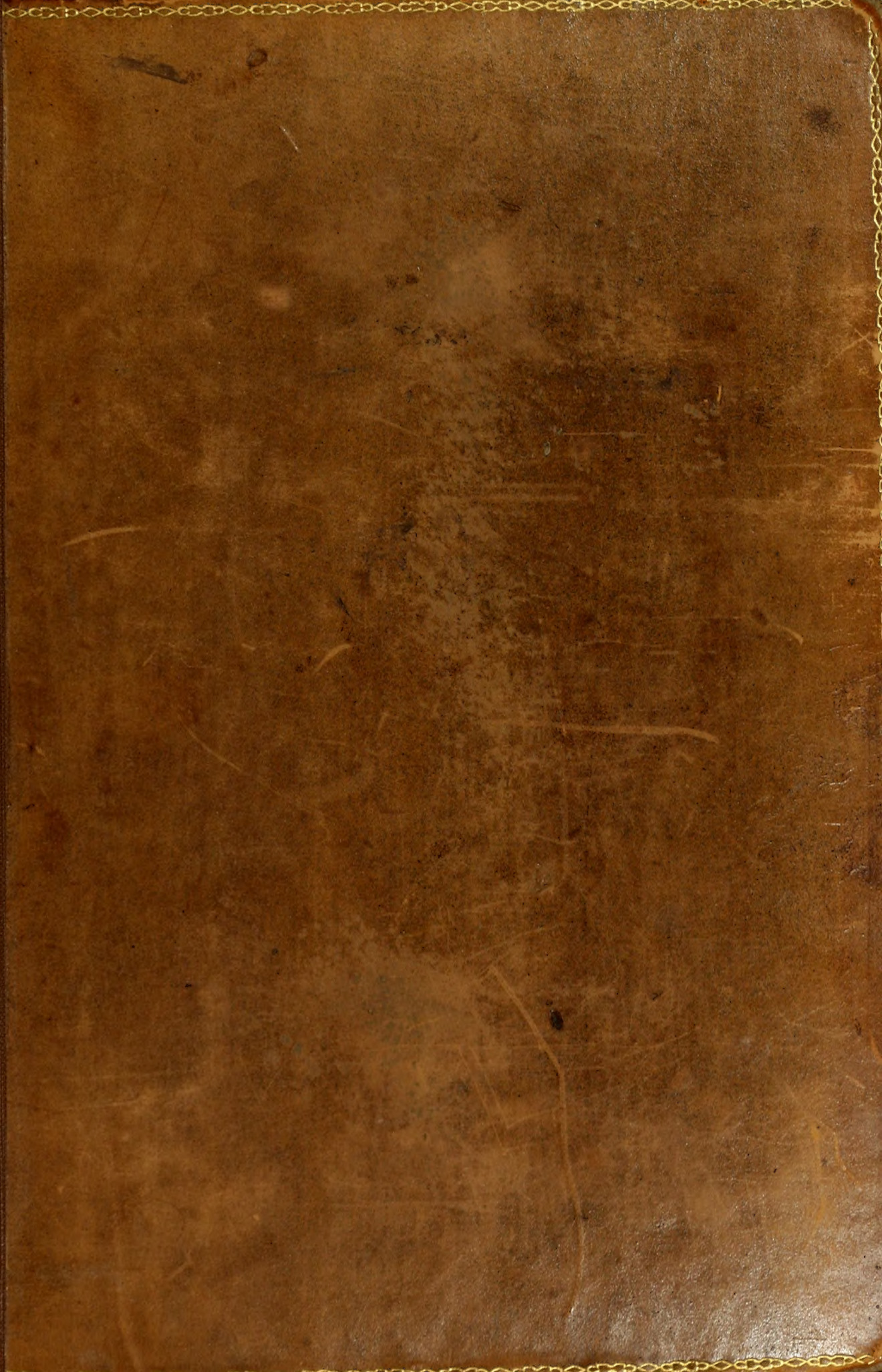
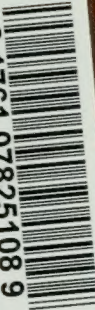


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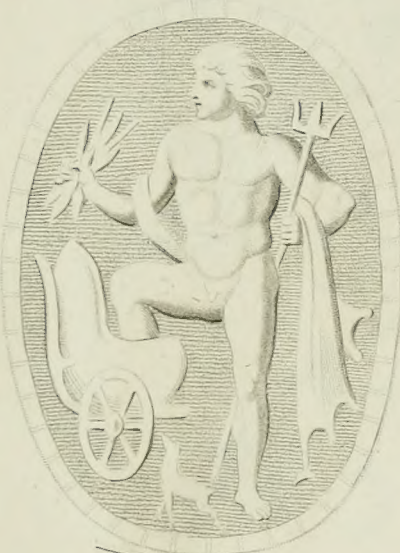
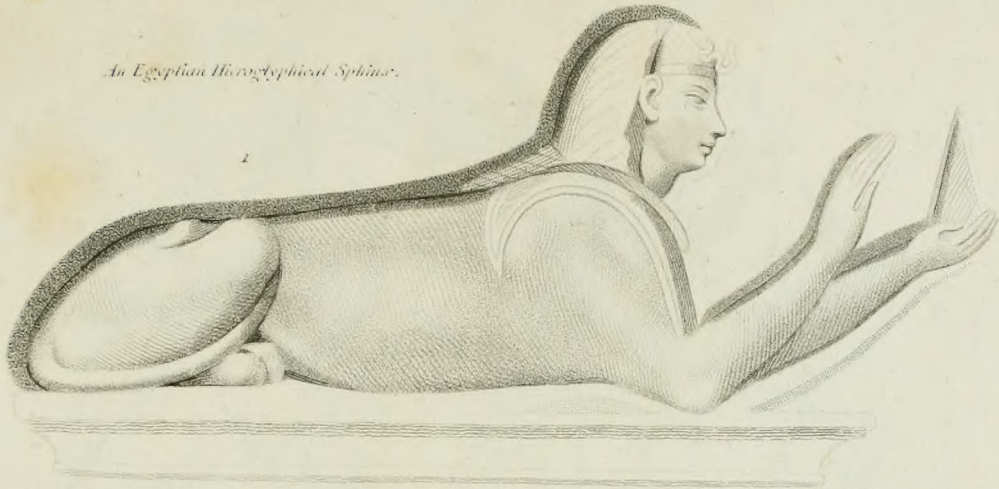
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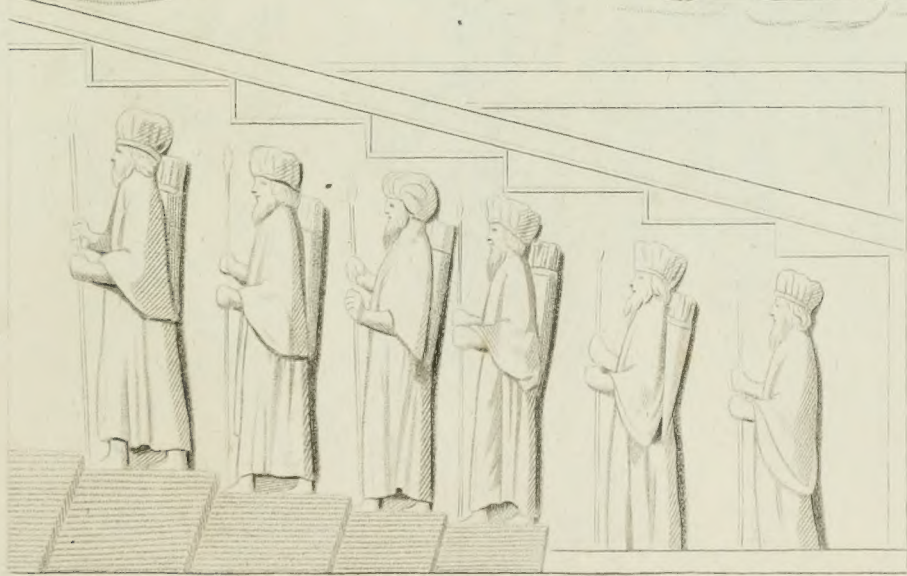
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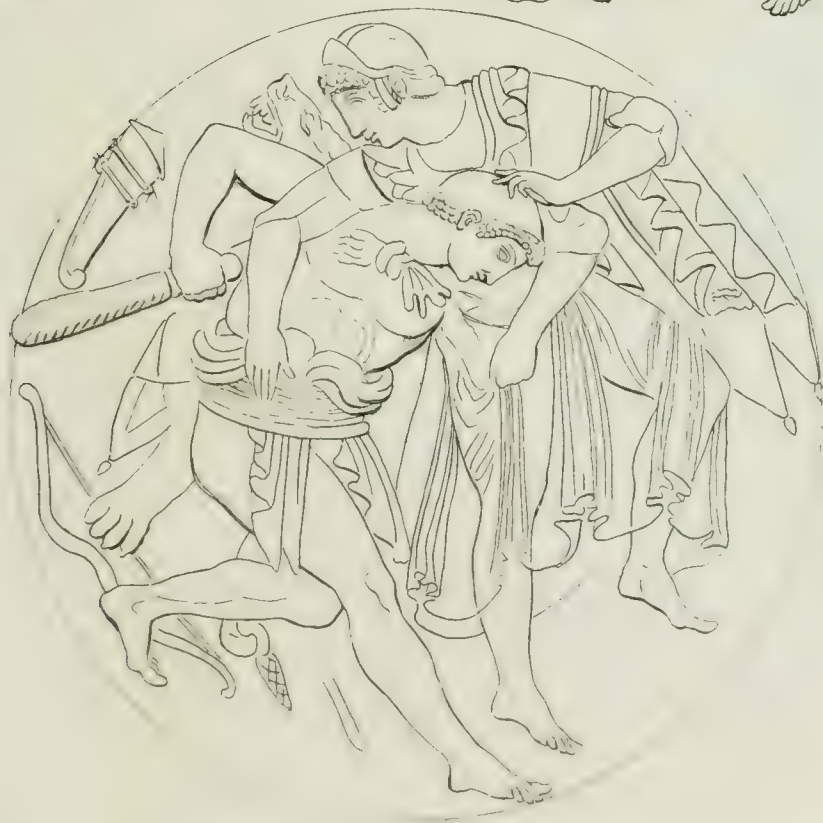
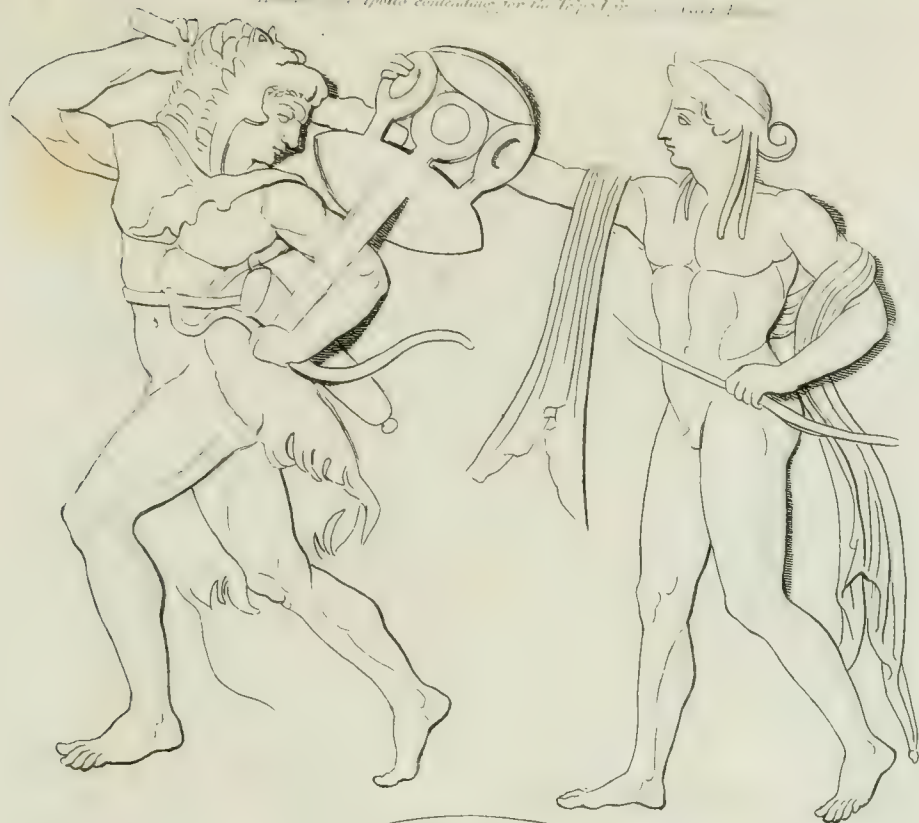


Hindu Baso-Relievo. - British Museum.



BASSO RELIEVO.

Uffizi, Apollo contending for the Tripod.

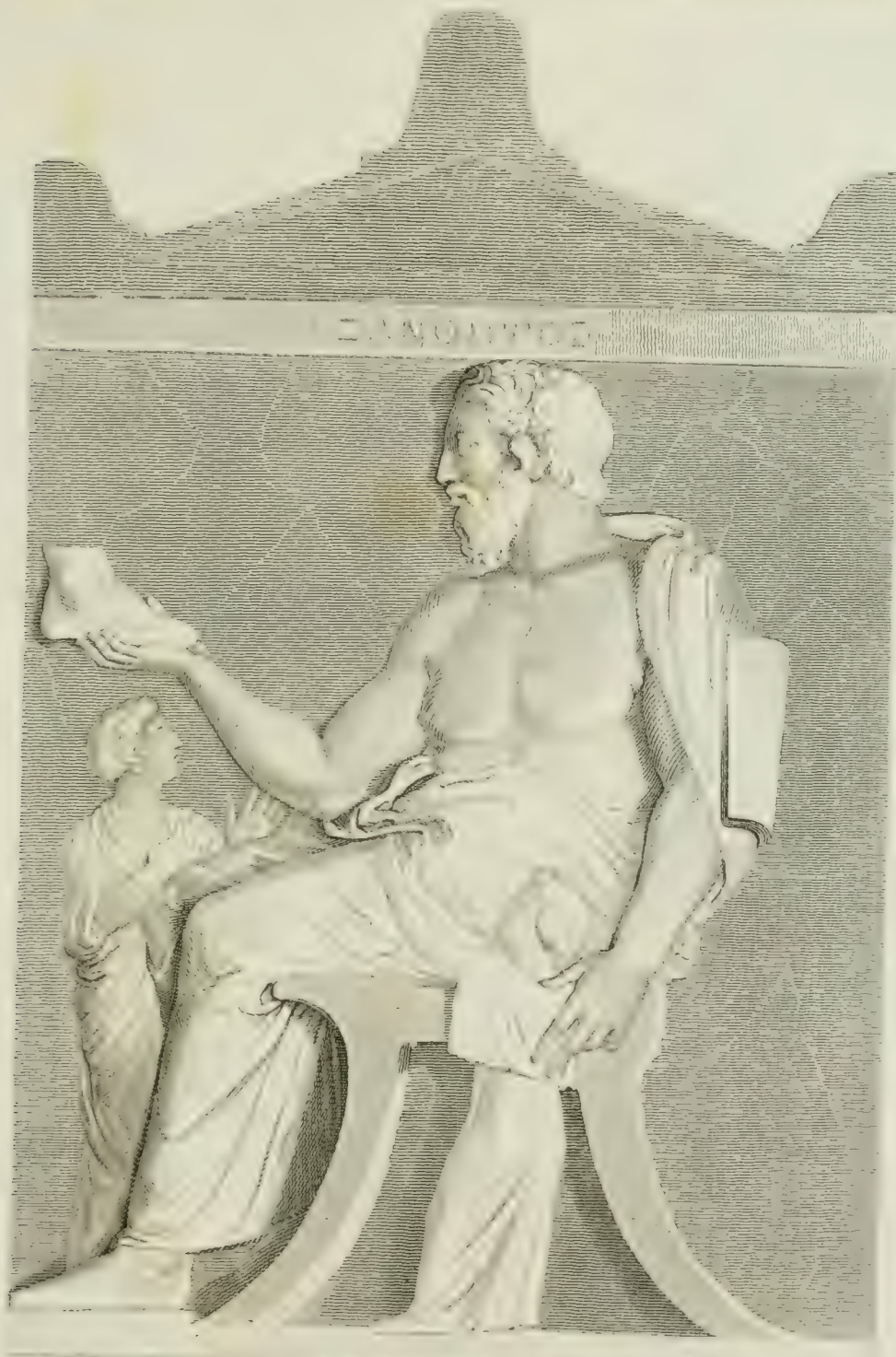


Uffizi, Apollo contending for the Tripod.

Uffizi, Apollo contending for the Tripod.



THE TOMB STONE OF XANTHIPPOS FATHER OF PERICLES.



*Brought from Athens by Dr. Askew
In the Possession of Charles Townley Esq.*

PAGAN

ALTARS.

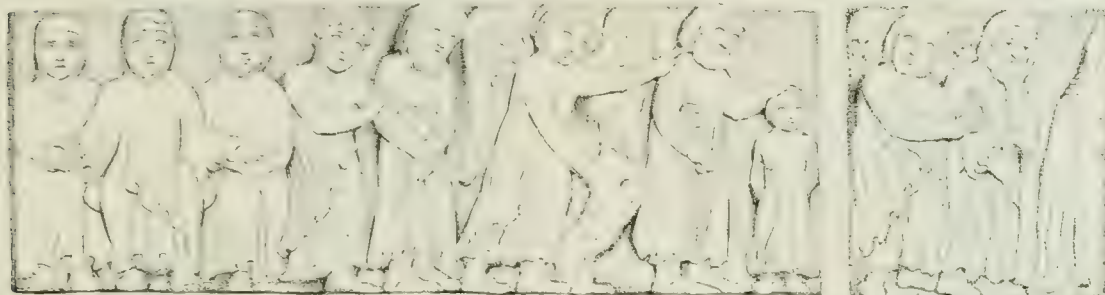
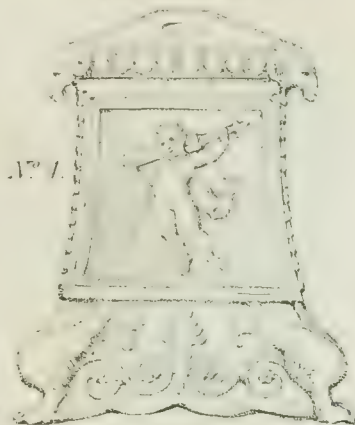
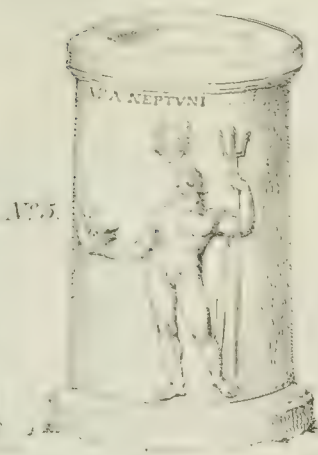
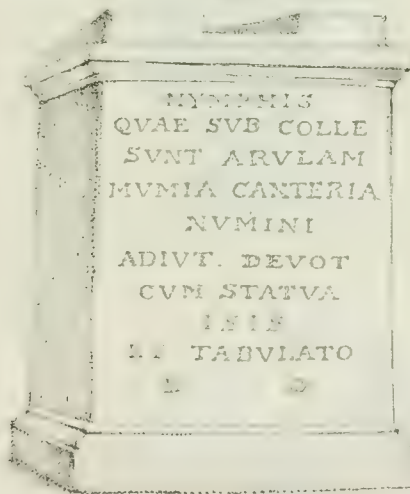


Fig.1. — Basso-relievo round a Capital in the Cathedral of Camara.

Altars N°2.



Altars N°1

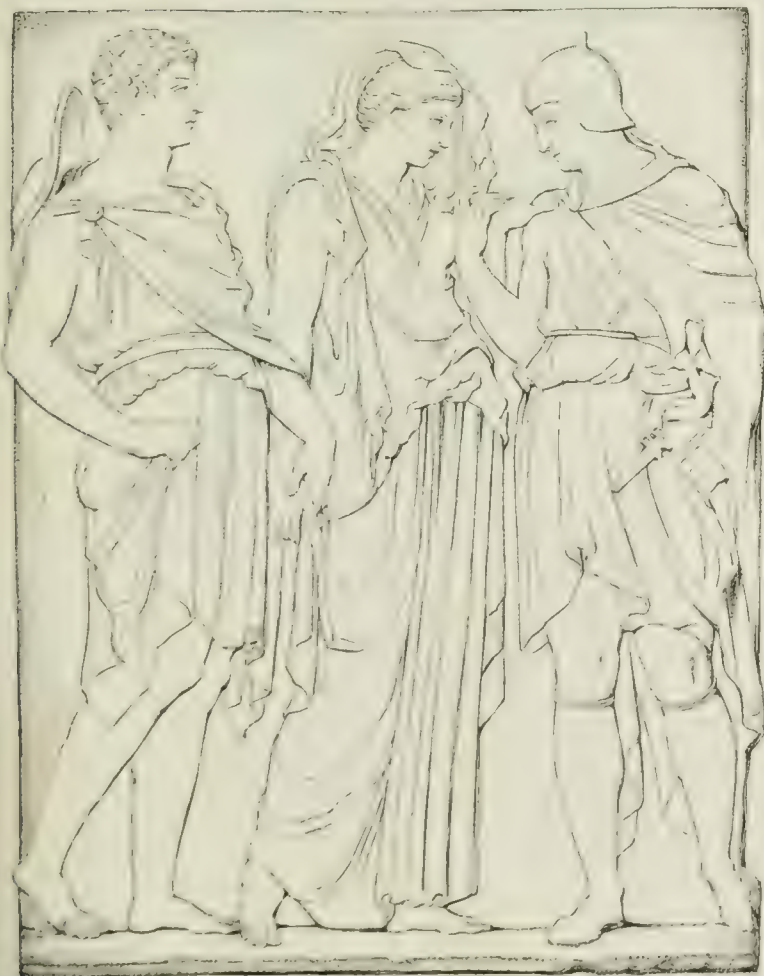


Fig 2 — Basso-relievo of Zethus, Antiope & Amphion

BLEACHING.



Fig. 1.

BUCKING

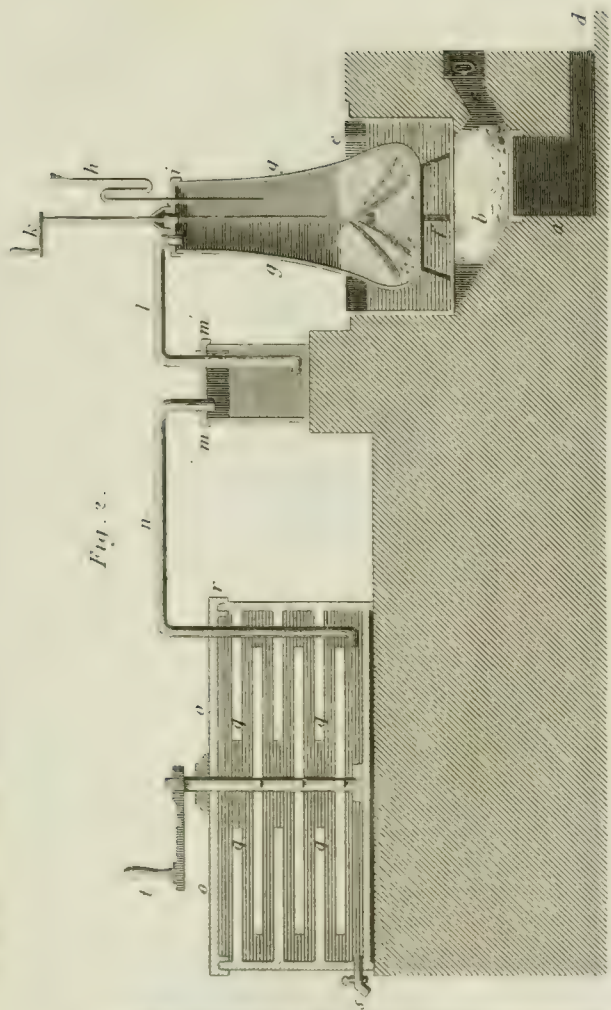


Fig. 2.

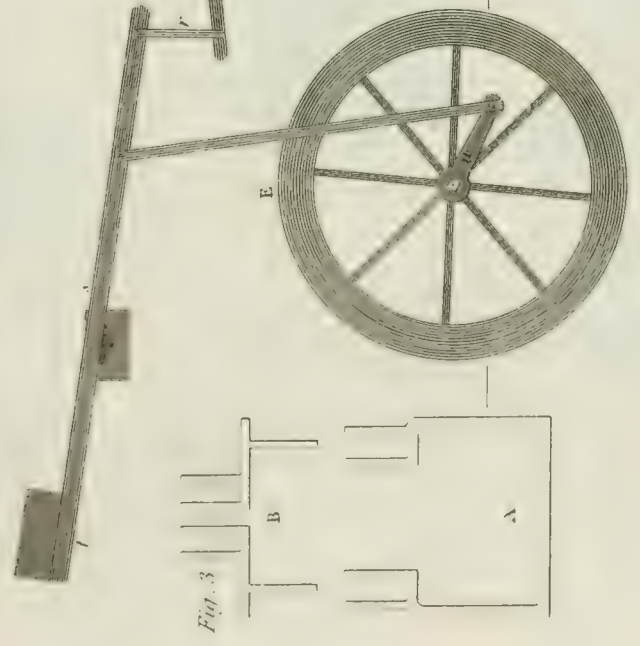


Fig. 3.

OXI-MURLATIC ACID

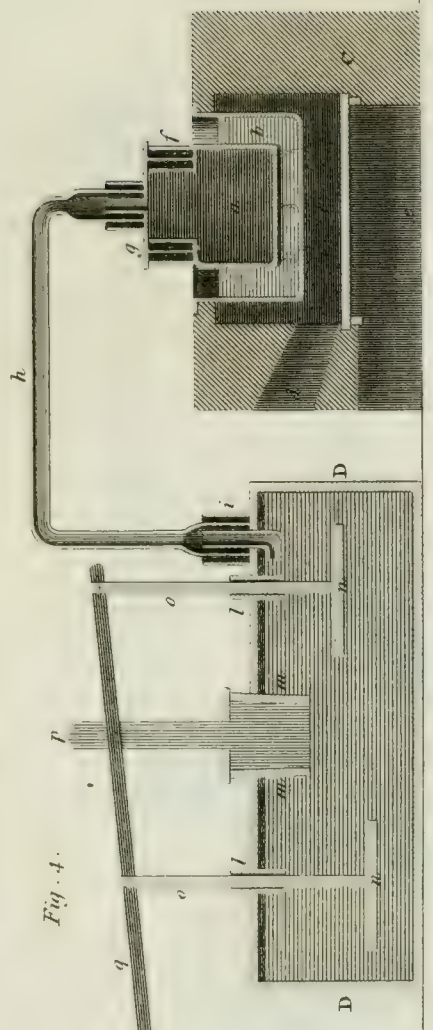


Fig. 4.

