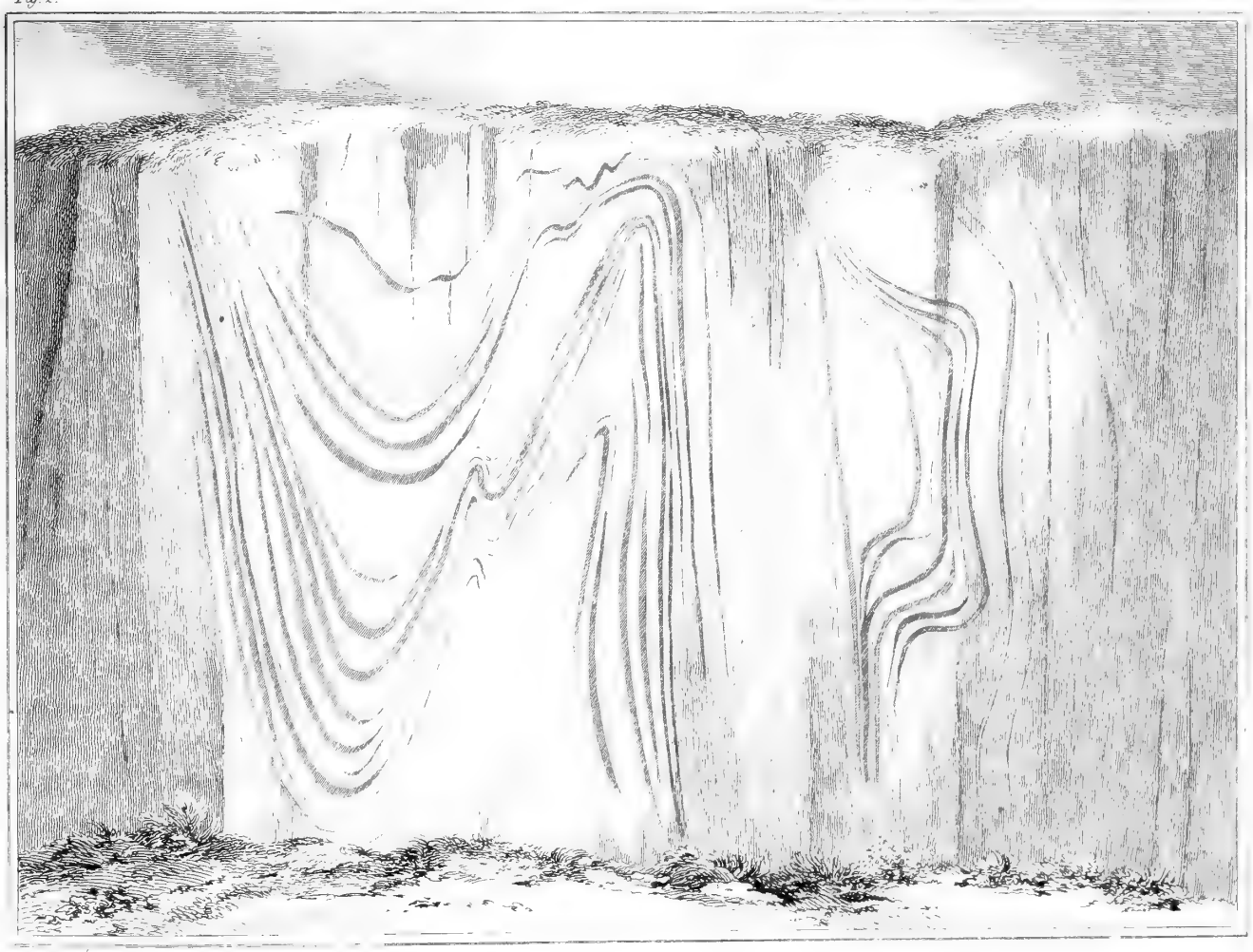


Drawn by C. Mac Donnell

Granite Veins in schist in the Mourne Mountains.

To illustrate D^r Mac Donnells notice.)

Fig. 2.



View of the Killas Rocks at the Gun Wharf, Plymouth Dock