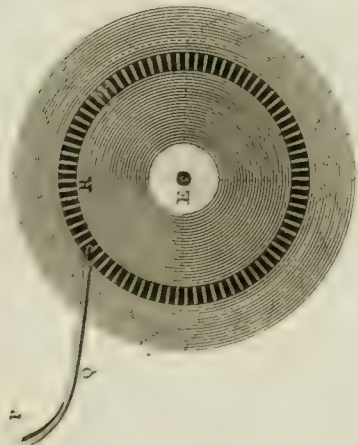


Fig. 2

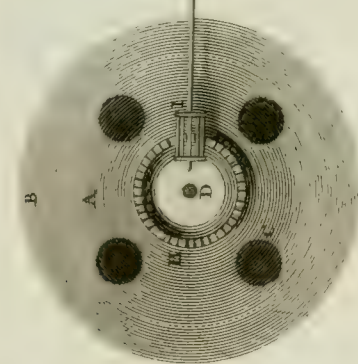


Fig. 1

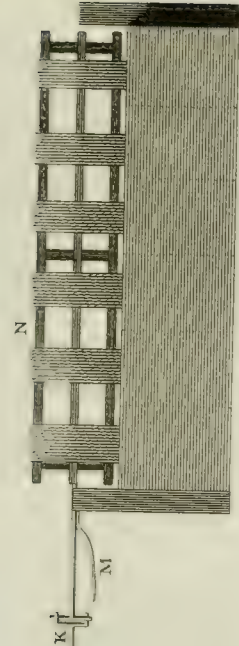


Fig. 3

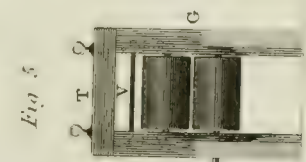


Fig. 5

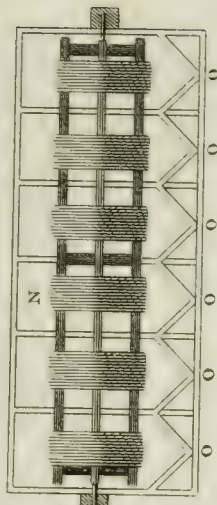


Fig. 4

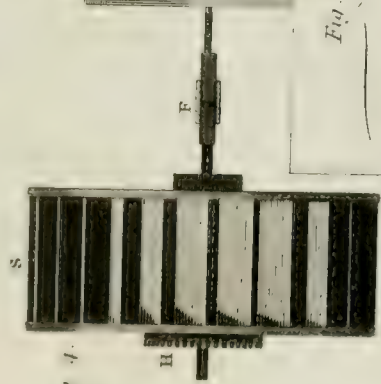


Fig. 6

Fig. 7

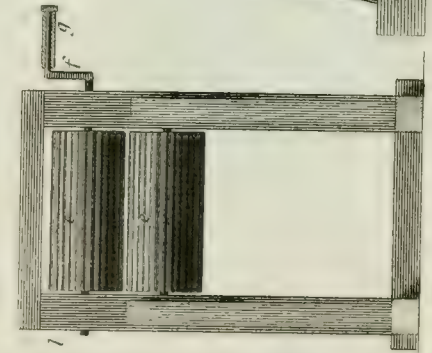
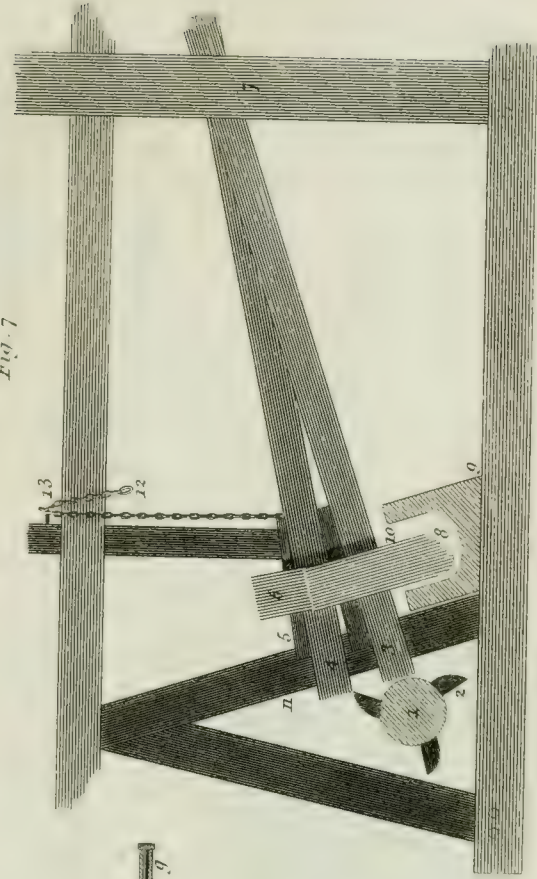


Fig. 8

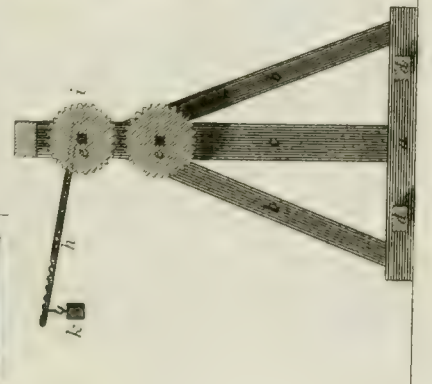
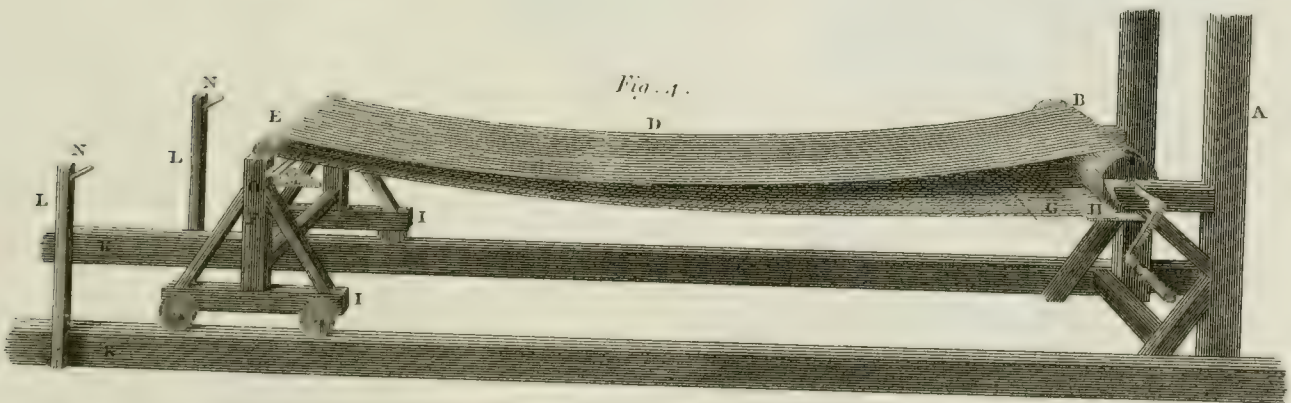
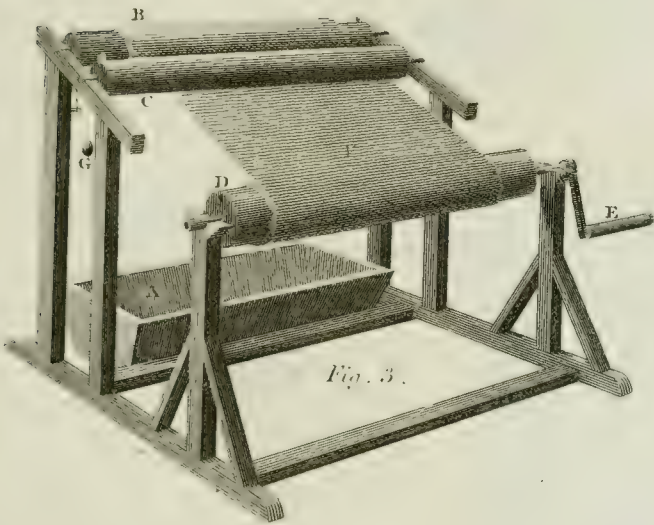
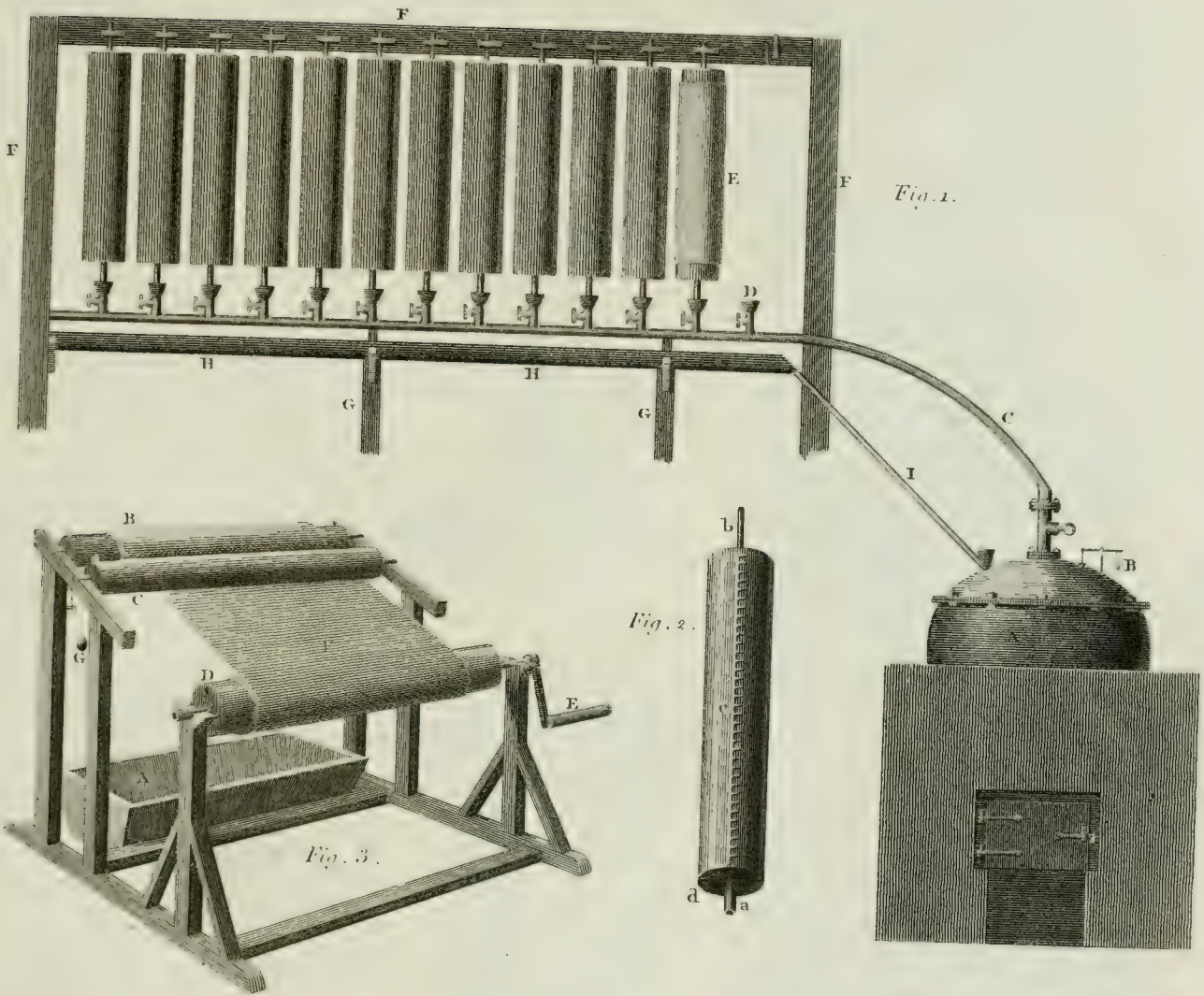


Fig. 9

DRYING.



BLEACHING.

Fig. 1.

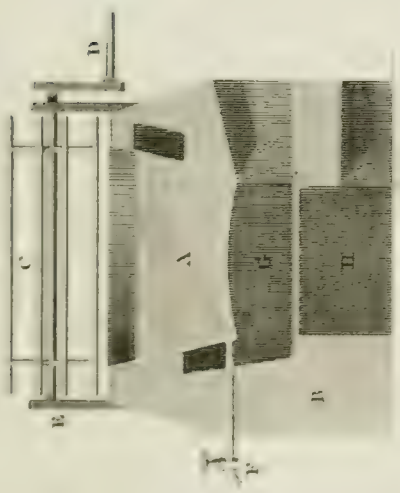


Fig. 2.

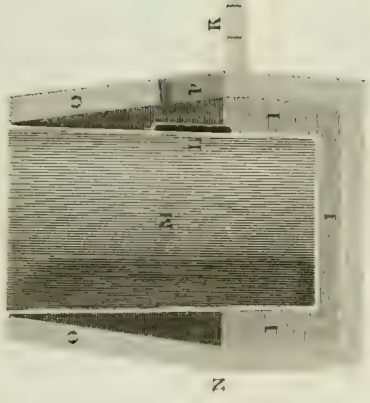


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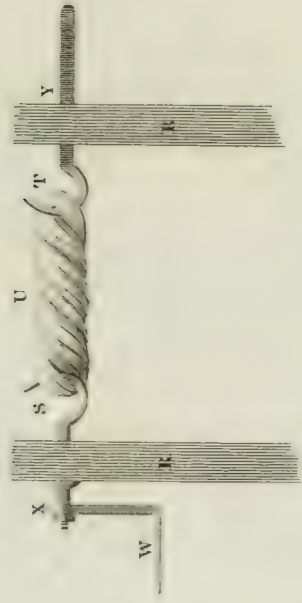


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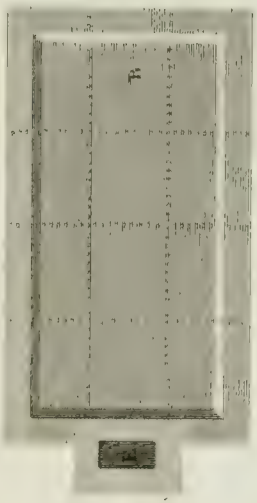


Fig. 4.

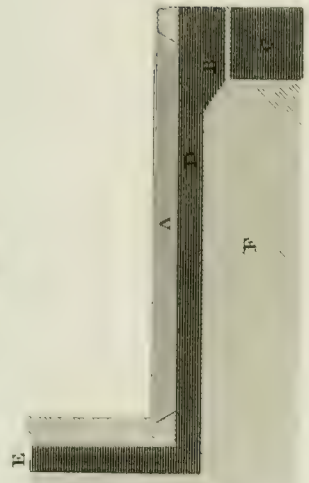


Fig. 6.

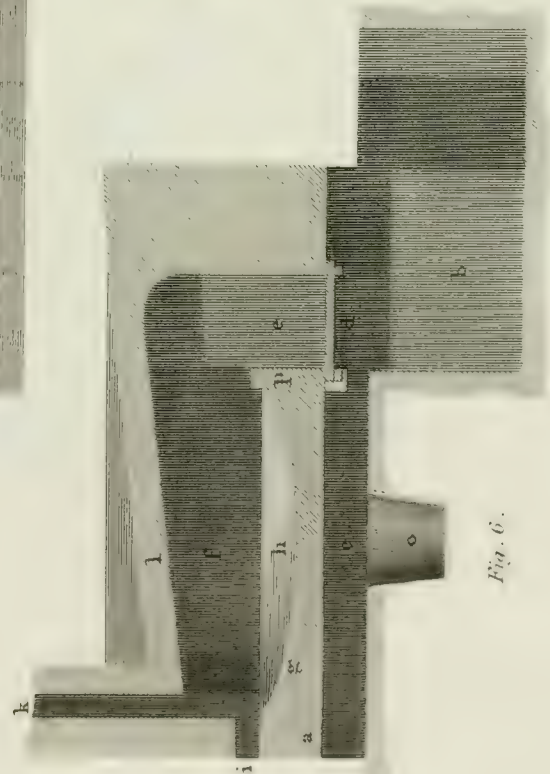
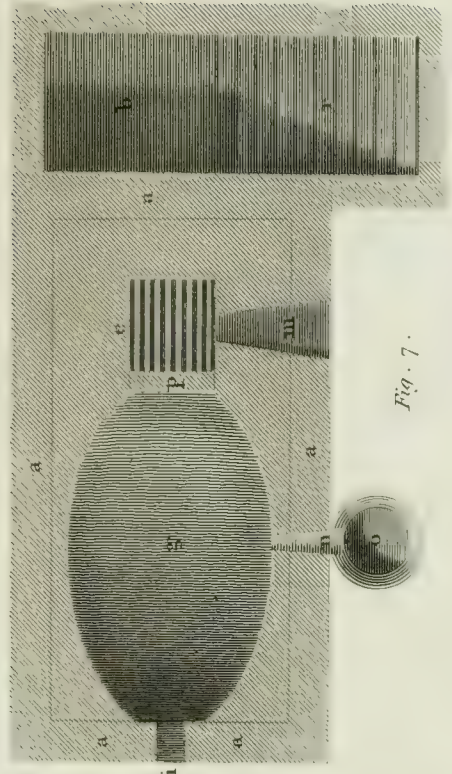
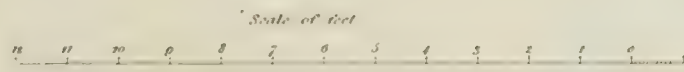
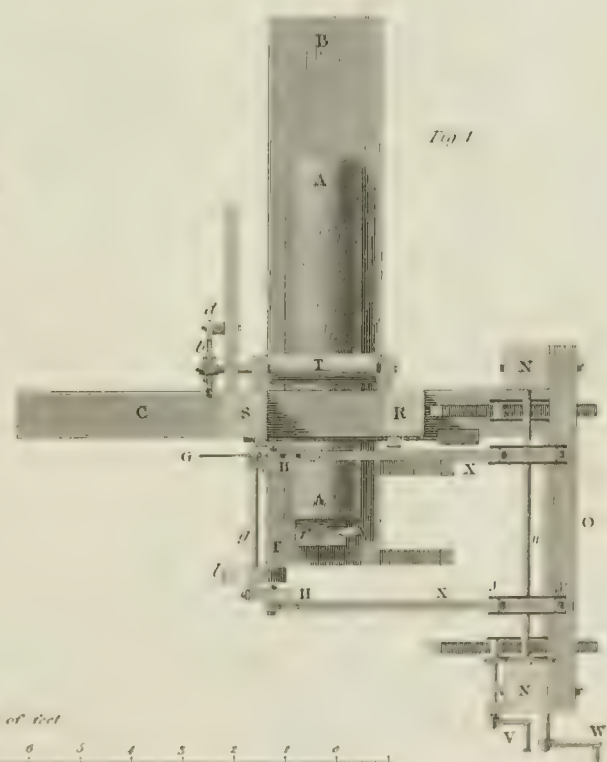
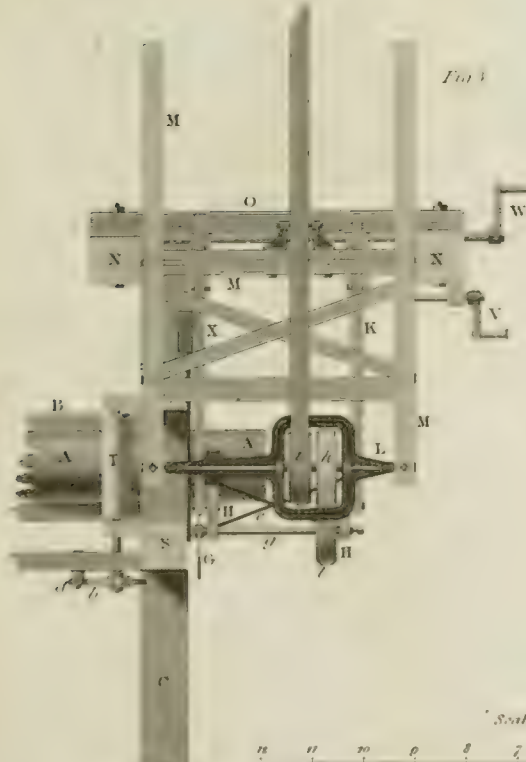
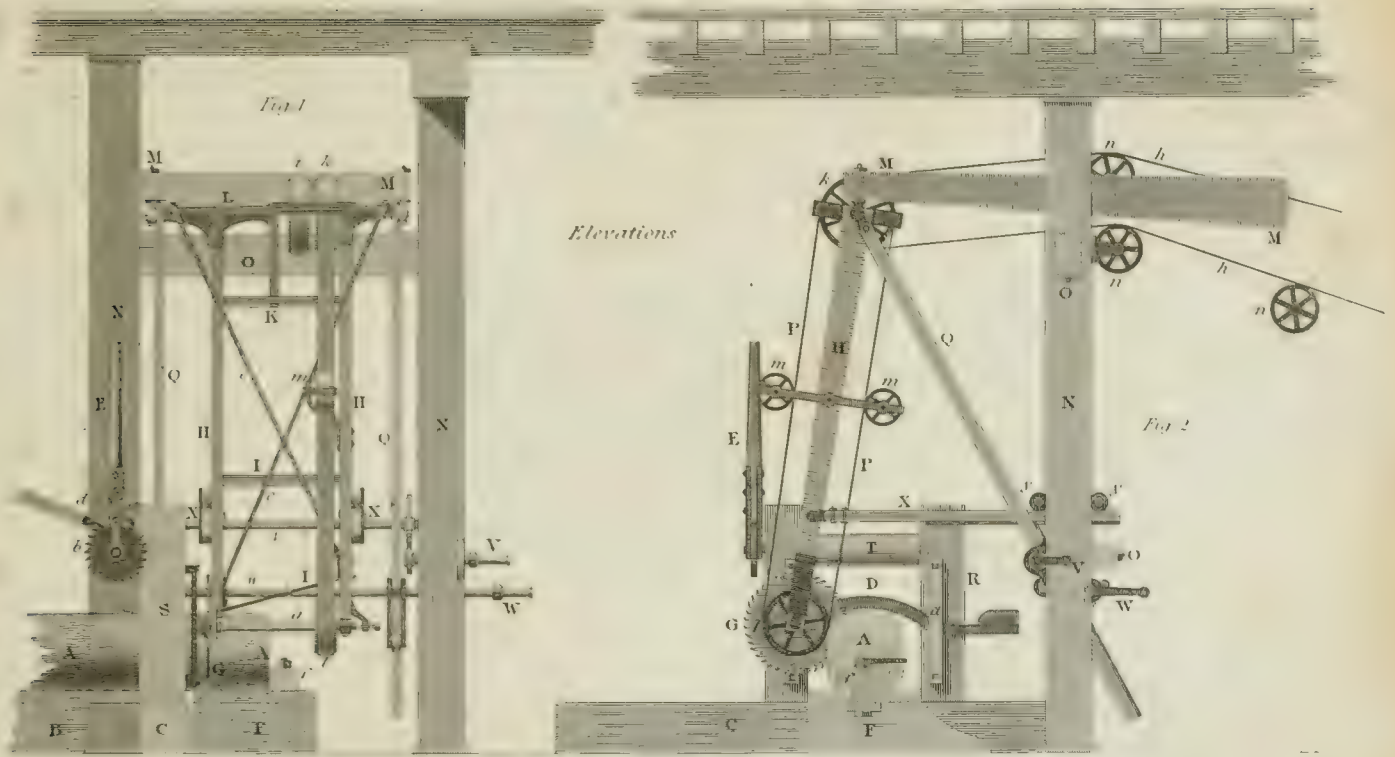


Fig. 7.



BLOCK MACHINERY at PORTSMOUTH.

Sawing Machine.



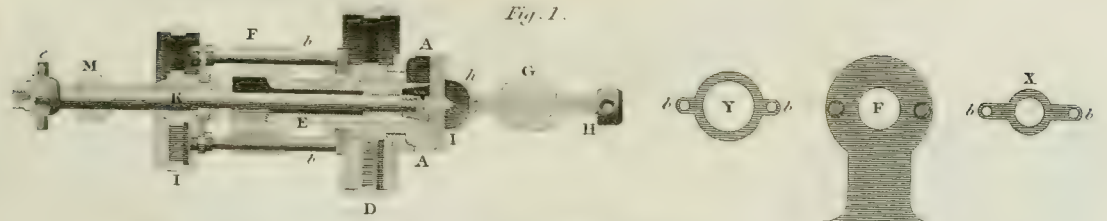


Fig. 1.

Fig. 2.

Crown Saw.

Fig. 3.

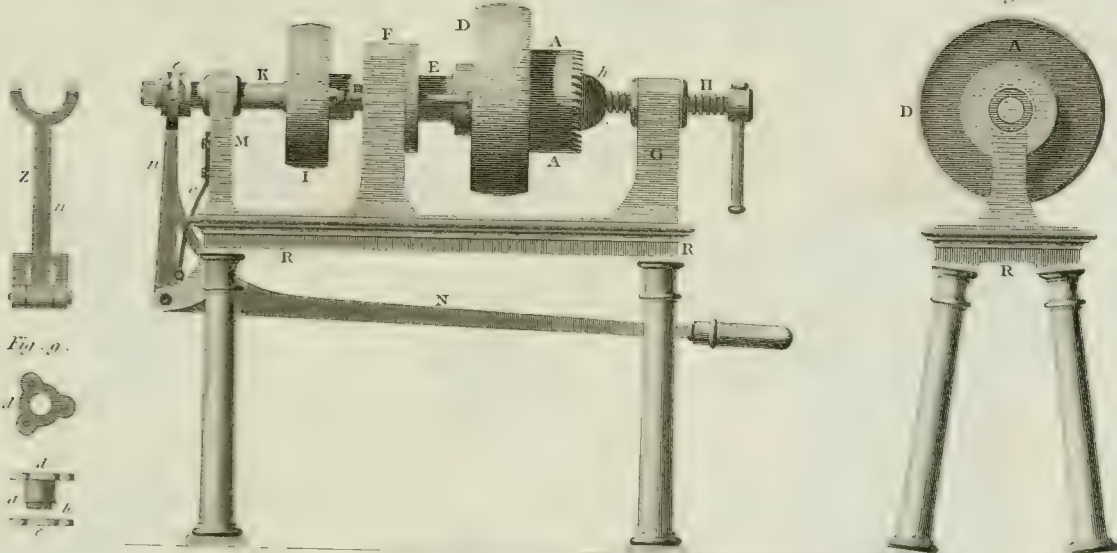


Fig. 9.



Fig. 4.

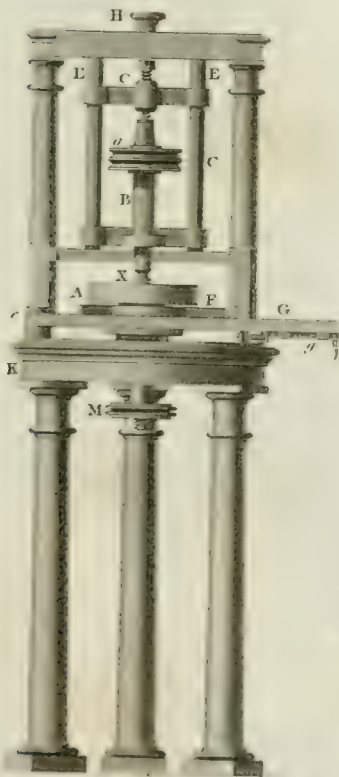


Fig. 6.

Coaking Engine.



Fig. 8.

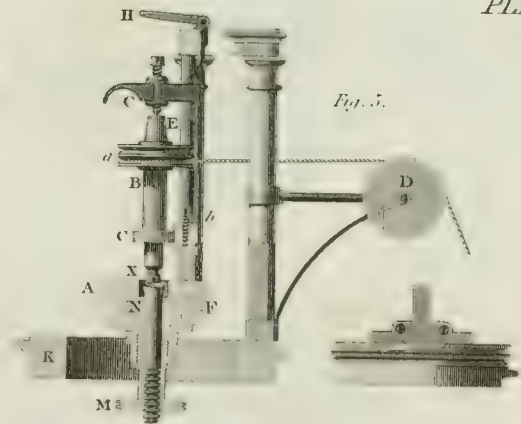


Fig. 5.

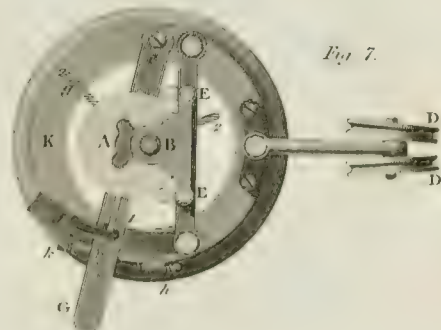
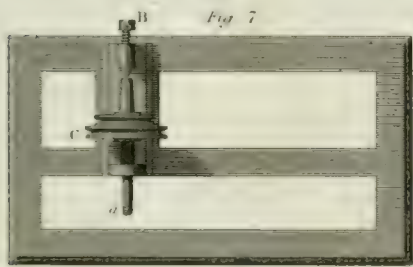
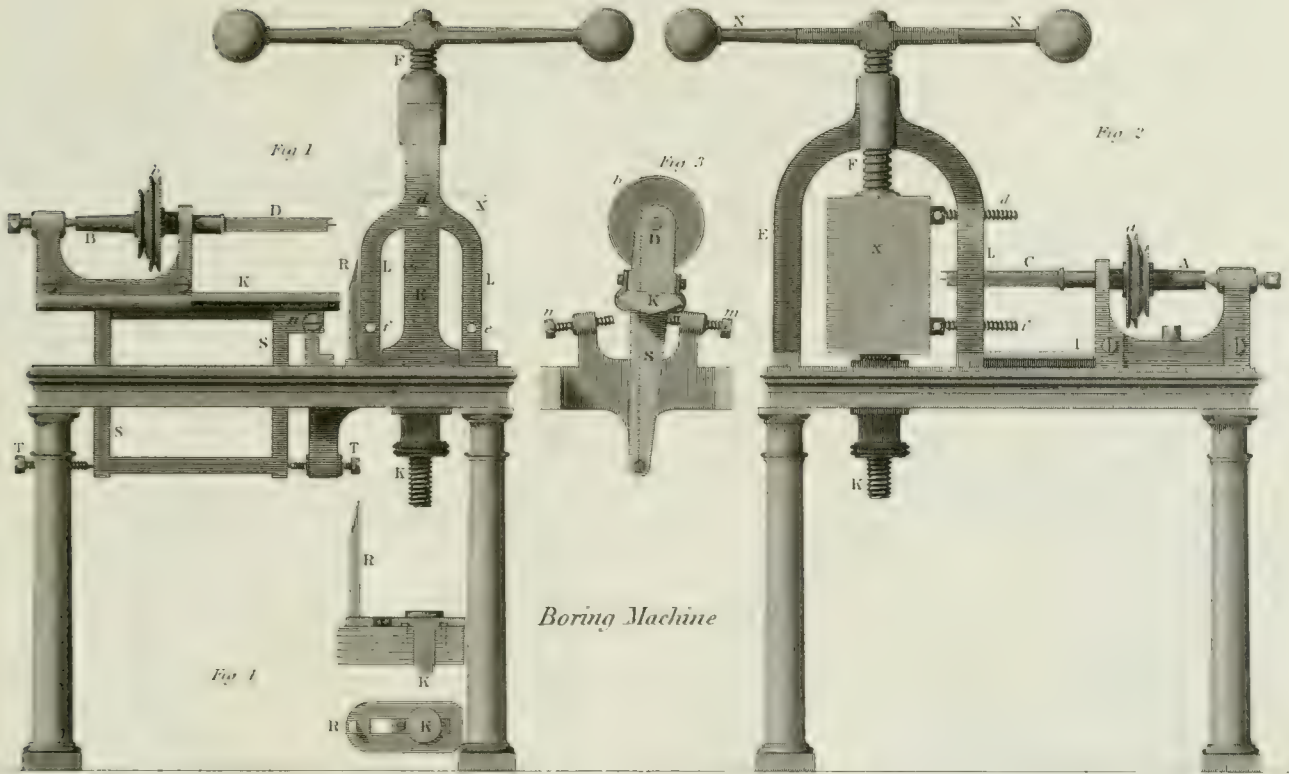


Fig. 7.



Cornering Saw

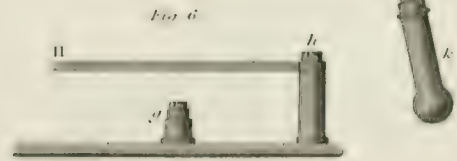
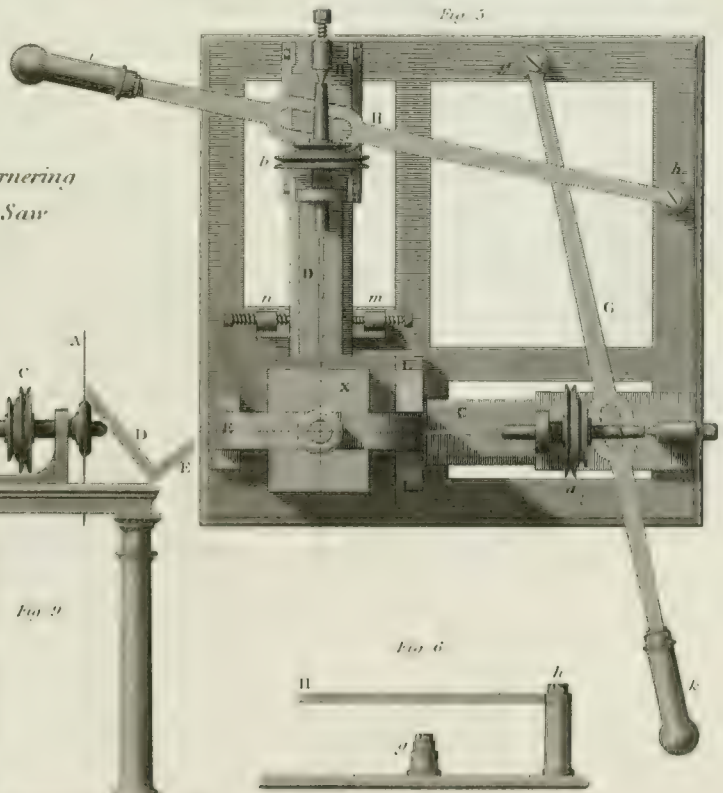


Fig. 1.

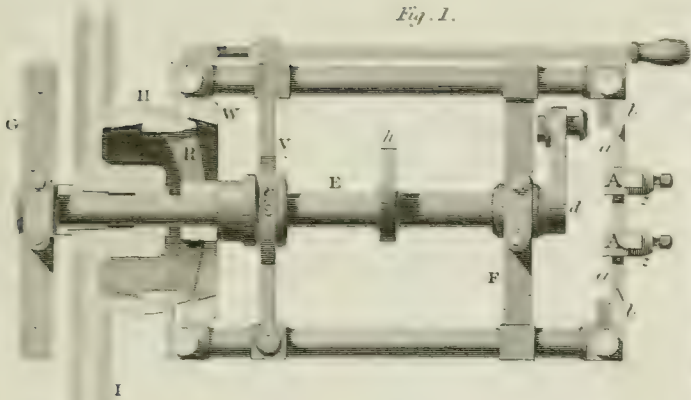


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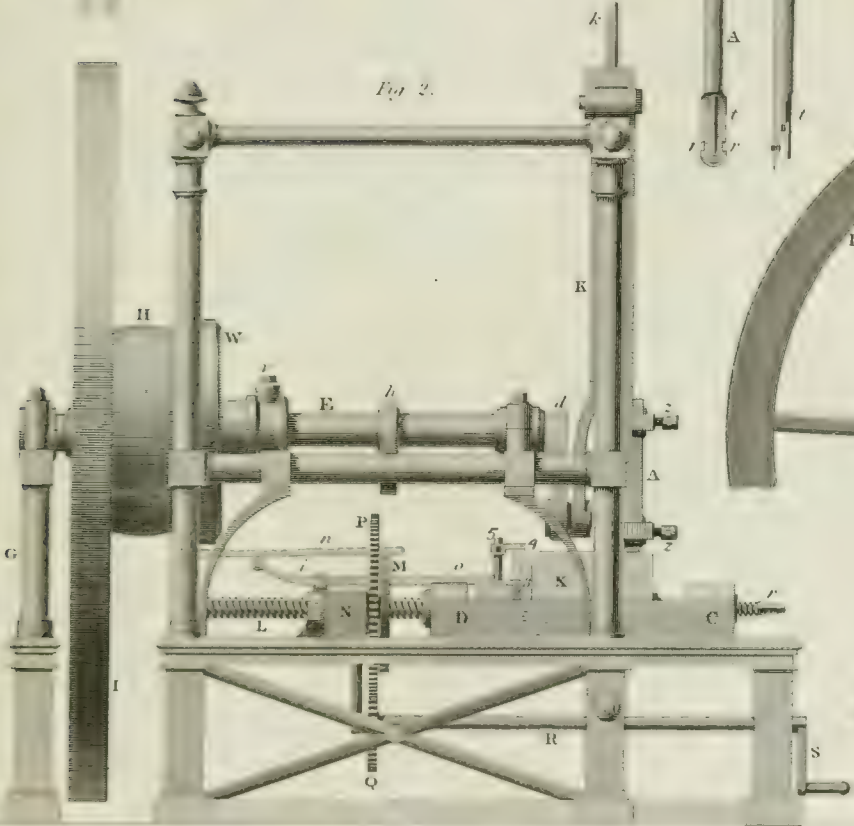


Fig. 6.

Mortising Machine.



Fig. 3.

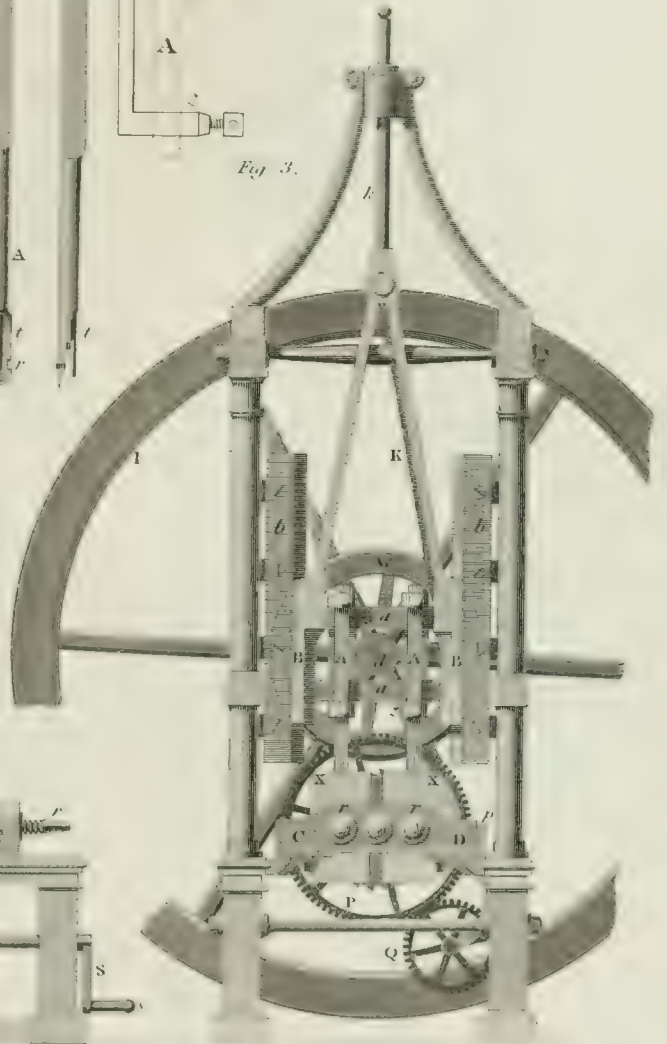


Fig. 4.

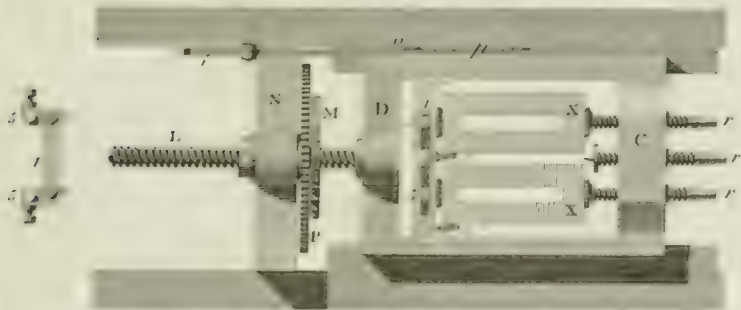
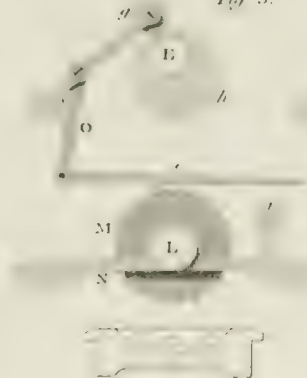
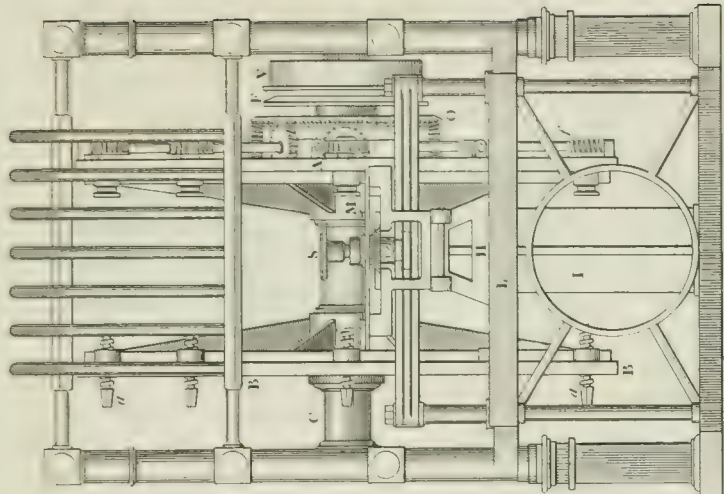


Fig. 5.



BLOCK MACHINERY AT PORTSMOUTH.
SLIPING Engine.

End View Fig. 2



Elevation Fig. 1.

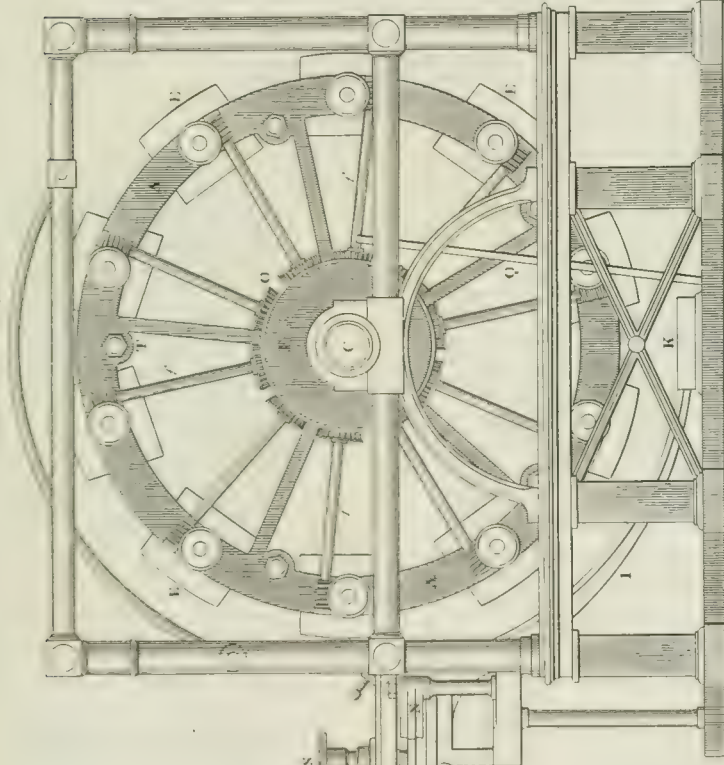


Fig. 3. Plan.

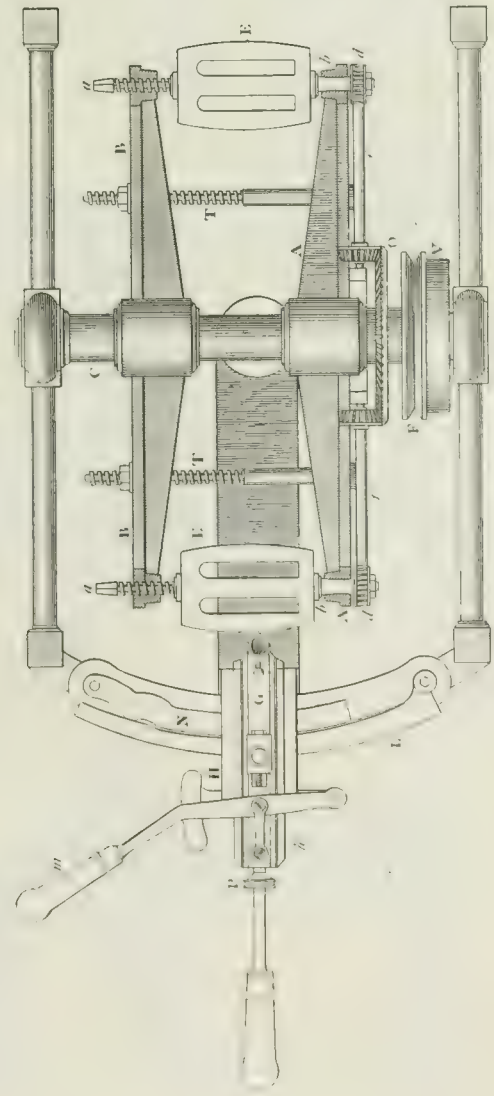
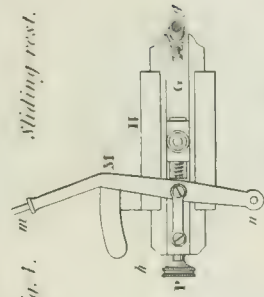
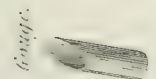
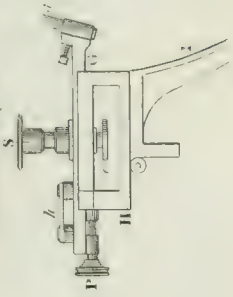


Fig. 1. Sliding rest.



Elevation Fig. 5.



Invented by M. Brunel.

Fig. 1.

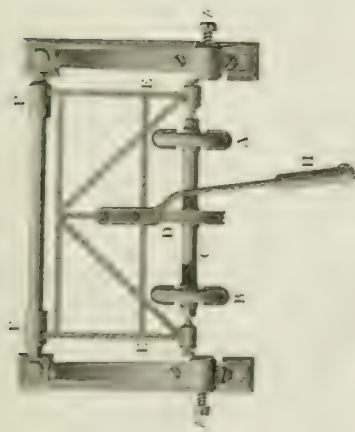


Fig. 2.

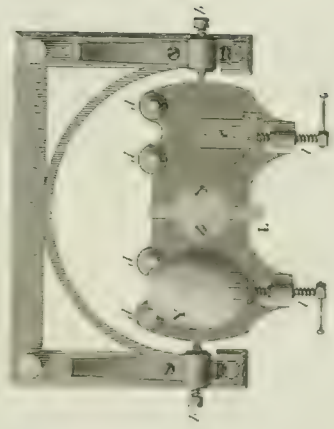


Fig. 3.



SCORING ENGINE.

Fig. 4.

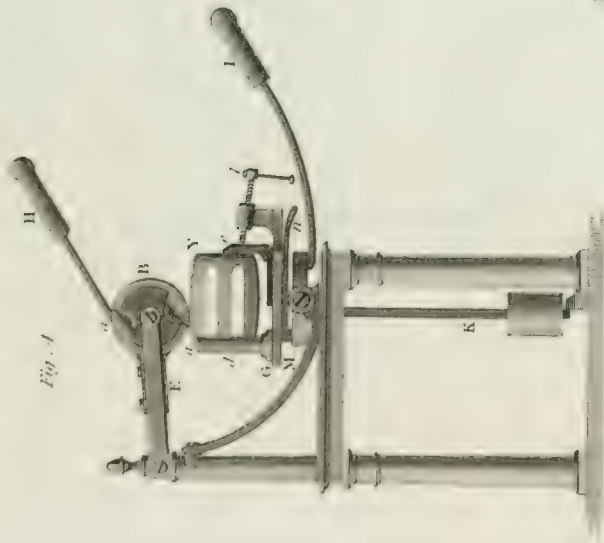


Fig. 5.

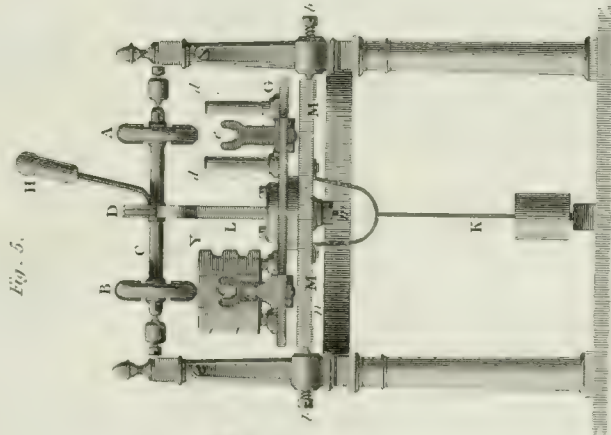


Fig. 6.

Machine for Making Dead Eyes.

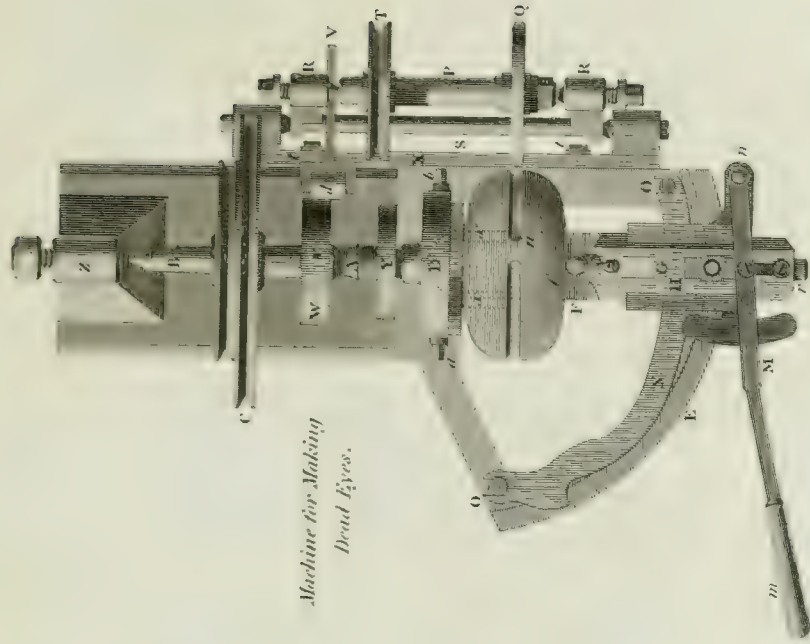
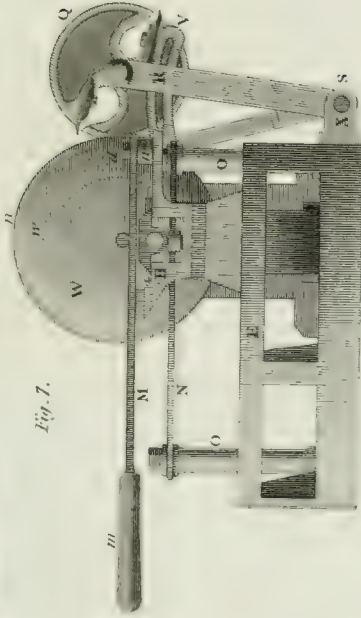
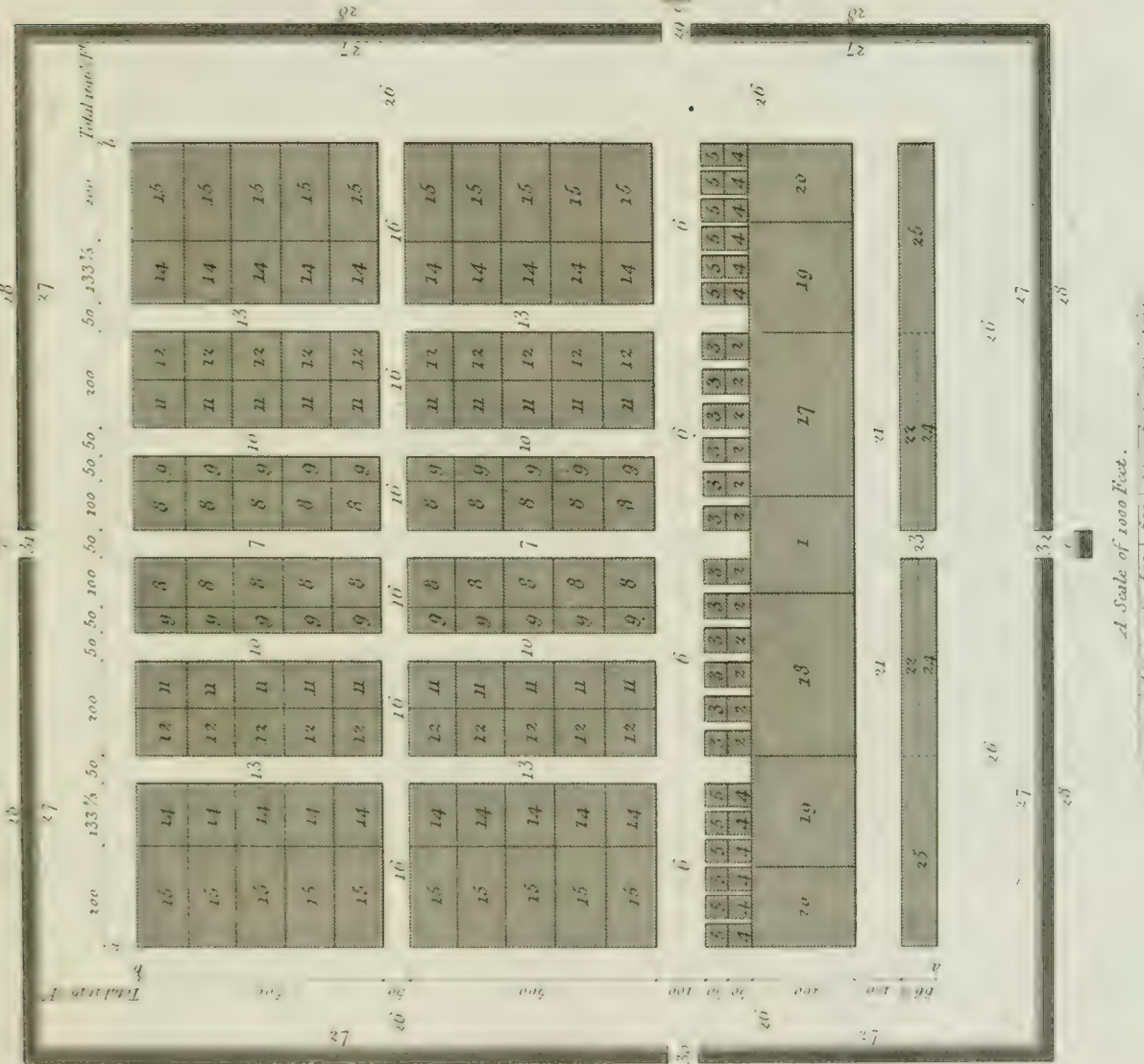


Fig. 7.



PLAN OF A ROMAN CONSULAR CAMP ACCORDING TO POLYBIUS.



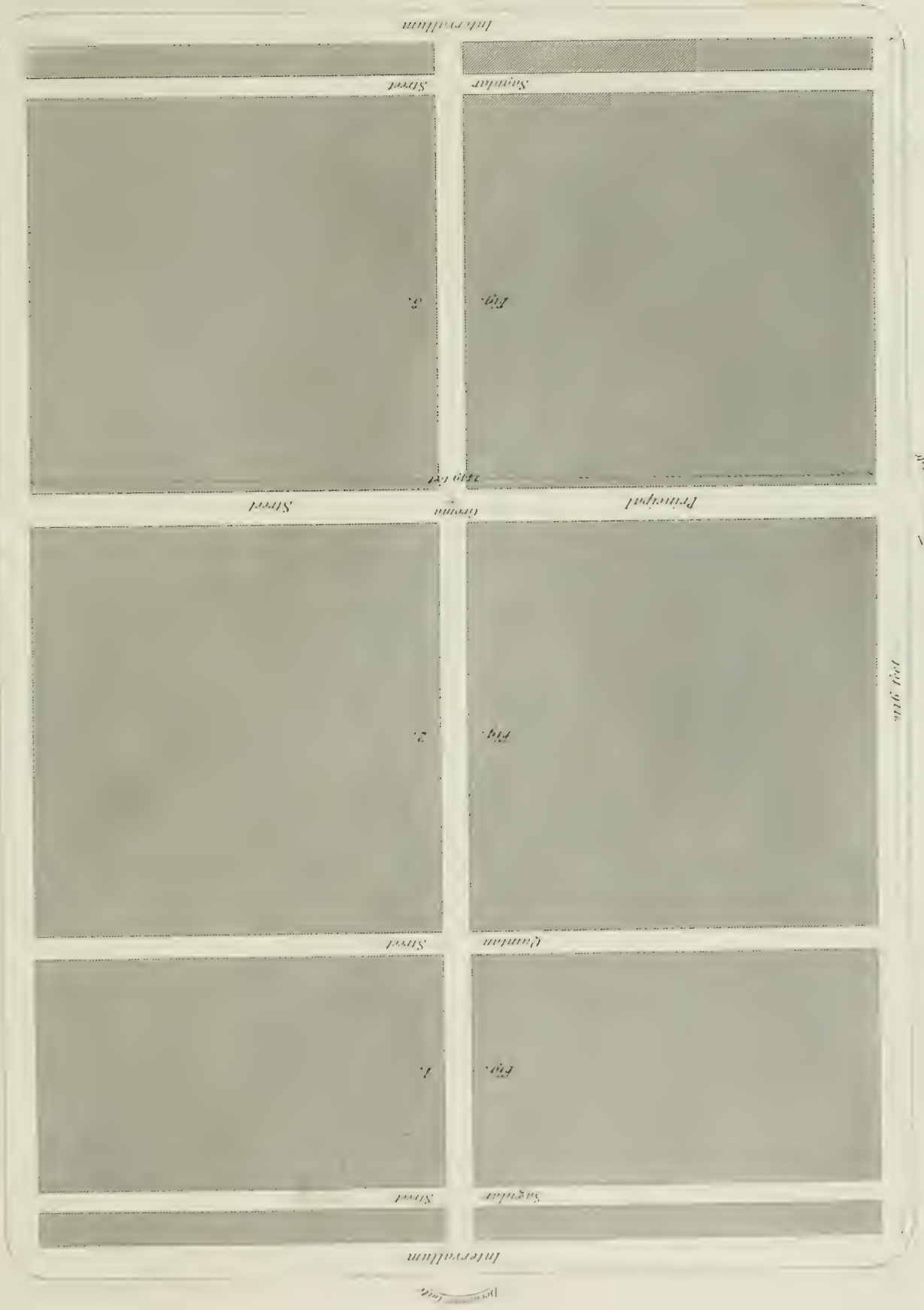
- 1 The Praetorium or General's ground set apart for the Consul containing 10000 Roman square feet
- 2 Ground behind the tents of the Tribunes for their Horses, Beasts of Burthen, Baggage, &c.
- 3 Ground where the tents of the Tribunes were pitched
- 4 Ground behind the tents of the Prefecti of the Allies for their Horses, Beasts of Burthen, Baggage, &c.
- 5 Ground where the tents of the Praepositi of the Allies were pitched.
- 6 A cross-street 200 feet wide called *Strata Praepositi*, which the encampments of the cavalry and infantry both of the Roman legions and of their Allies had their headquarters or emplacements
- 7 A street 50 feet wide between the *Strata Praepositi*
- 8 The Horses of two Roman legions in ten troops each
- 9 The Triarii of two legions in ten Maniples each
- 10 Two streets 50 feet wide each between the Triarii and Principes of two legions.
- 11 The Principes of two legions in ten Maniples each
- 12 The Hastati of two legions in ten Maniples each.
- 13 Two streets 50 feet wide each between the Hastati of the two Roman legions and the Horse of the Allies.
- 14 The Horse of the Allies consisting of ten Maniples each

- 15 The Infantry of the Allies wanting the Extraordinarii who amounted to a fifth part of their whole number in ten divisions each on the right and left sides of the Encampment.
- 16 Via Quintana 50 feet wide running across the camp between the fifth and sixth Maniples and troops reckoned from the Principia.
- 17 The Quaeestorium, 18 The Forum.
- 19 Quarters or encamping ground for the Horse guards of the Consul and Quaestor.
- 20 Quarters for the Foot-guards of the Consul and Quaestor
- 21 A cross street 200 feet wide.
- 22 The extraordinary Horse except those selected for the guards of the Consul and Quaestor.
- 23 A street 50 feet wide.
- 24 The extraordinary Foot except those selected for the guards of the Consul and Quaestor.
- 25 Quarters for any stragglers that might arrive at the Camp.
- 26 A space two hundred feet broad between the encampment tents and the Rampart.
- 27 The Rampart, 28 The Ditch.
- 29 Porta principalis dextra
- 30 Porta principalis sinistra.
- 31 Porta Decumana according to some but Porta Praetoria according to others.
- 32 Porta Praetoria according to some but Porta Decumana according to others
- a b Two right lines on which are marked the principal dimensions of the whole to be a square or an equilateral right angled quadrangle
- c A Traverse Breastwork or Epaulment with a ditch before it opposite to each of the Gates.

A Scale of 1000 Feet.

The total length of the CAMP from front to rear is 2320 Roman Feet or 2222 English Feet, and its extreme breadth from right to left is 2000 Roman Feet or 1900 English Feet. The intervalum is 600 Roman Feet or 570 English Feet, and the height of the space that was occupied by the troops is 216 English Feet and its breadth 1440.

Fig. 1. 2. 3.



216 Feet

Fig. 1. 2. 3.

ARTILLERY. ENCAMPMENT.

PLAN OF THE ENCAMPMENT OF A PARK OF ARTILLERY,

with a Regiment of 12 Companies each consisting of 60 Privates.

The Park contains 80 Cannon, 20 Howitzers, 20 Pontoons, 4 Forges, 436 Waggon, 2600 Horses and 650 Drivers.

EXPLANATION.

A, B, C, D. Bounds of the Park.

E. Artillery Ground.

F. Subalterns Tents.

G. Captains Tents.

H. Lieutenant Colonel,

and Majors Tents.

I. Colonel's Tent.

K. Staff Officers Tents.

L. Ground Sudders Tents.

M. Private Sudders Tents.

N. Sergeants Tents.

O. Bells of Arms.

P. Alarm or Evening Guns.

Q. Army Guard.

R. Artillery Guard.

S. Rear Guard.

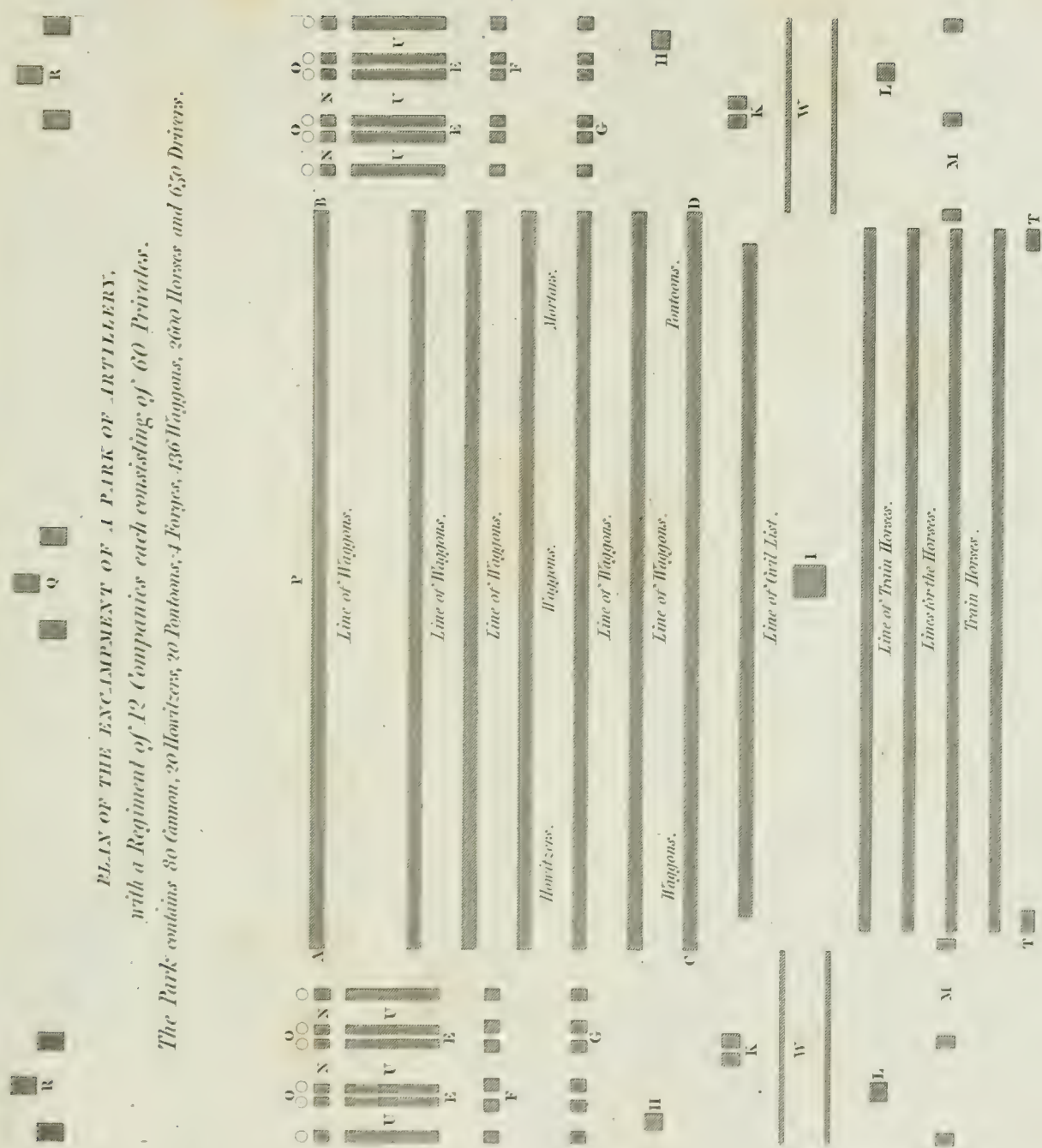
T. The Forges.

U. The Streets.

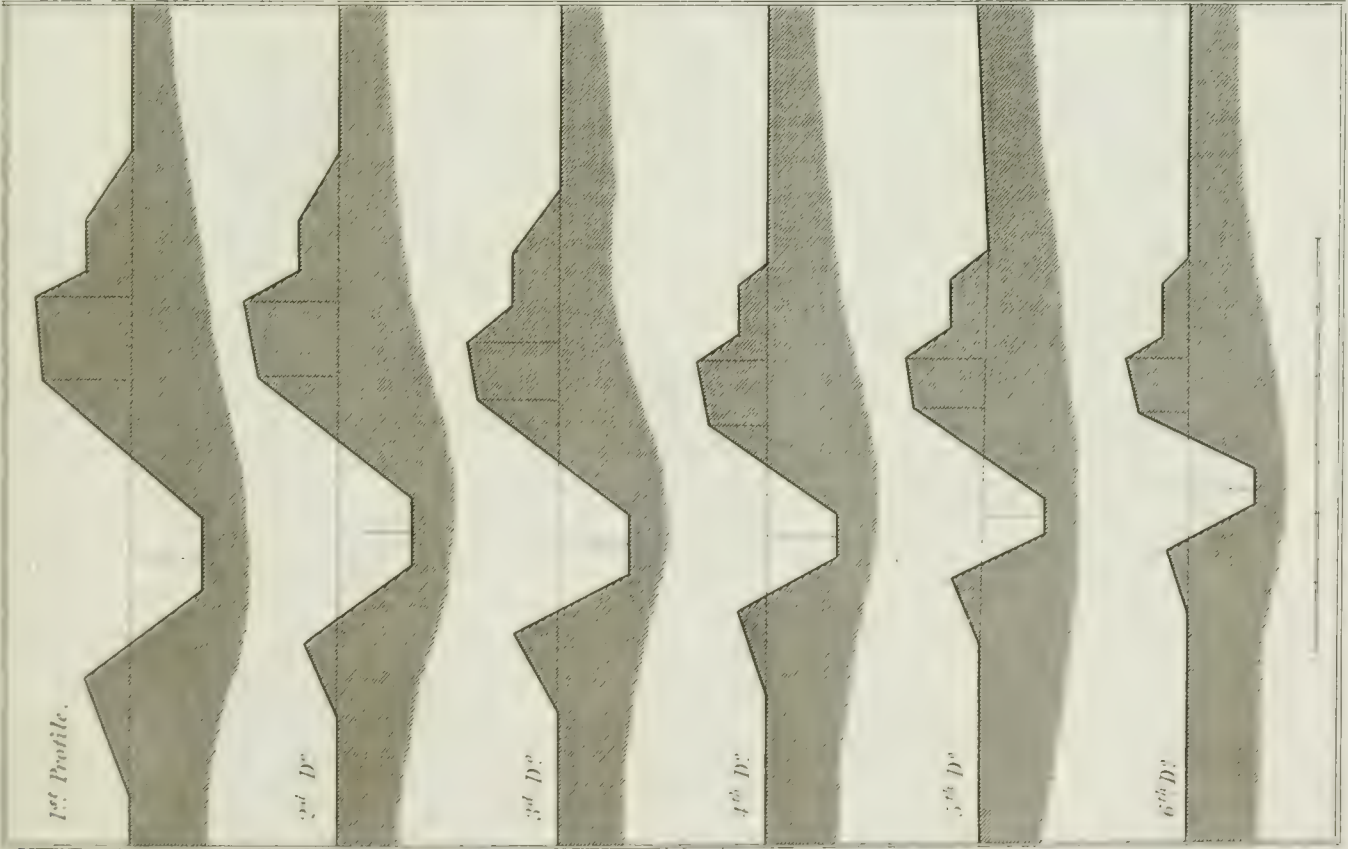
W. The Barracks Tents and

Horses of the Regiment.

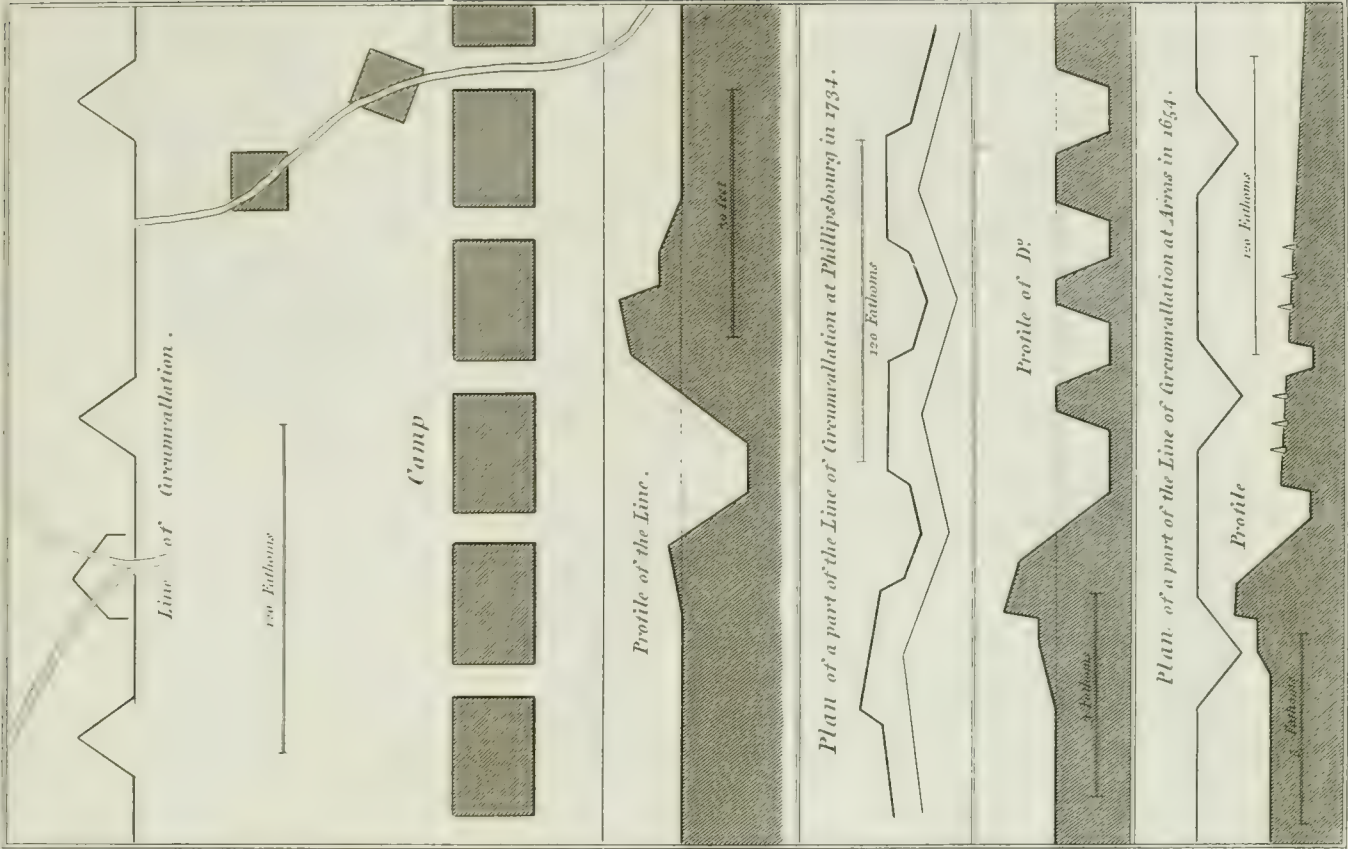
Total 980 Feet.

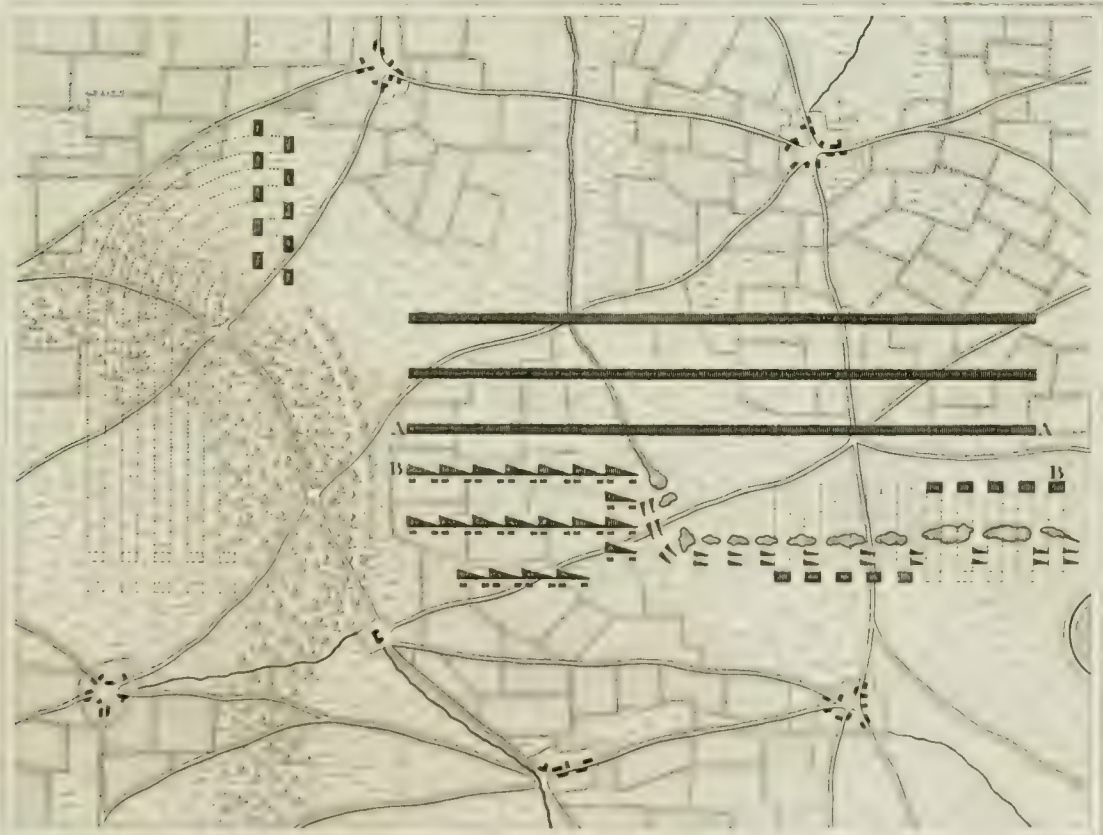
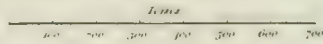
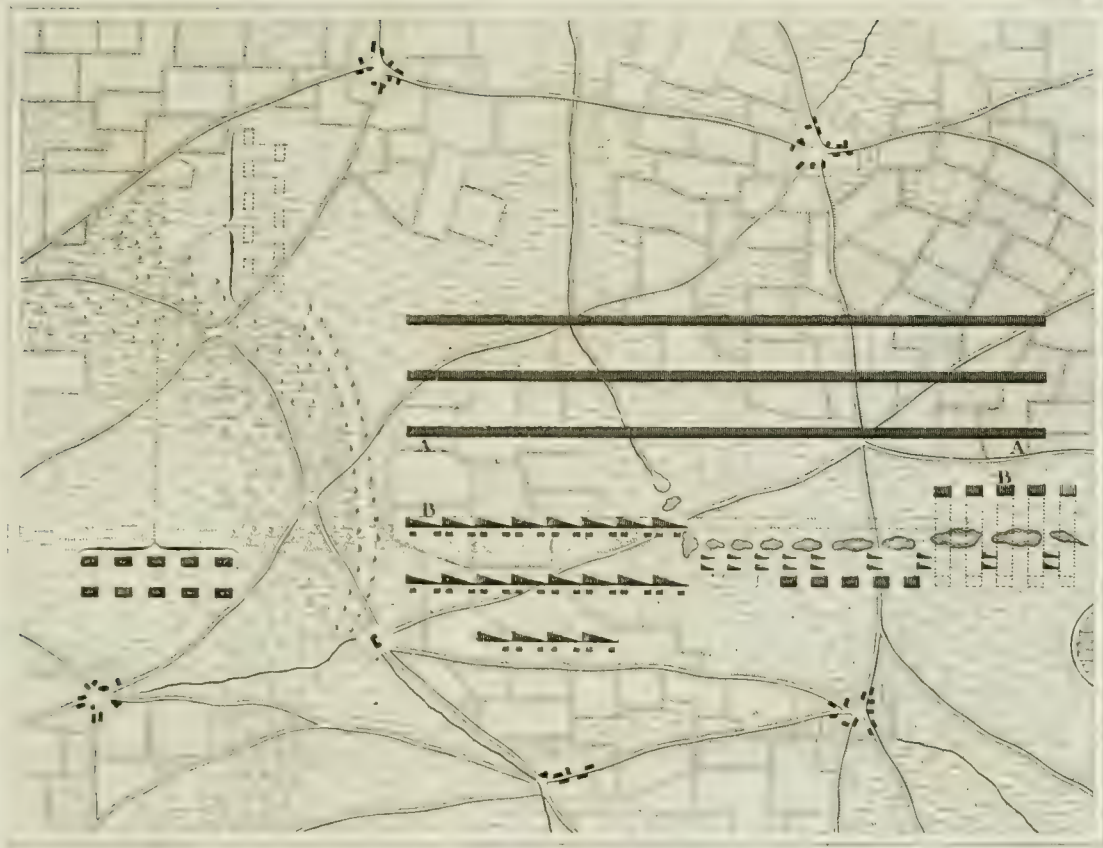


Profiles of Lines of Circumvallation according to Tauban.



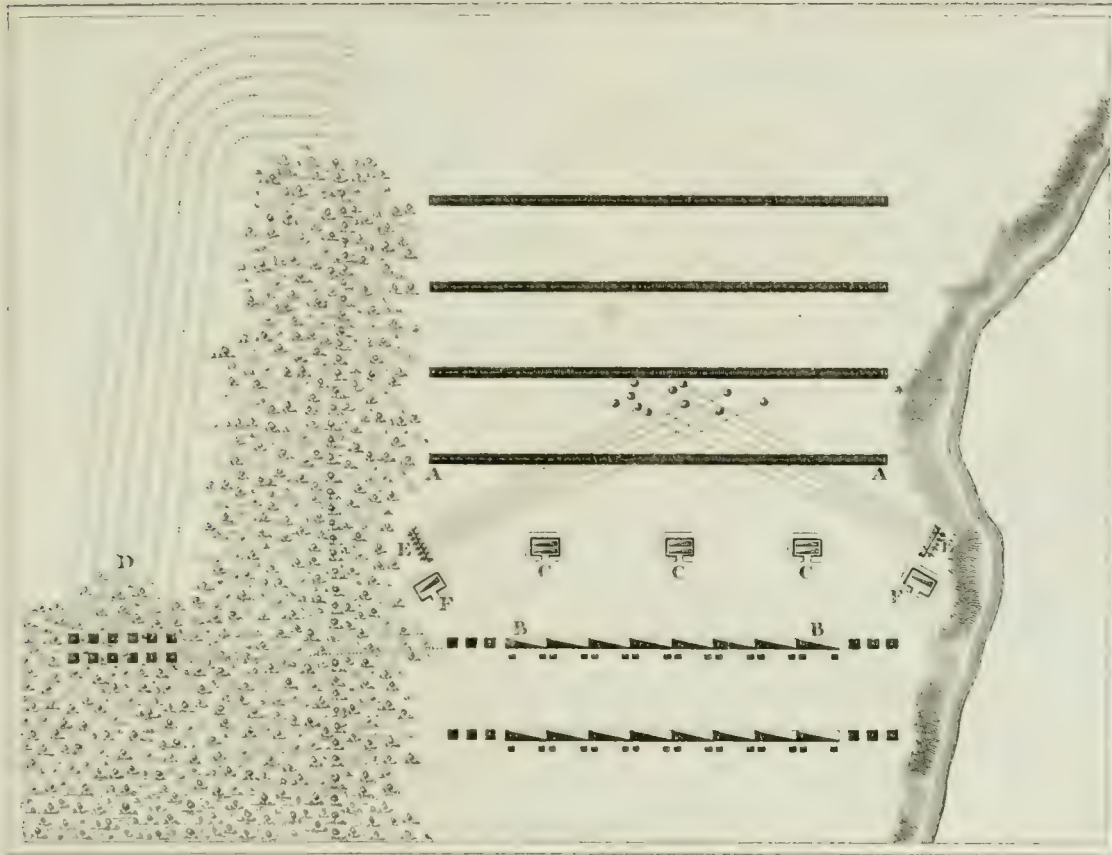
Lines of Circumvallation with Camp.





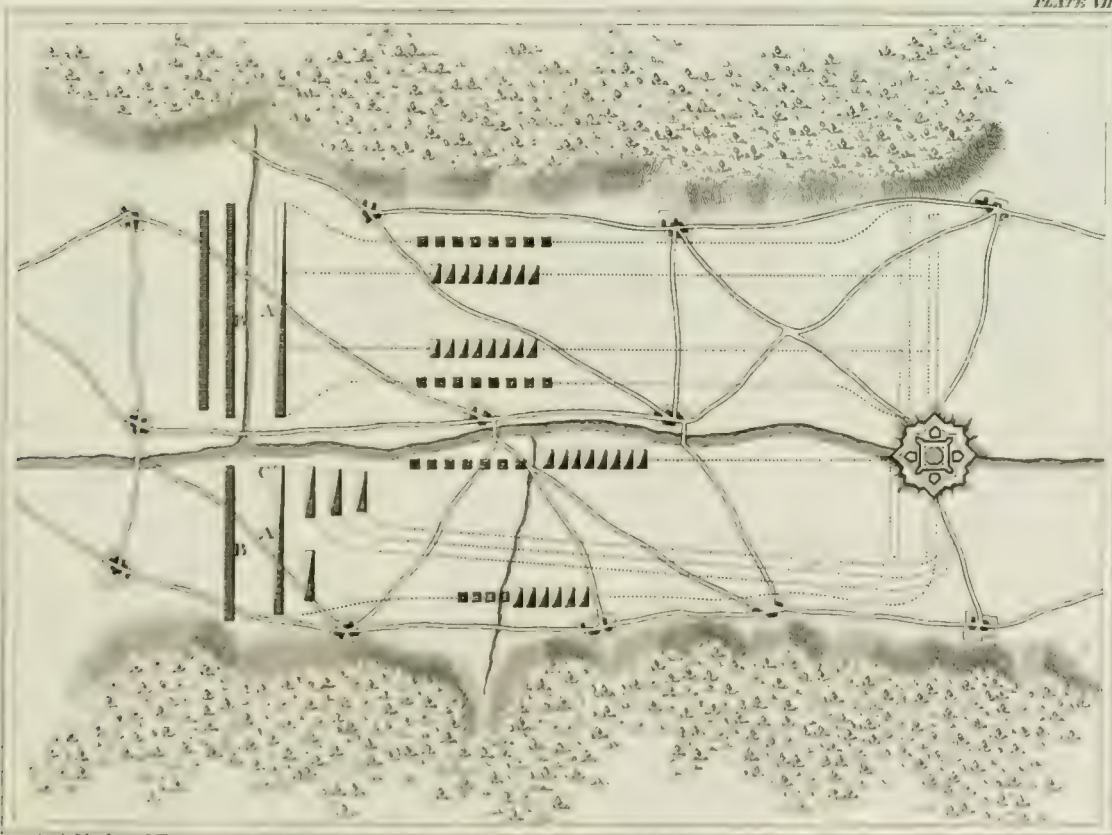
CASTRAMETATION.

PLATE VII.



Fathoms
200 300 400 500 600

PLATE VIII.



in Fathoms

CASTRAMETATION.

PLATE II

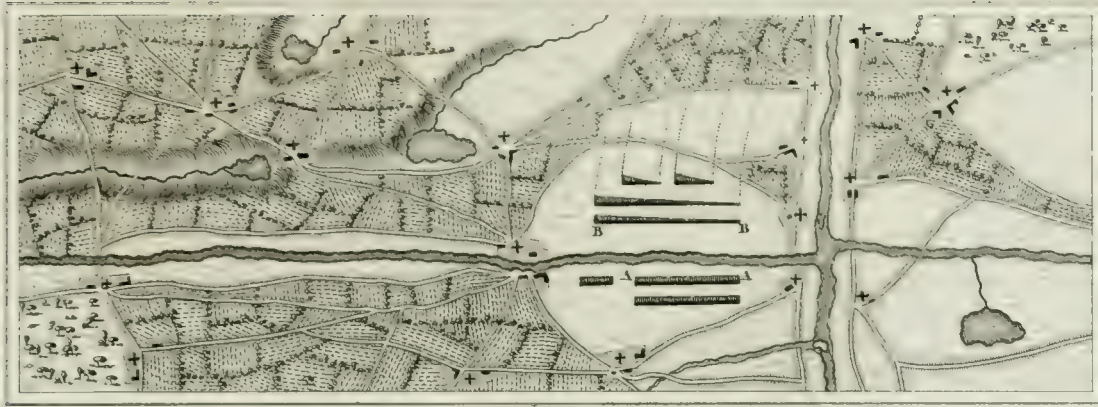
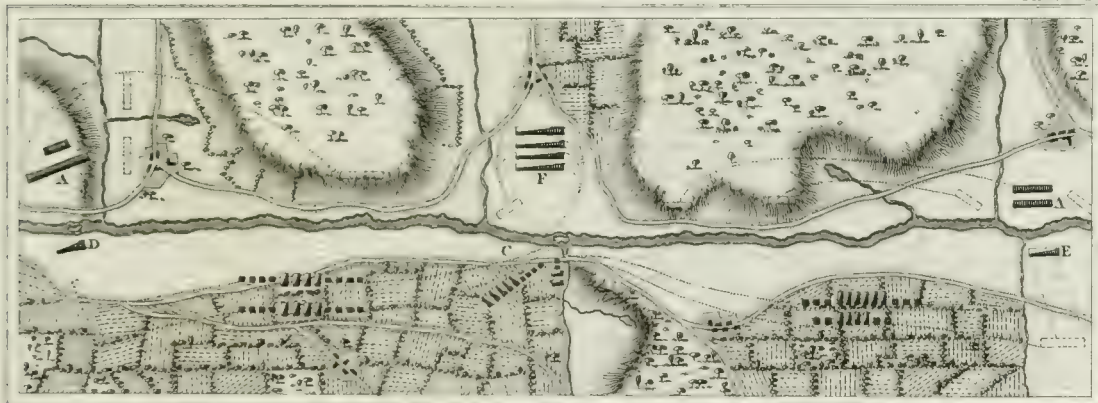


PLATE I.



CASTRAMETATION.

PLATE XI.

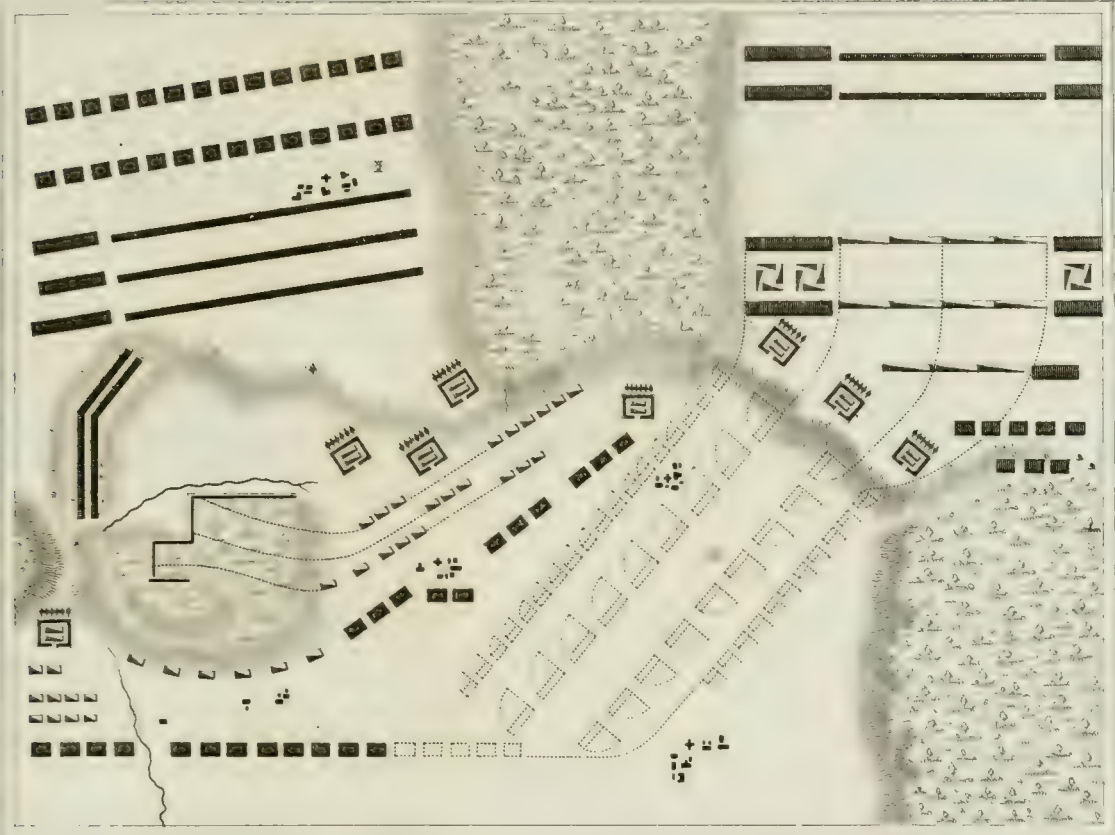


PLATE XII.

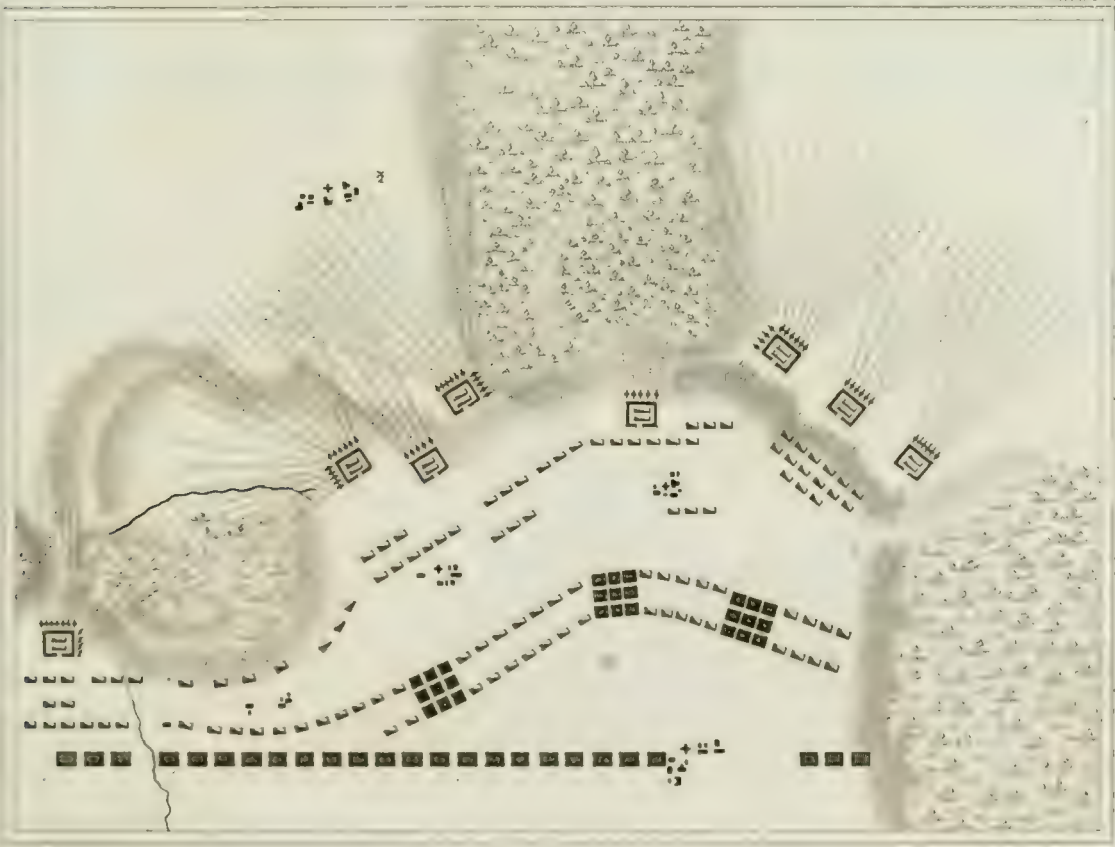


Fig. 1. Level-cutting.

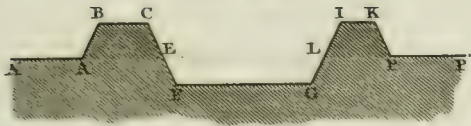


Fig. 2. Side-lying Ground.

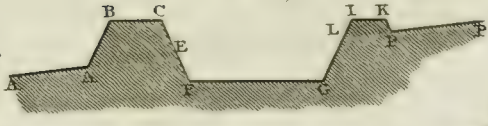


Fig. 3

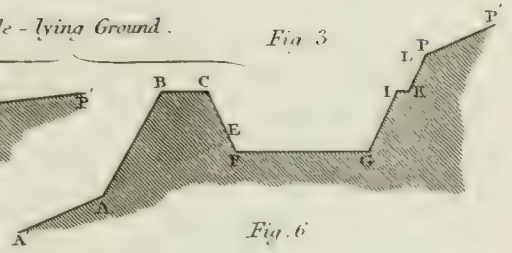
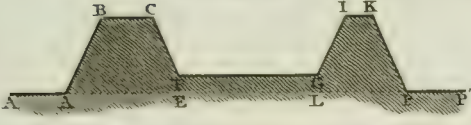


Fig. 4.



Embanking.

Fig. 5.

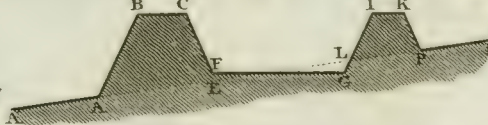


Fig. 6. Deep cutting.

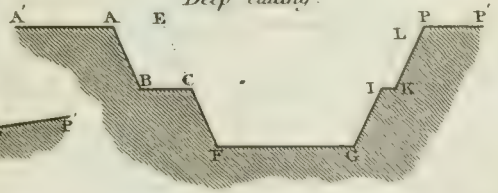


Fig. 7.

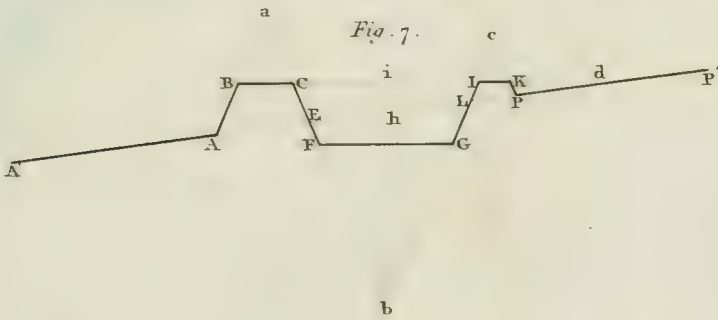


Fig. 8.

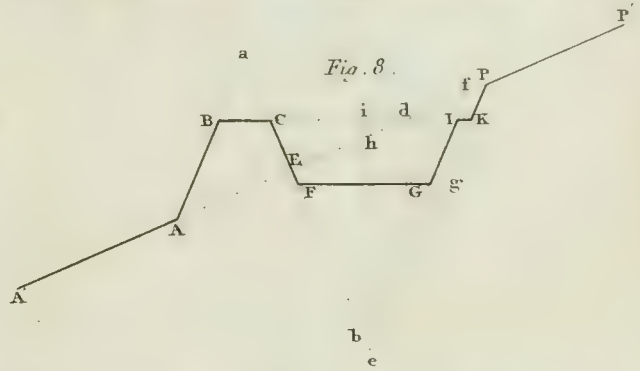


Fig. 9.

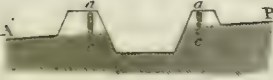


Fig. 10.



Fig. 11.



Fig. 12.

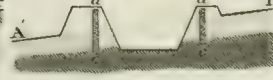
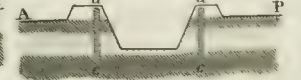
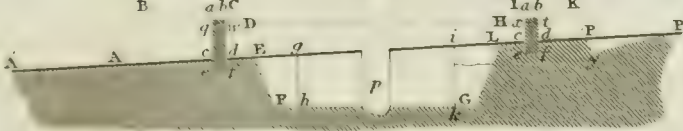


Fig. 13.



Puddling.

Fig. 14.

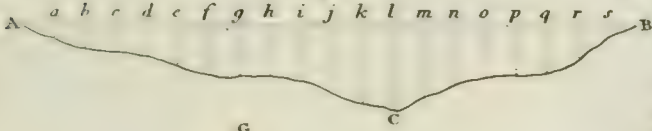


Lining.

Fig. 15.



Fig. 16.



Reservoirs.

Fig. 17.

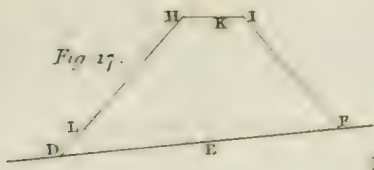
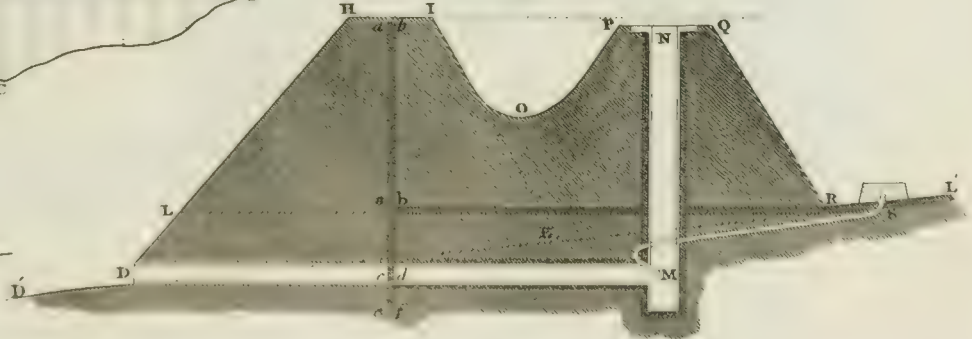
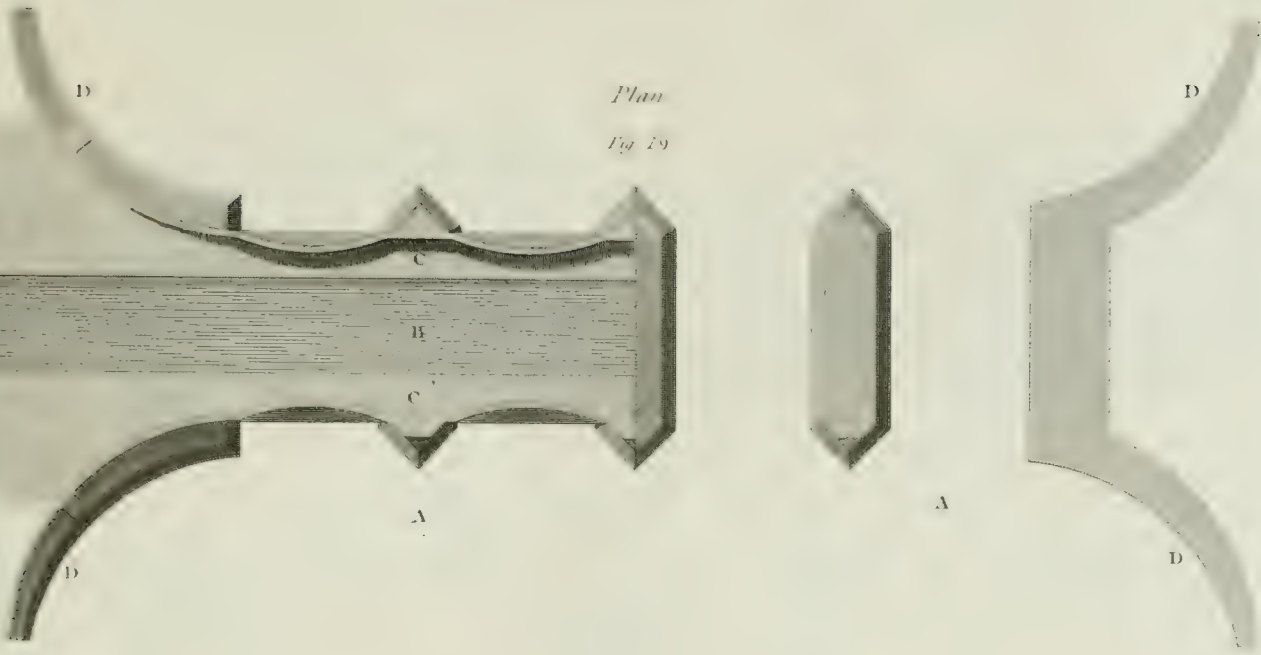


Fig. 18.

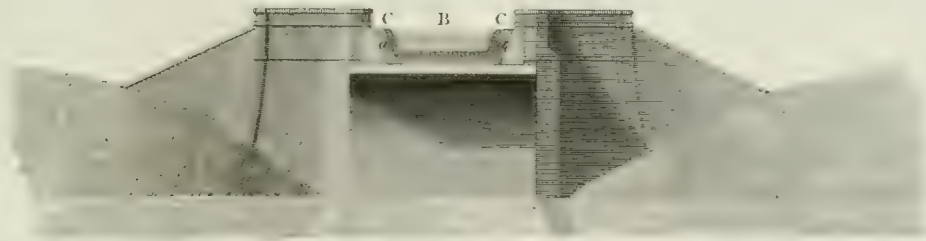


Aqueduct BRIDGE at Kelvin on the Forth & Clyde Canal.



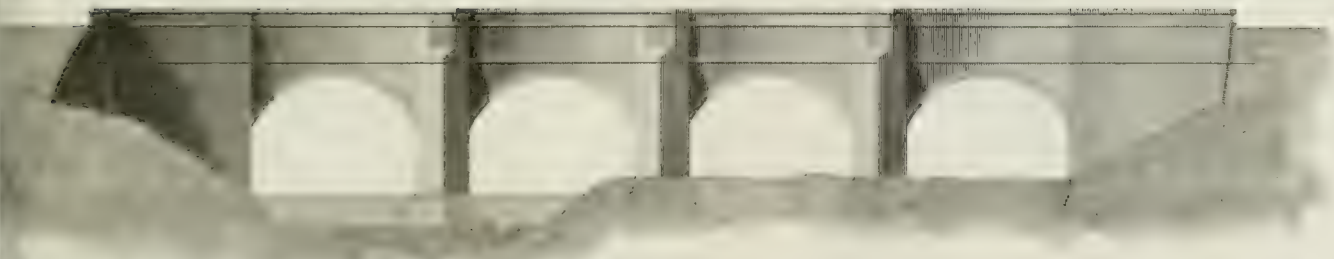
Transverse Section.

Fig. 20.



Elevation.

Fig. 21.



0 20 30 40 50 60 70 80 90 100 110 120 130 140 150 feet.

CAST IRON AQUEDUCTS.

M. Telford's, on the Shrewsbury Canal at Long.

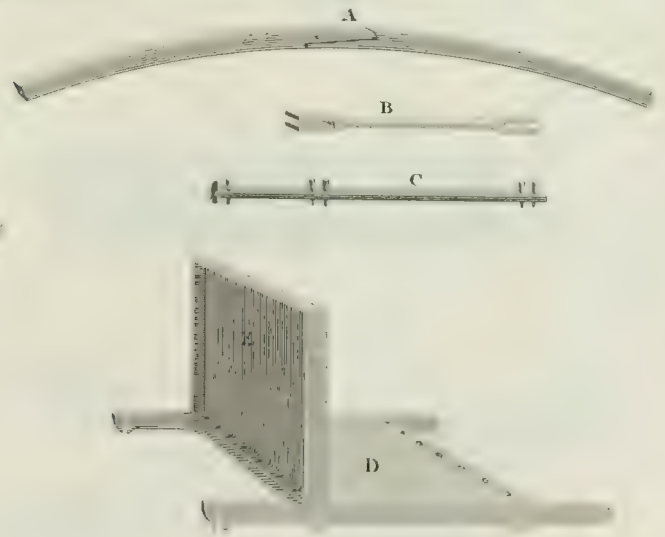
Fig. 22.

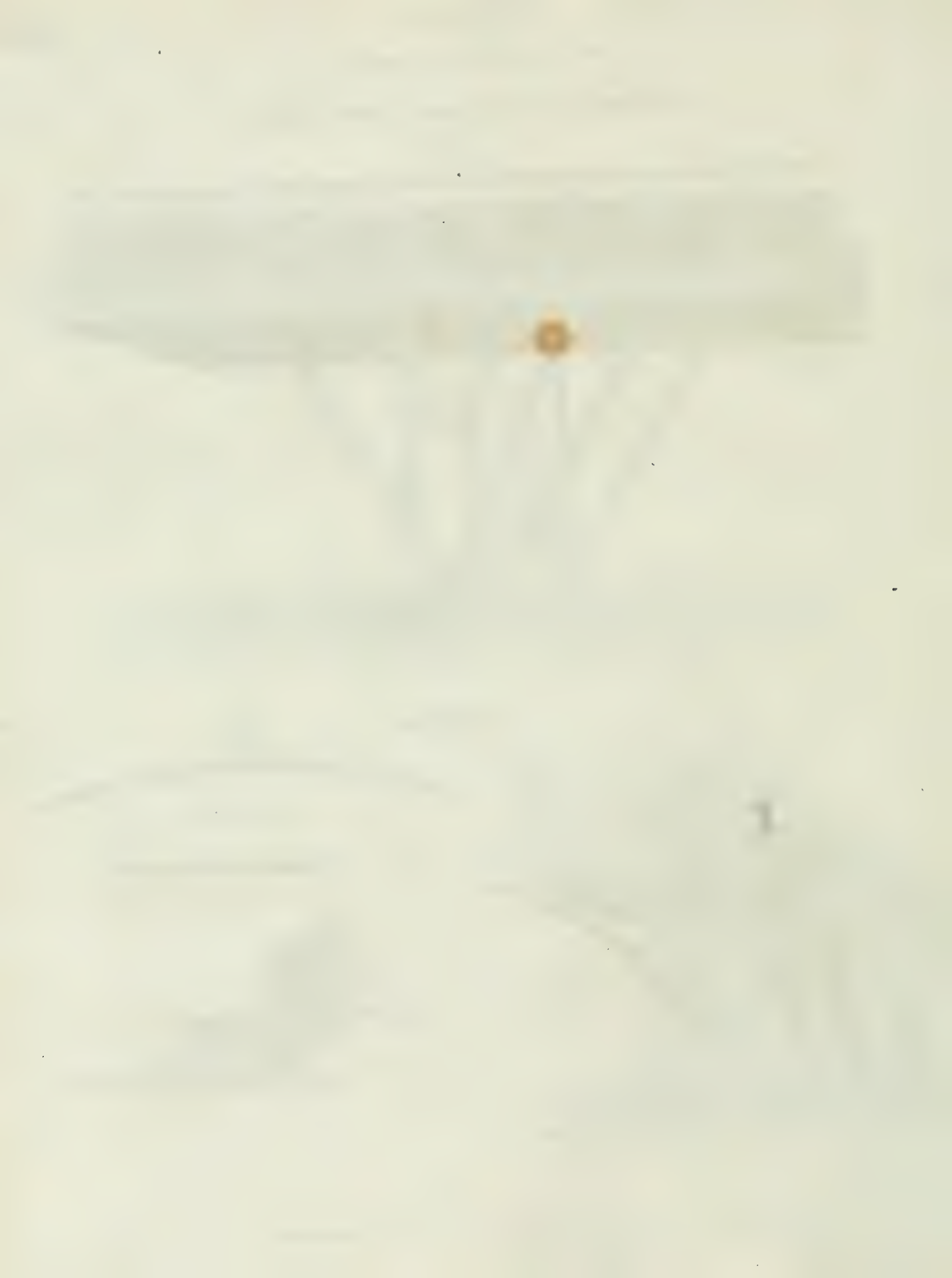


Fig. 23.

by M. Fulton.

Fig. 24.





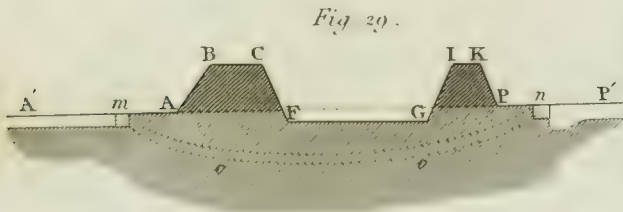
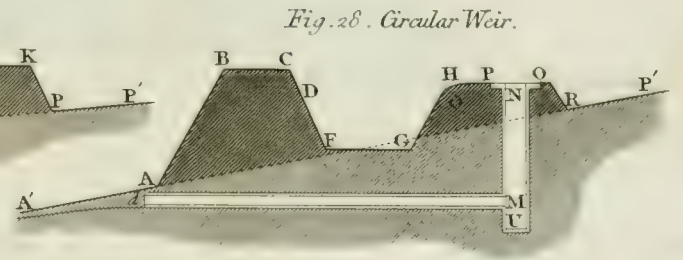
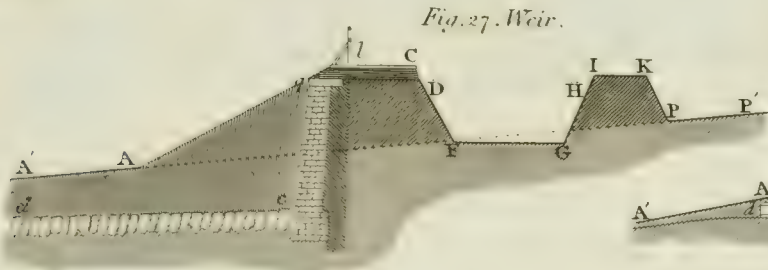
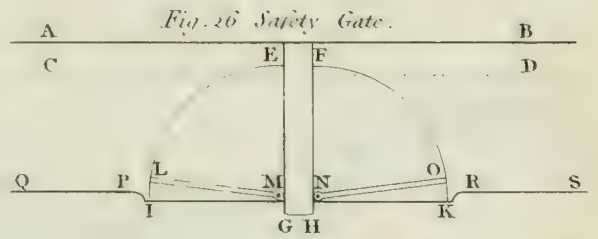
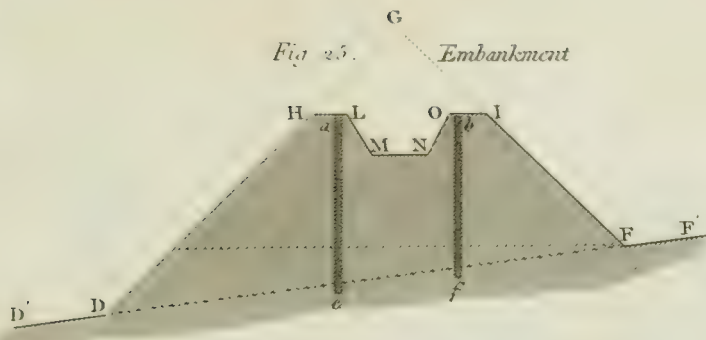


Fig. 30 Pile-planks.

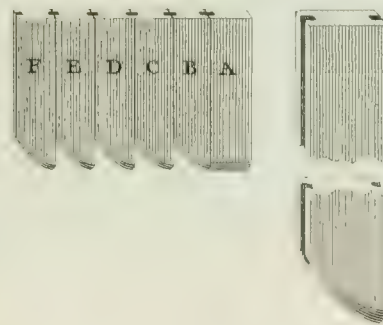


Fig. 31.

Iron Rail-ways.



Fig. 34.

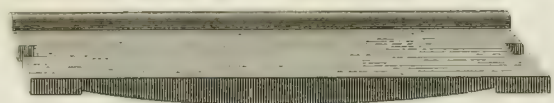


Fig. 32

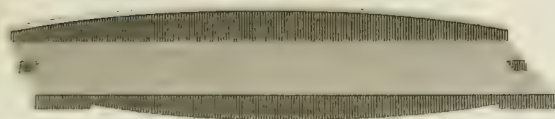


Fig. 33

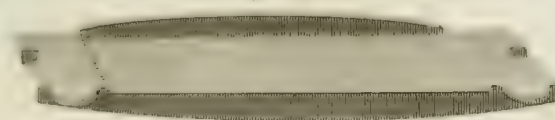
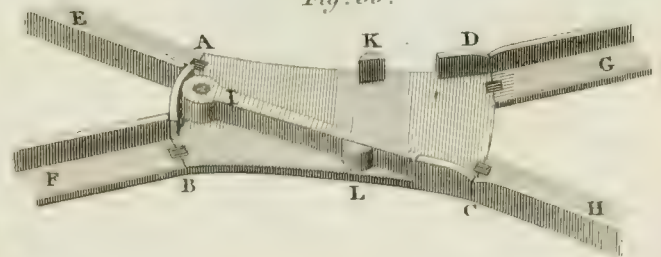
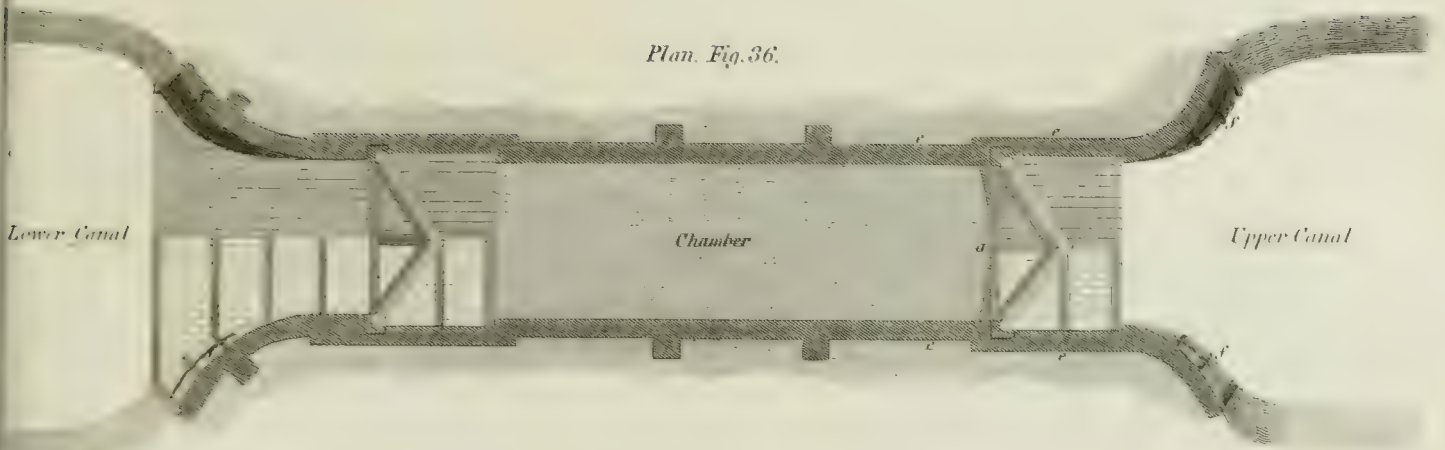


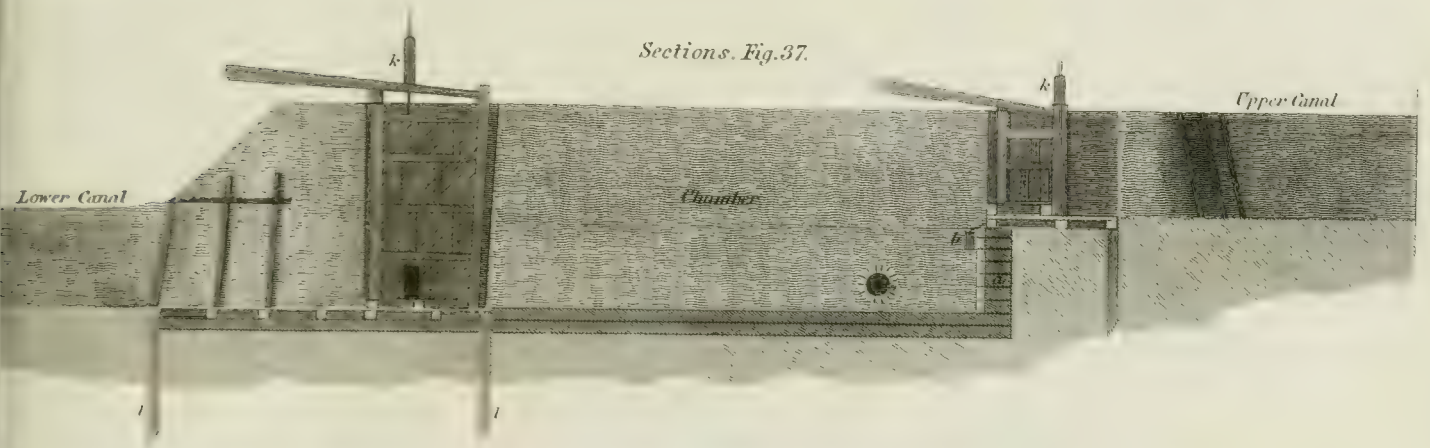
Fig. 35.



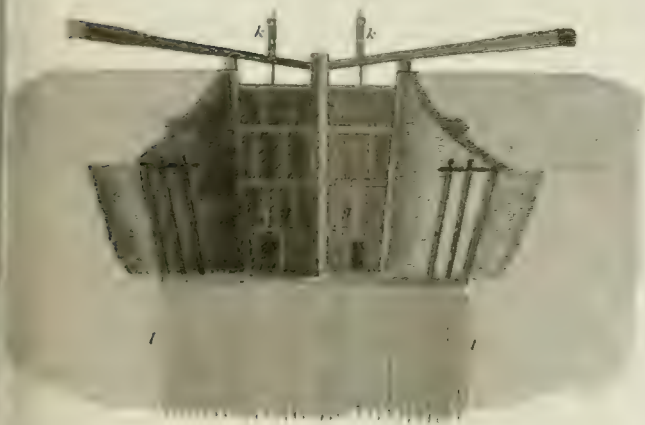
Plan. Fig. 36.



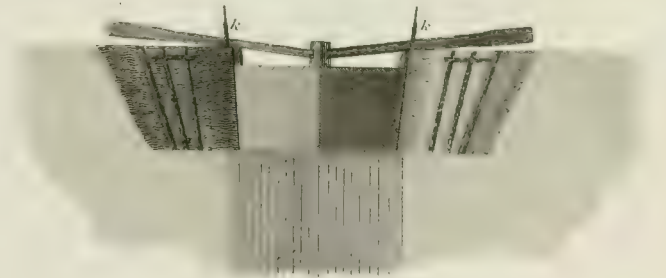
Sections. Fig. 37.



Lower Gates. Fig. 39.



Upper Gates. Fig. 38.

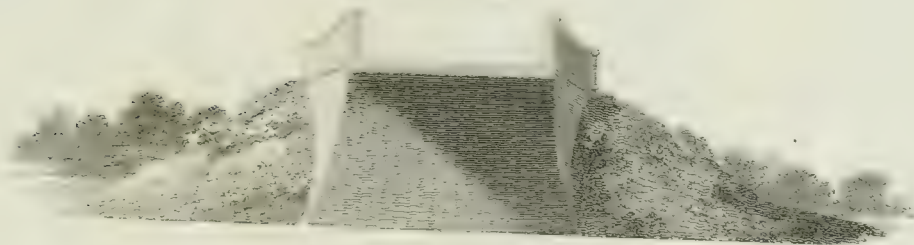


BRIDGES.

View - Fig. 42.



Section - Fig. 41.



Plan - Fig. 40.



Swing-Bridge.



Fig. 43.

Fig. 44.

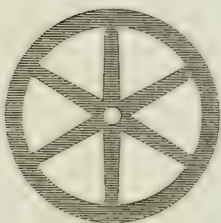


Fig. 45.



Fig. 46.

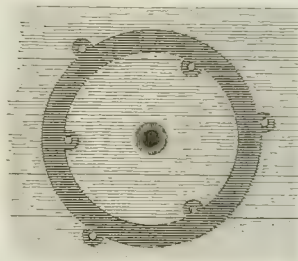
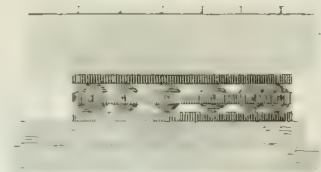


Fig. 47.



NAVIGATOR'S TOOLS &c.

Fig. 48. Barrow.



Fig. 52. Scoop.

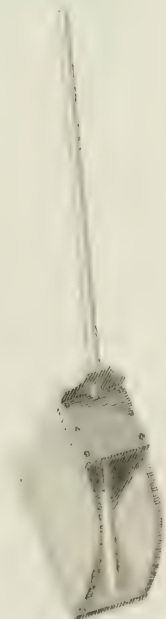


Fig. 50. Grating Tool.



Fig. 51. Shovel.

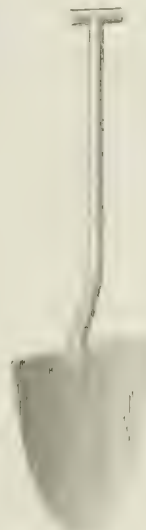
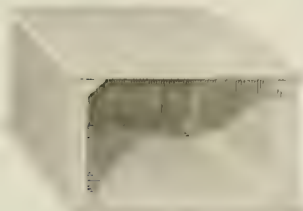
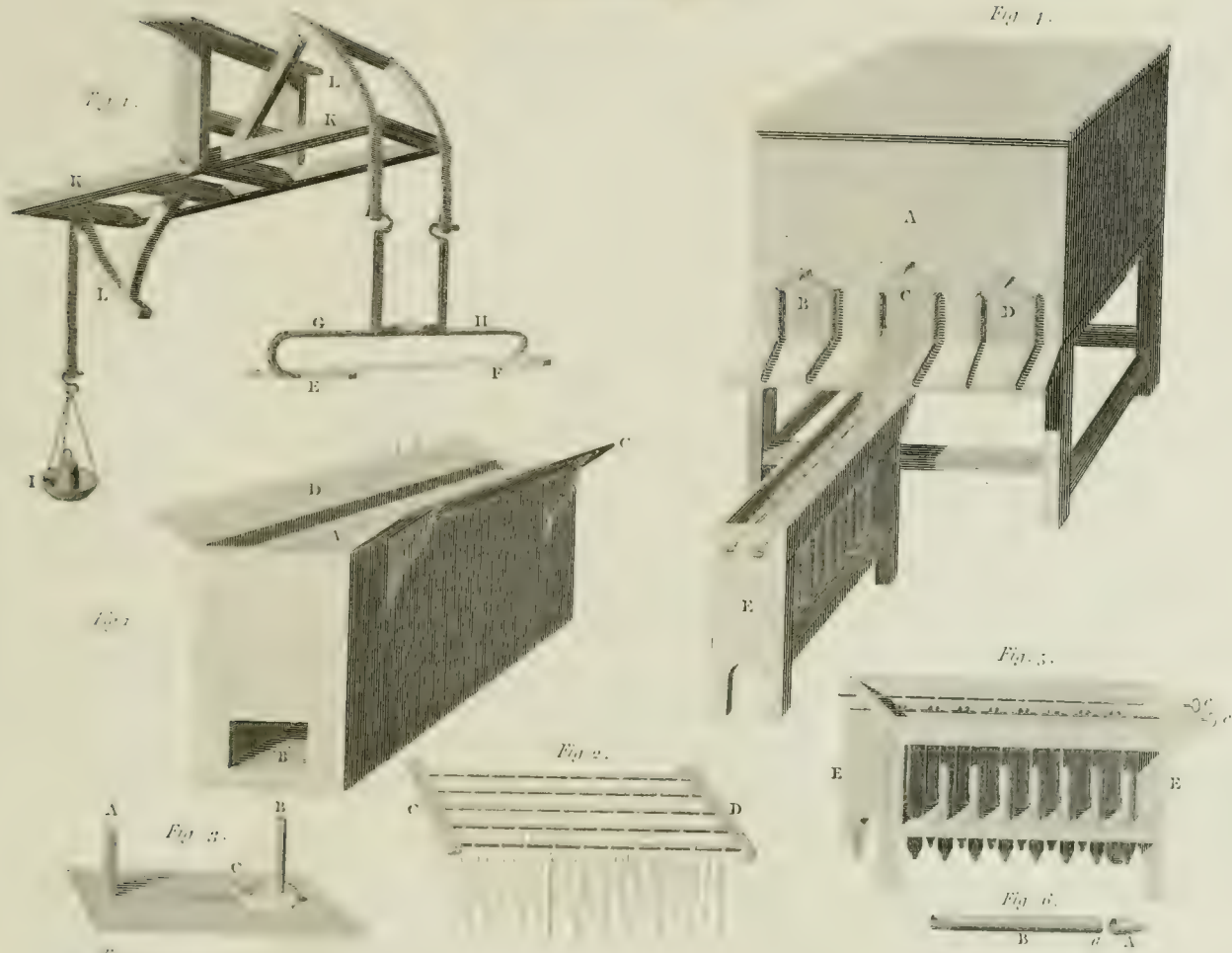


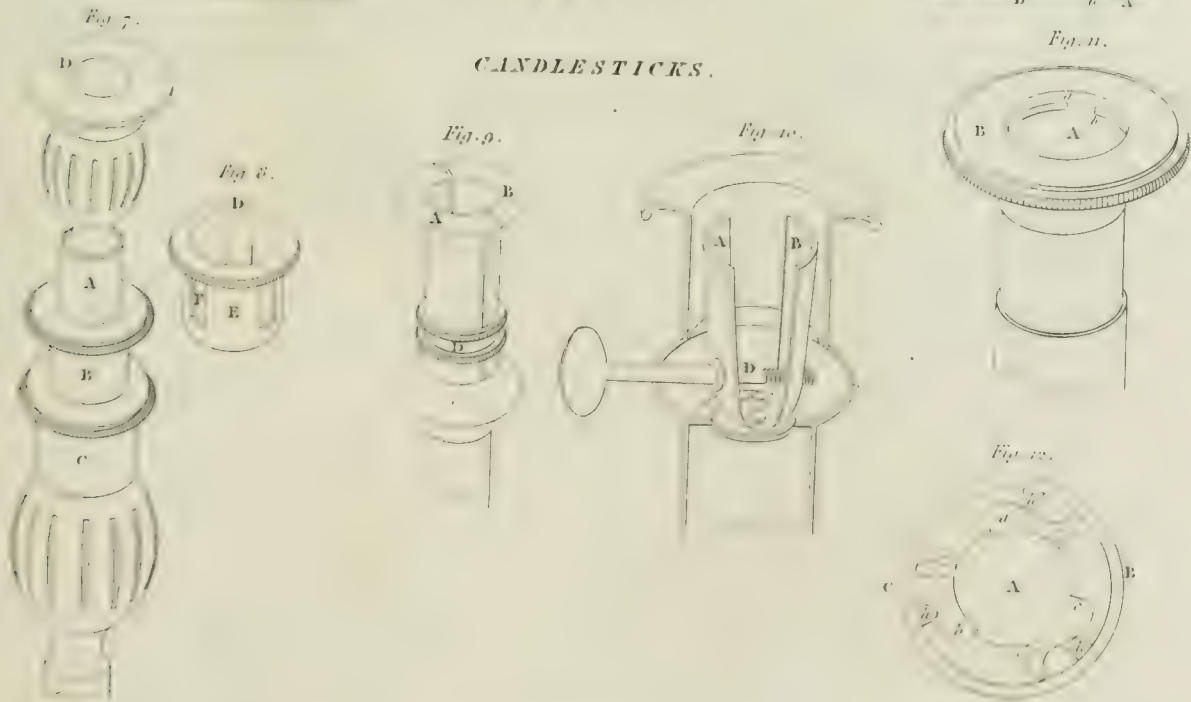
Fig. 49. Horse's Block.



CANDLE.
CANDLE MAKING.



CANDLESTICKS.



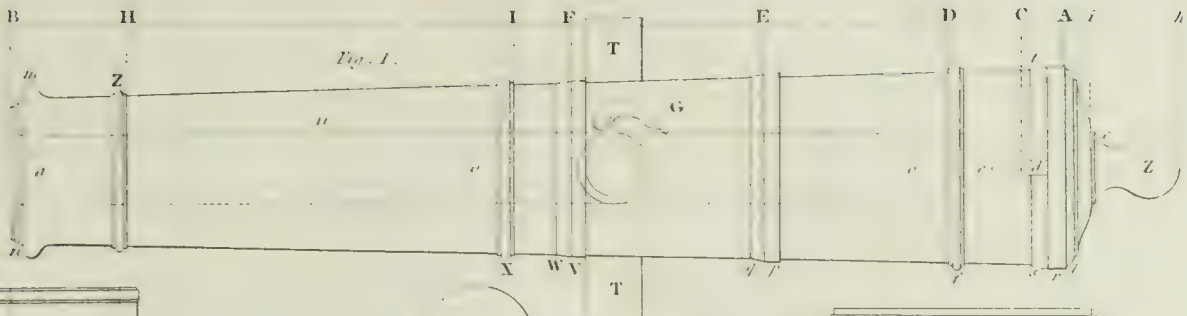


Fig. 12

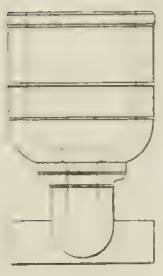


Fig. 2

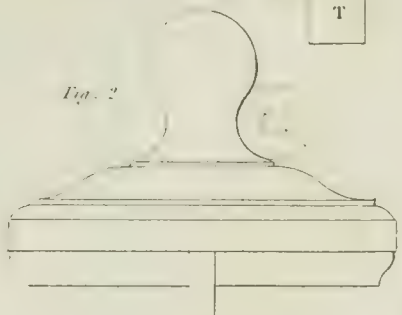


Fig. 3



Fig. 7



Fig. 6

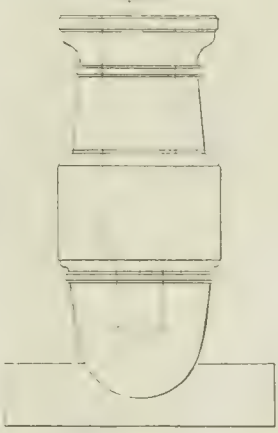


Fig. 5

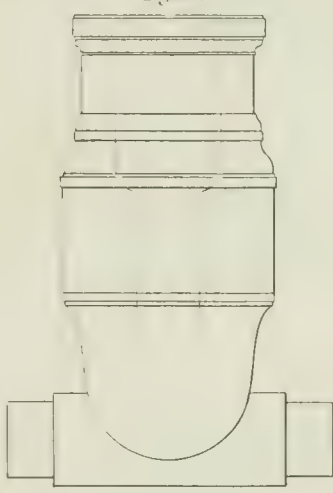


Fig. 4

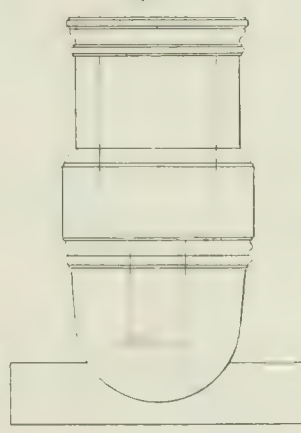


Fig. 11

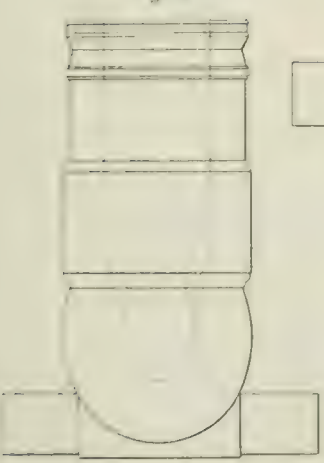


Fig. 10

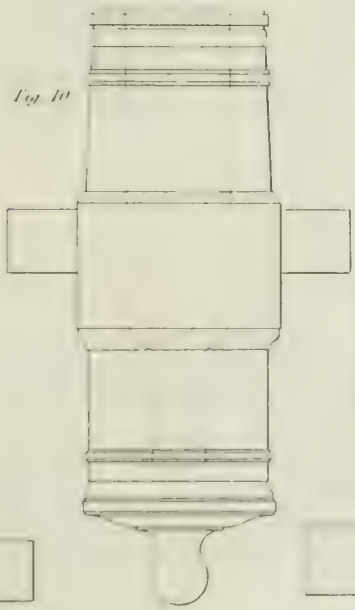
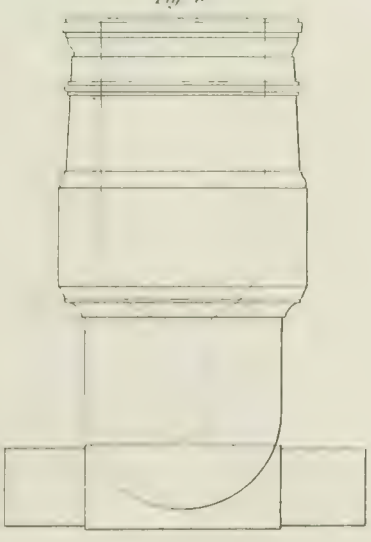


Fig. 9



Fig. 8



BORING.

Fig. 13.

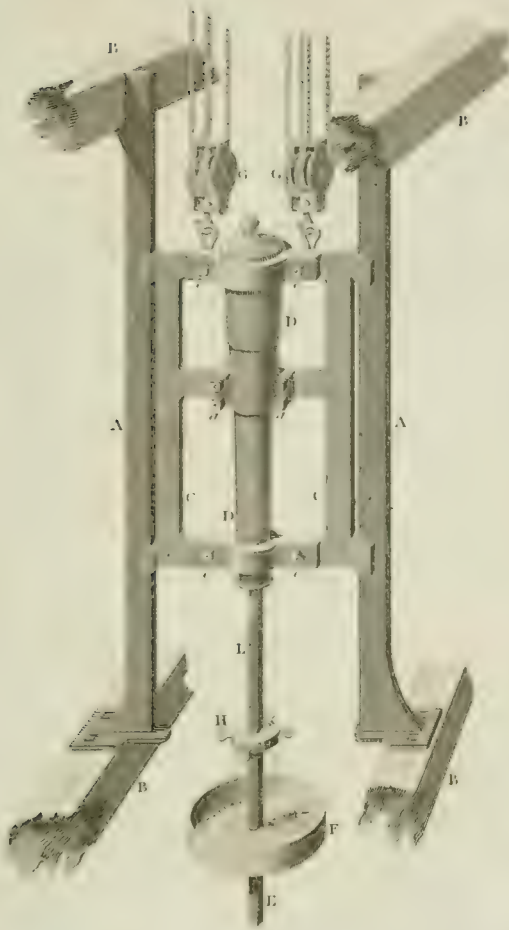


Fig. 11.

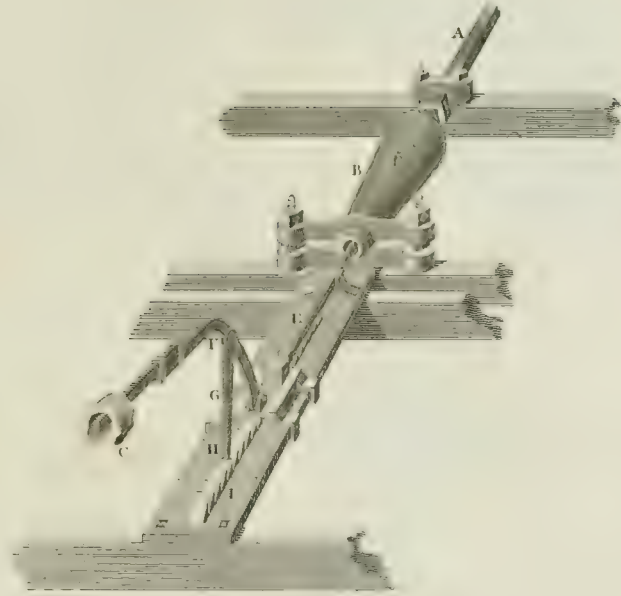


Fig. 15.

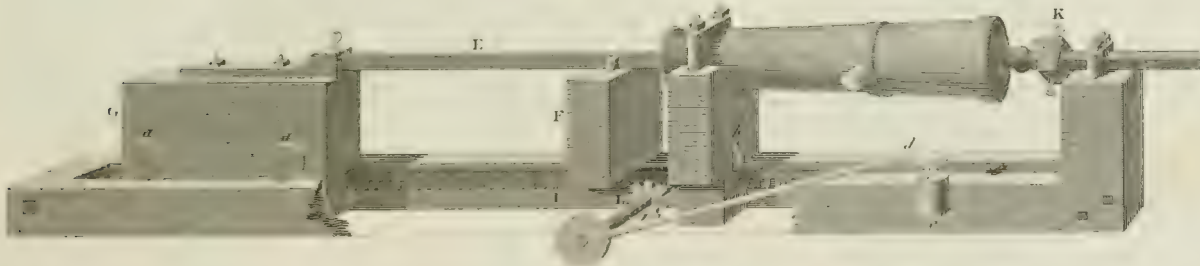
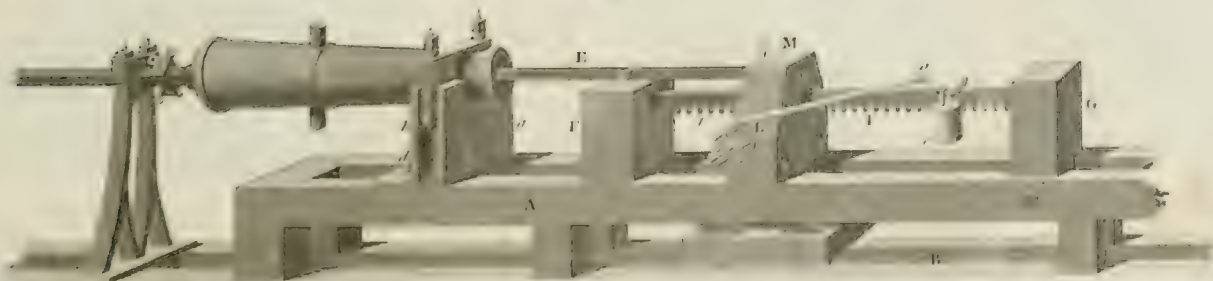


Fig. 16.



BORING, &c.

Fig. 17.

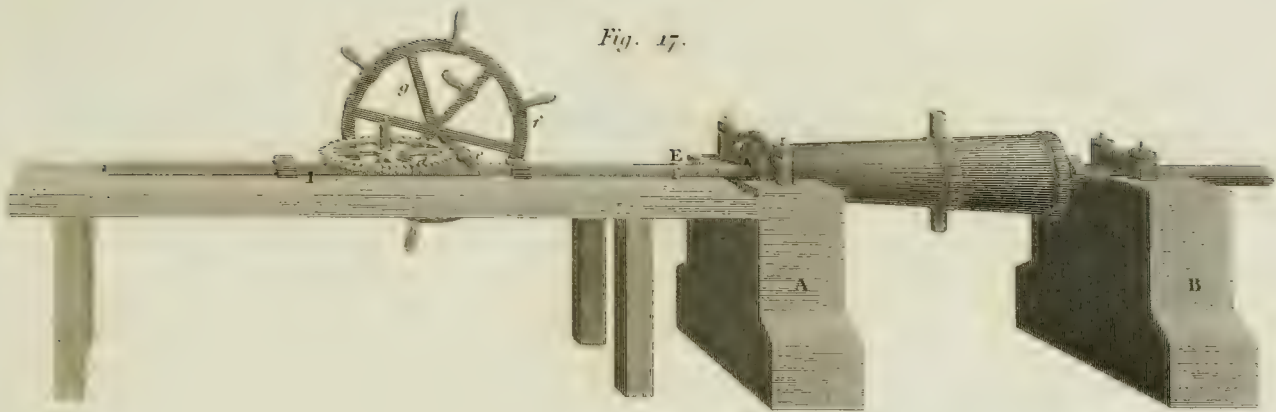


Fig. 19.

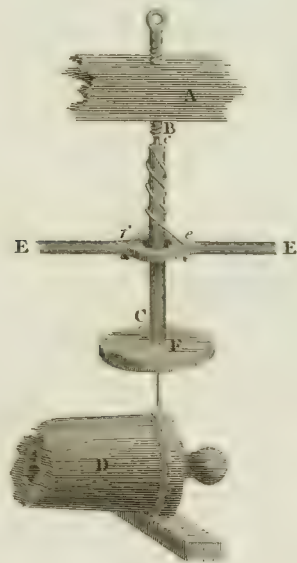


Fig. 18.

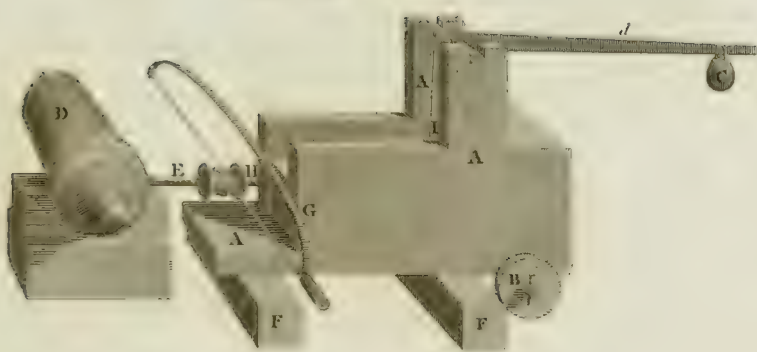
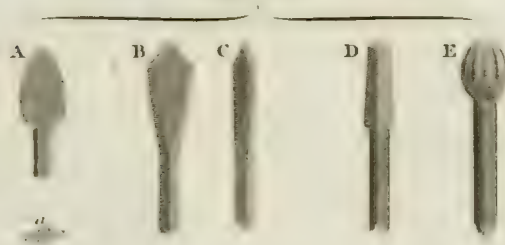


Fig. 20.



Fig. 21.



CANTEENS.
 MANUFACTURE OF
 by M^r Geo. Smart.

PLATE I.

Fig. 1. A Canteen.



Fig. 2. Cross cutting Saw.

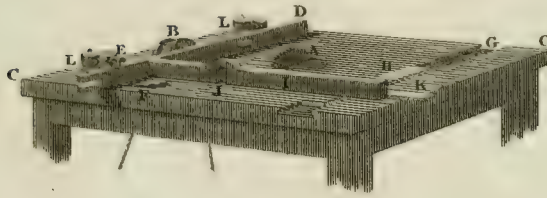


Fig. 3.

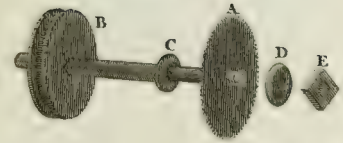


Fig. 4. Tenanting or rebating Saws.

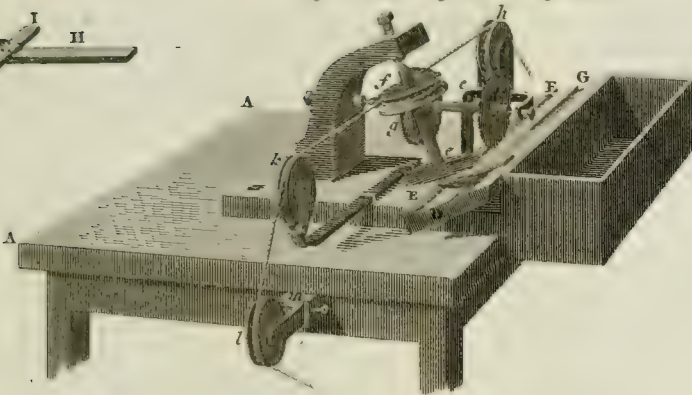


Fig. 5.



Fig. 6. Bung stave.



Fig. 8. Center bit.



Fig. 7. boring Machine.

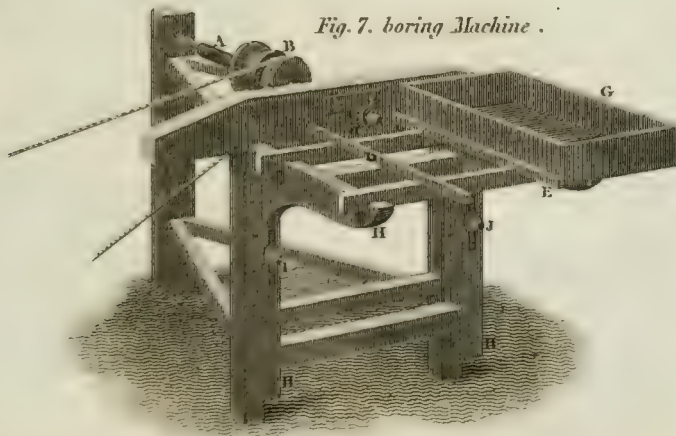


Fig. 9. Slider.



Fig. 11.
Screw Hoop

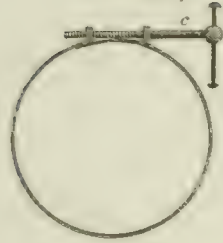


Fig. 12.
Truss Hoop



Fig. 13.

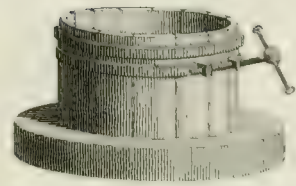


Fig. 10.

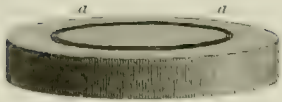


Fig. 15. turning the head.

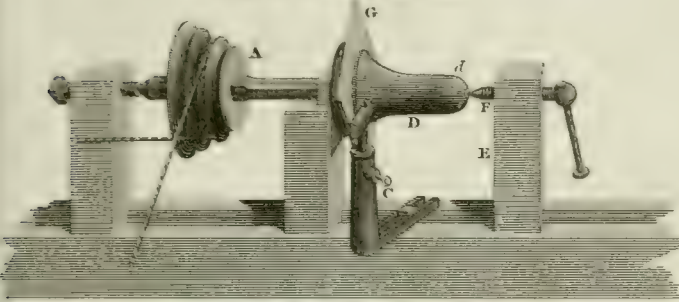


Fig. 14. turning the chime.

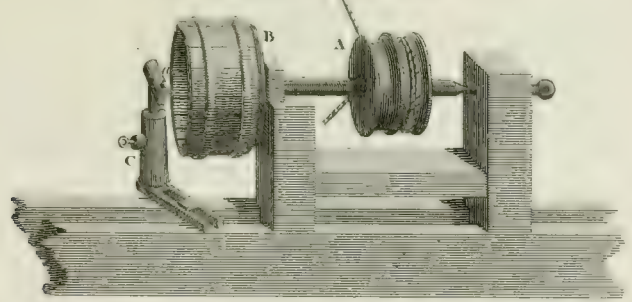
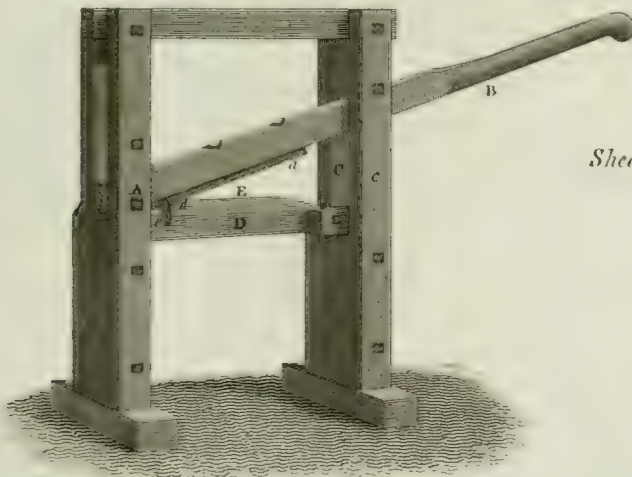


Fig. 16.



Shears

Fig. 17.

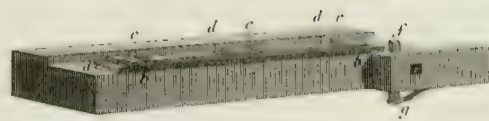


Fig. 18. punching the Hoops.

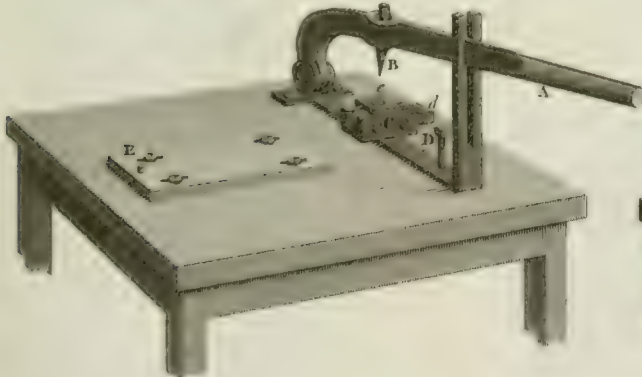
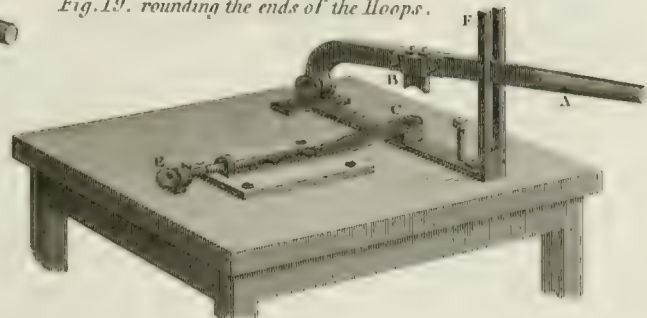
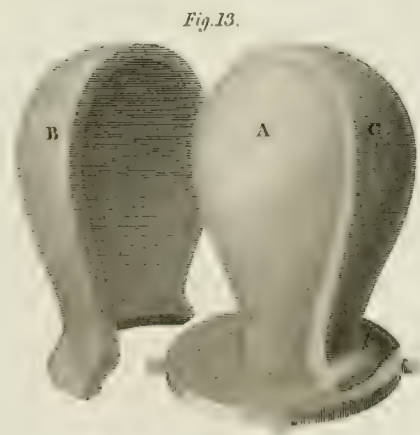
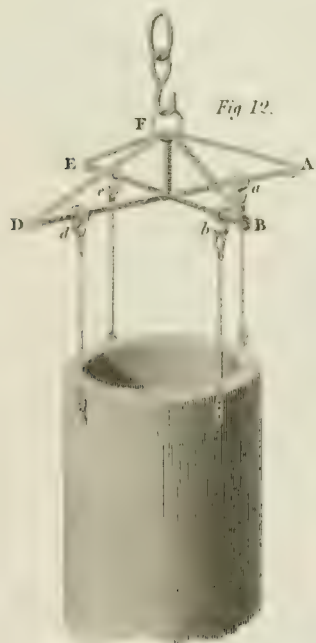
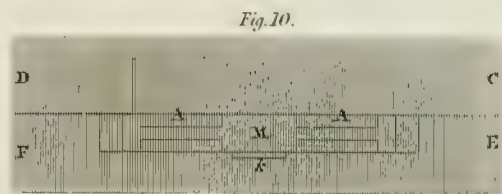
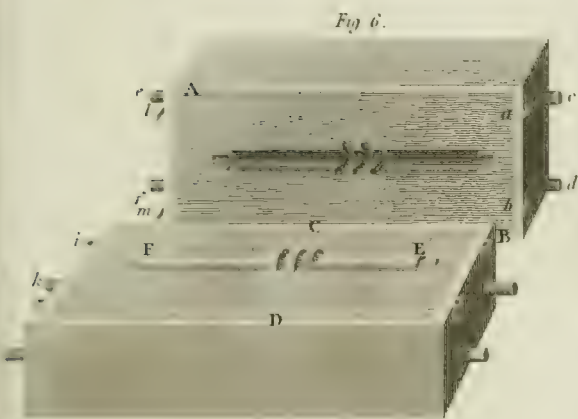
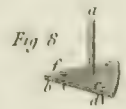
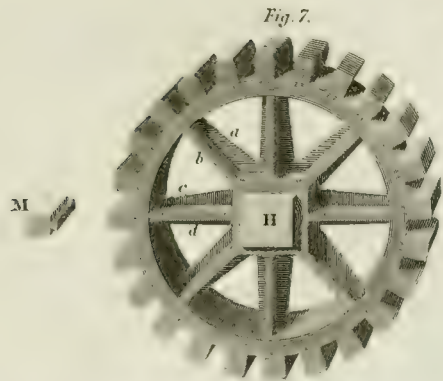
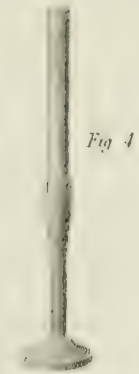
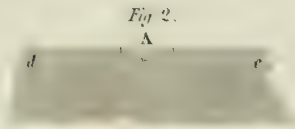
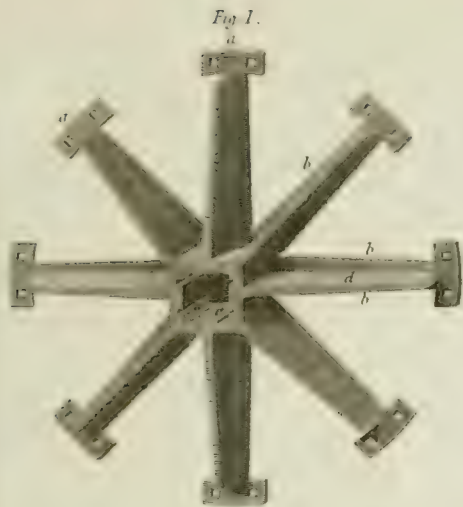


Fig. 19. rounding the ends of the Hoops.





SECTION OF CUPLO FURNACE.

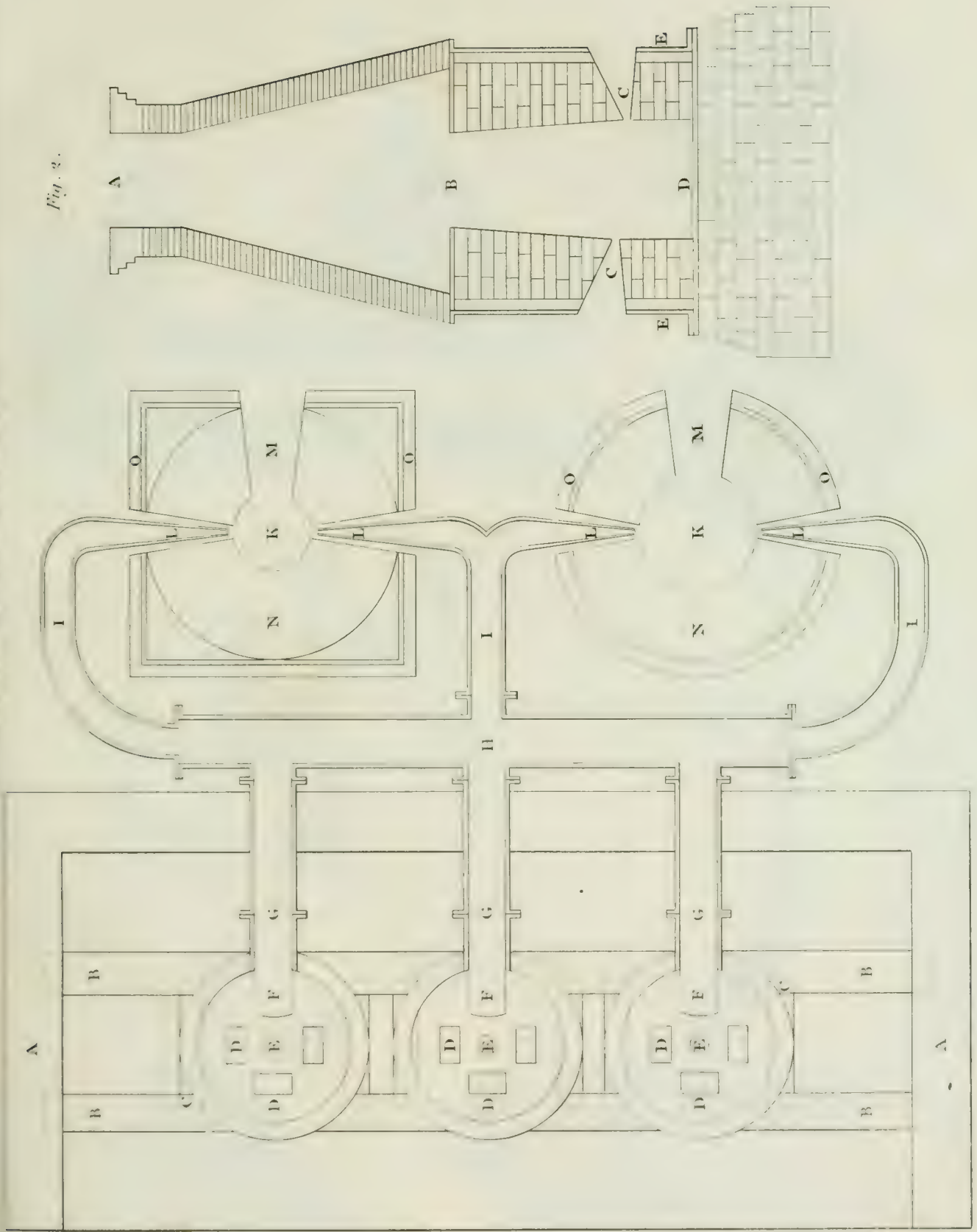
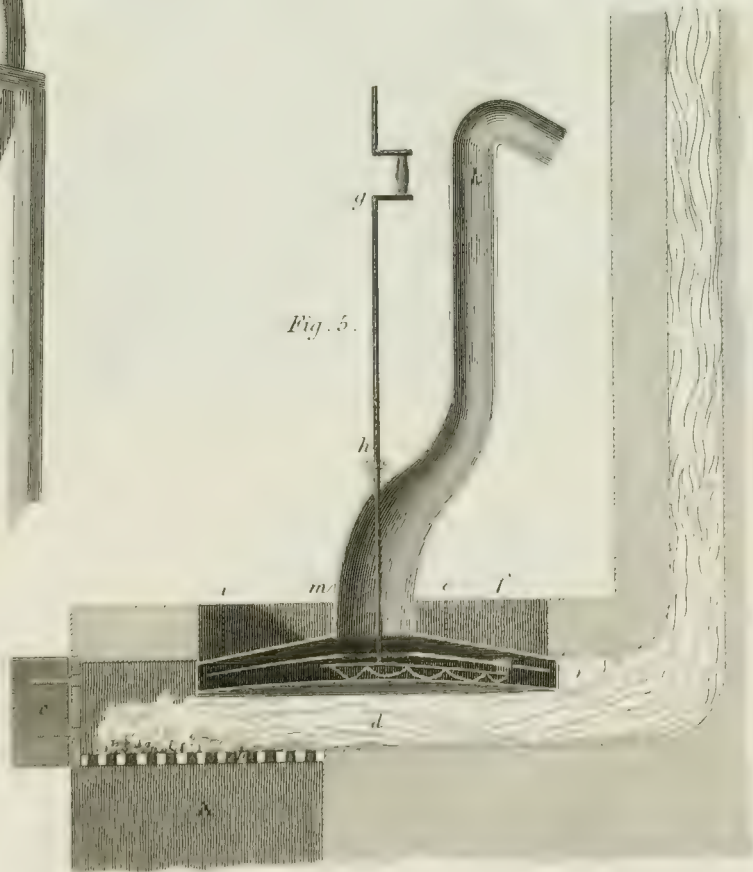
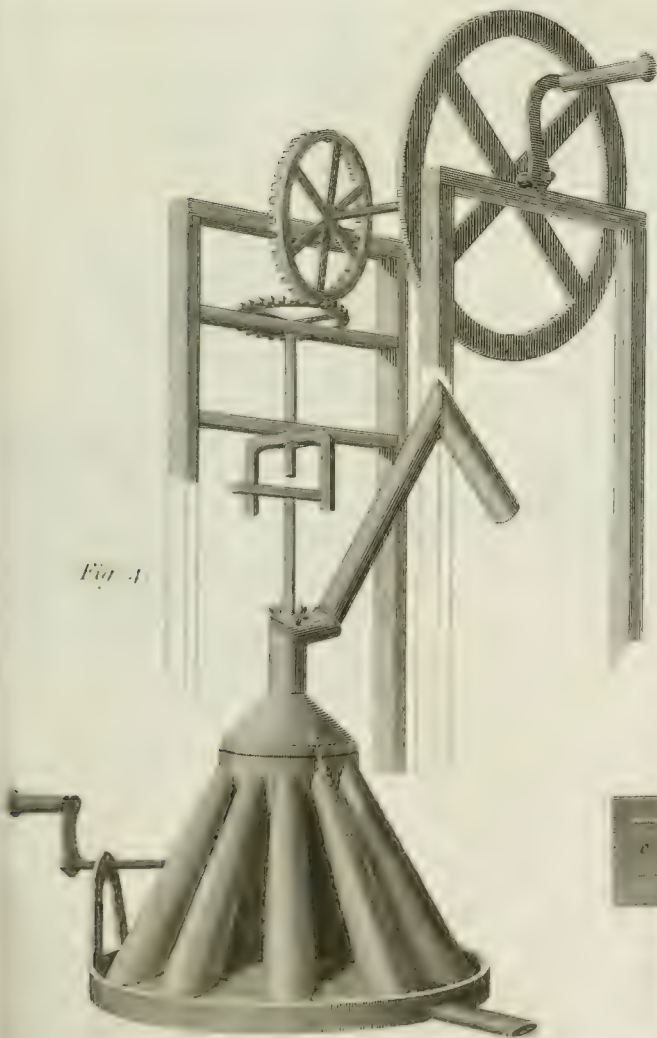
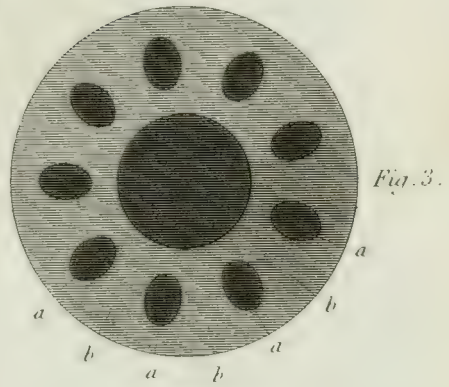
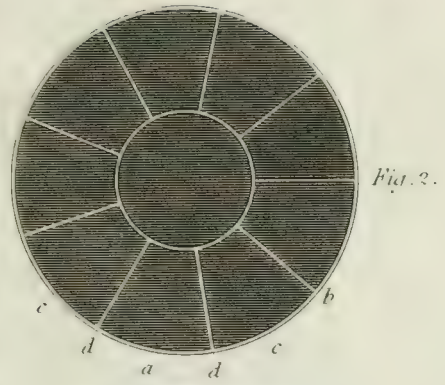
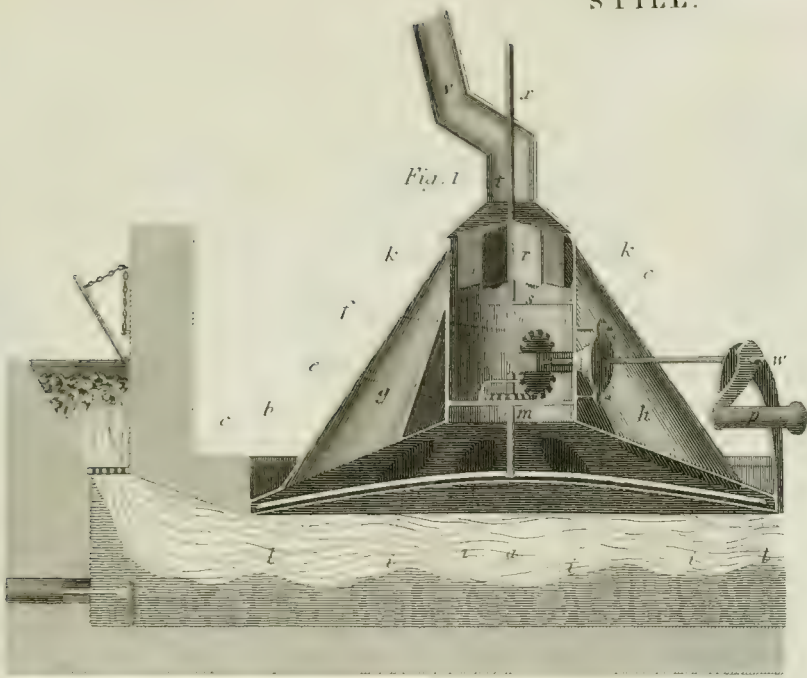


Fig. 2.

STILL.



CHEMISTRY.

IRON SMELTING FURNACE

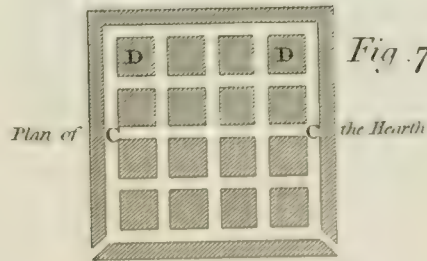
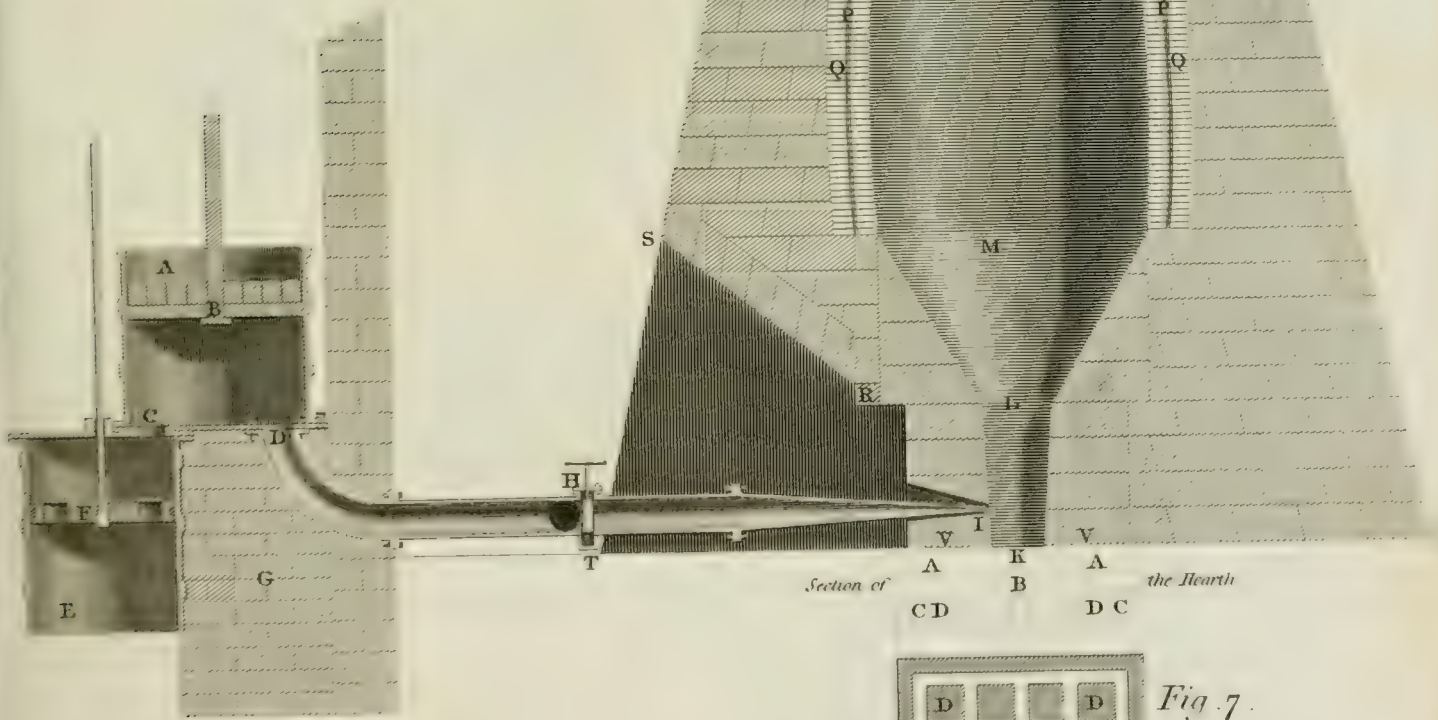
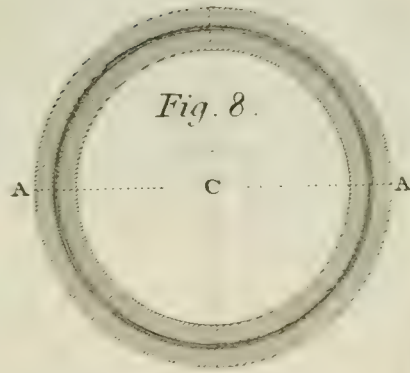
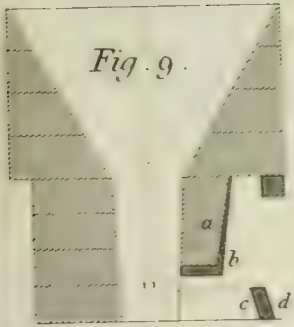
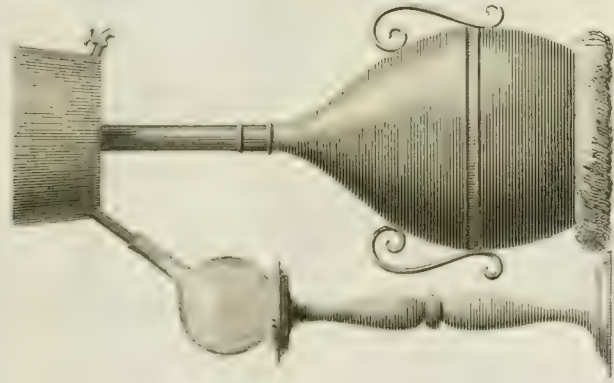


Fig. 1.



Fig. 2.



ALAMBIC.

Fig. 3.

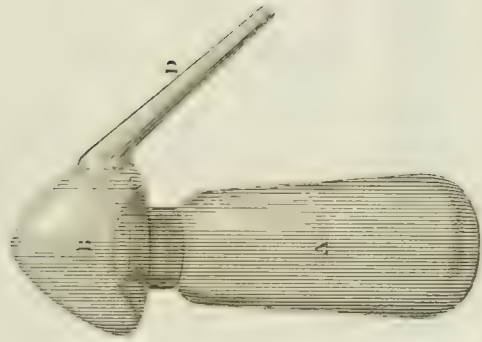
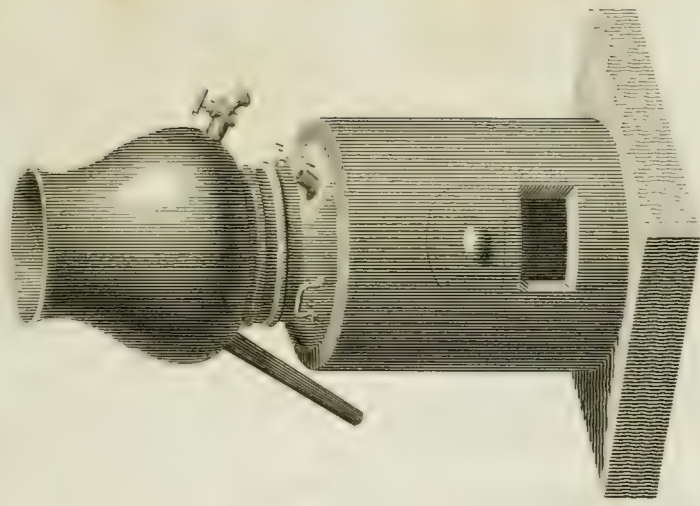


Fig. 4.



ALCOHOL.

Fig. 5.

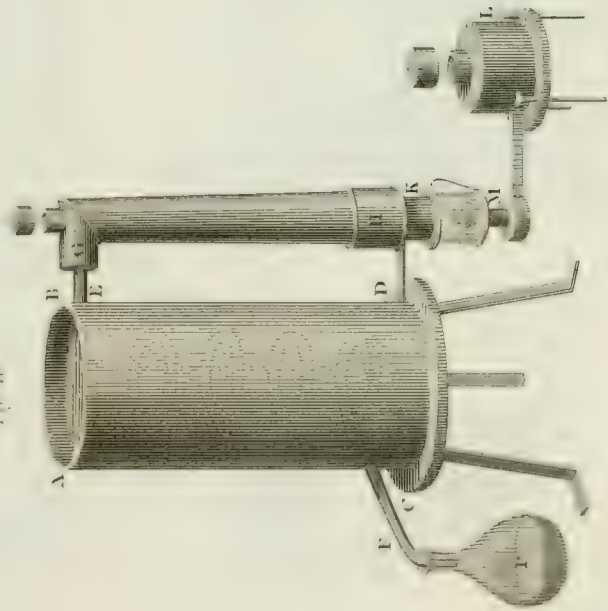
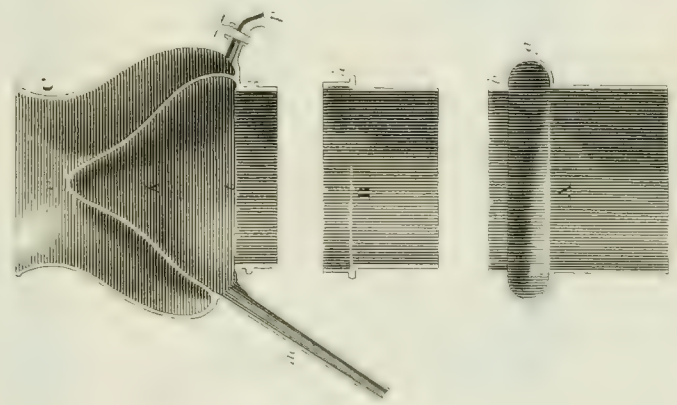
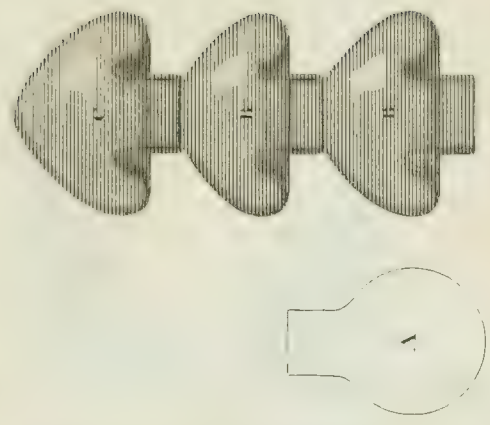


Fig. 6.

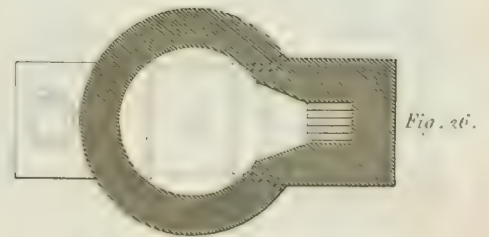
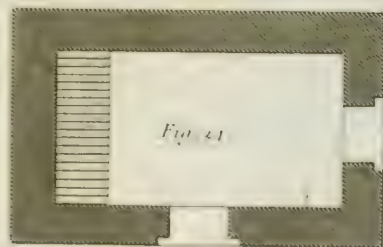
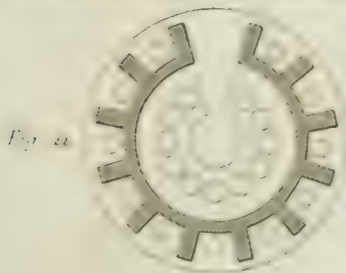
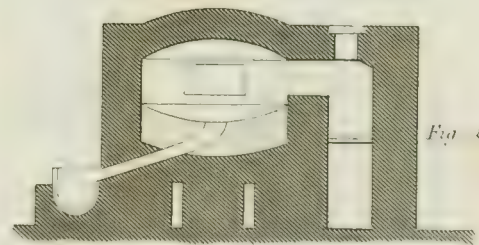
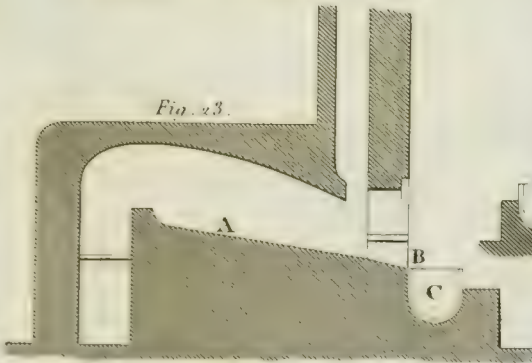
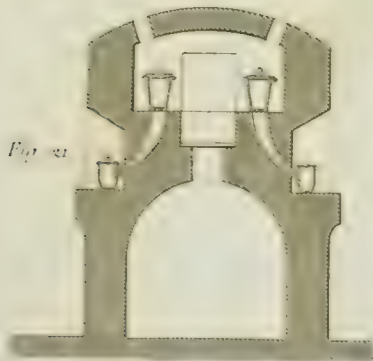
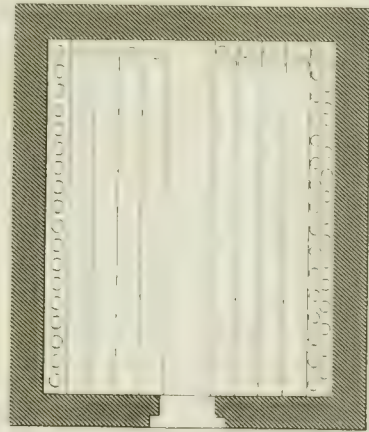
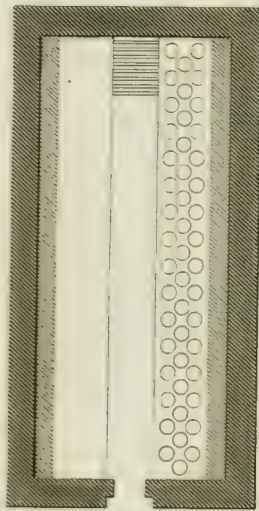
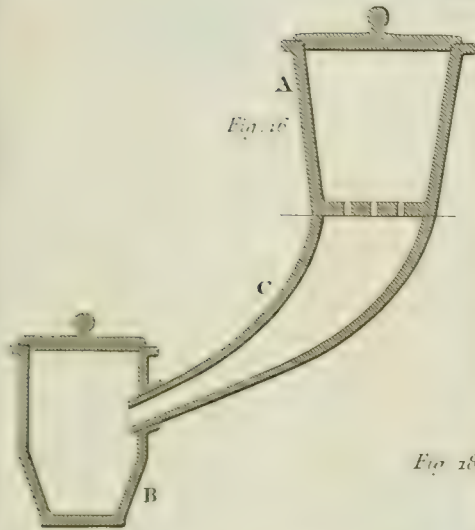
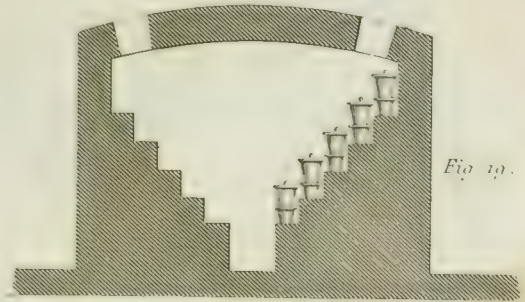
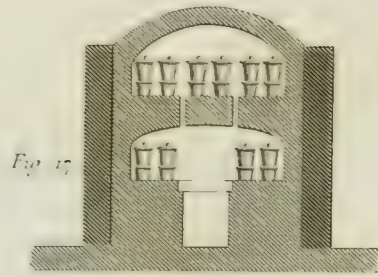
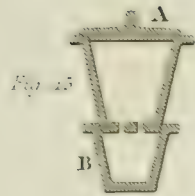


ALCUBEL.

Fig. 7.



FURNACES FOR THE REDUCTION OF ANTIMONY.



Scale of feet for all except Figs. 23 & 26

CHEMISTRY.
WOULFE'S APPARATUS.

Fig. 28.

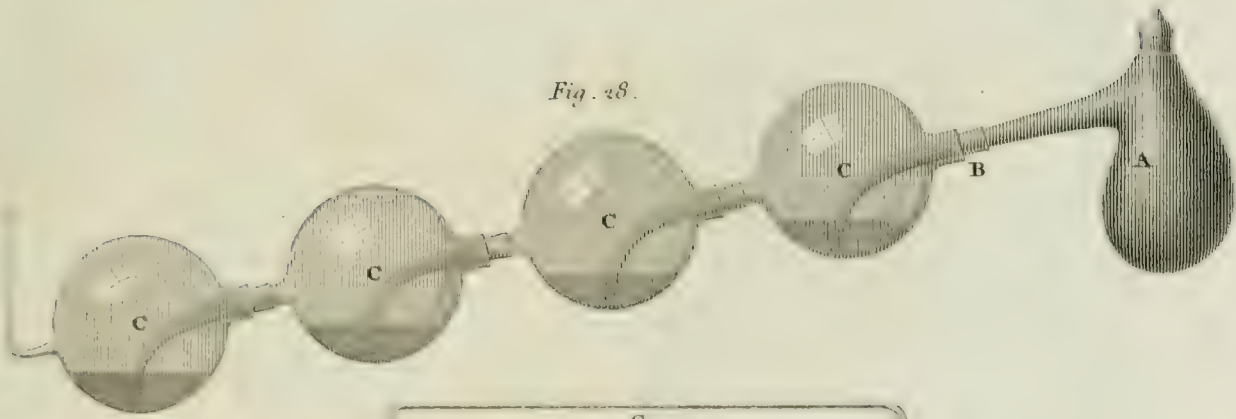
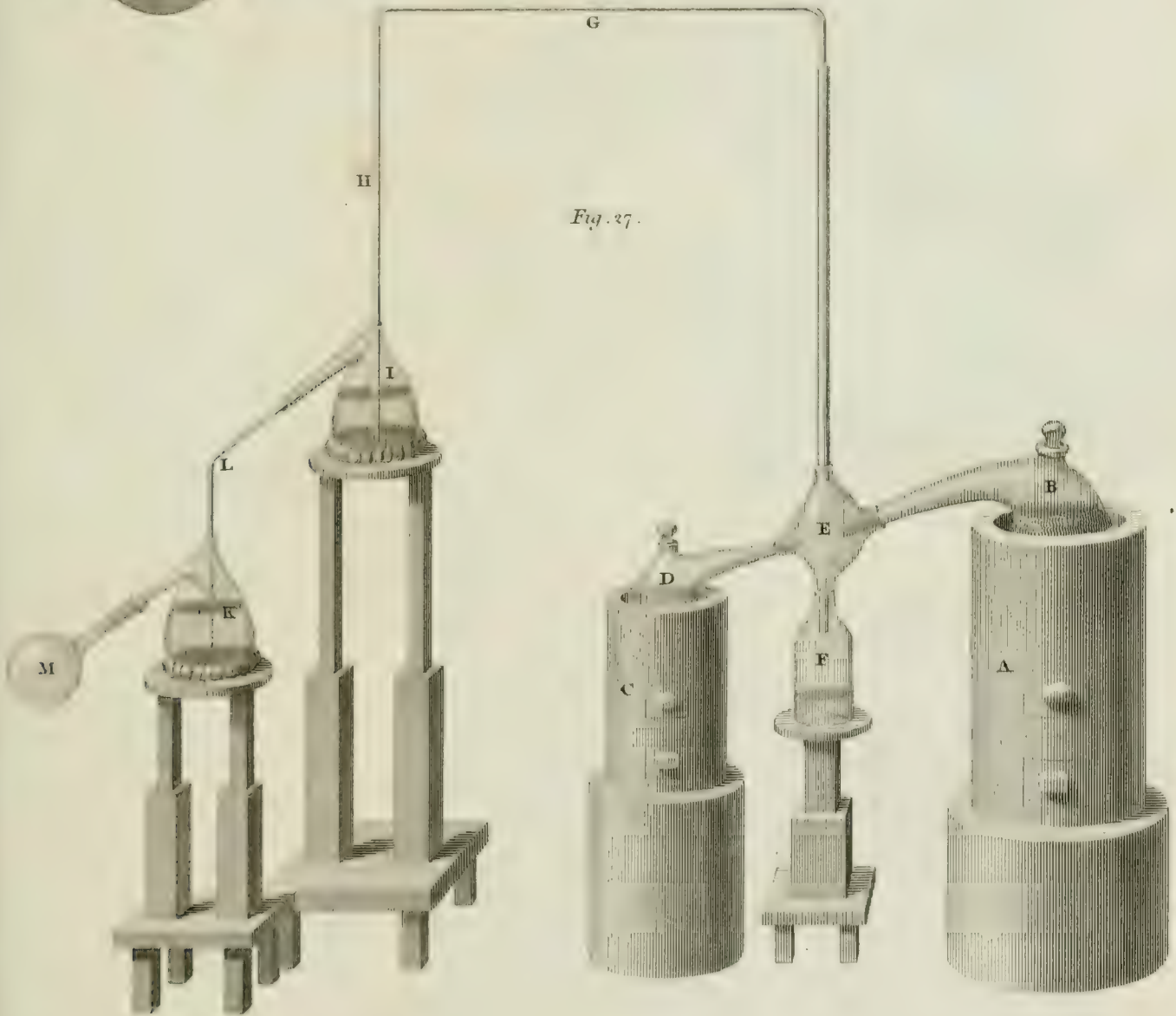
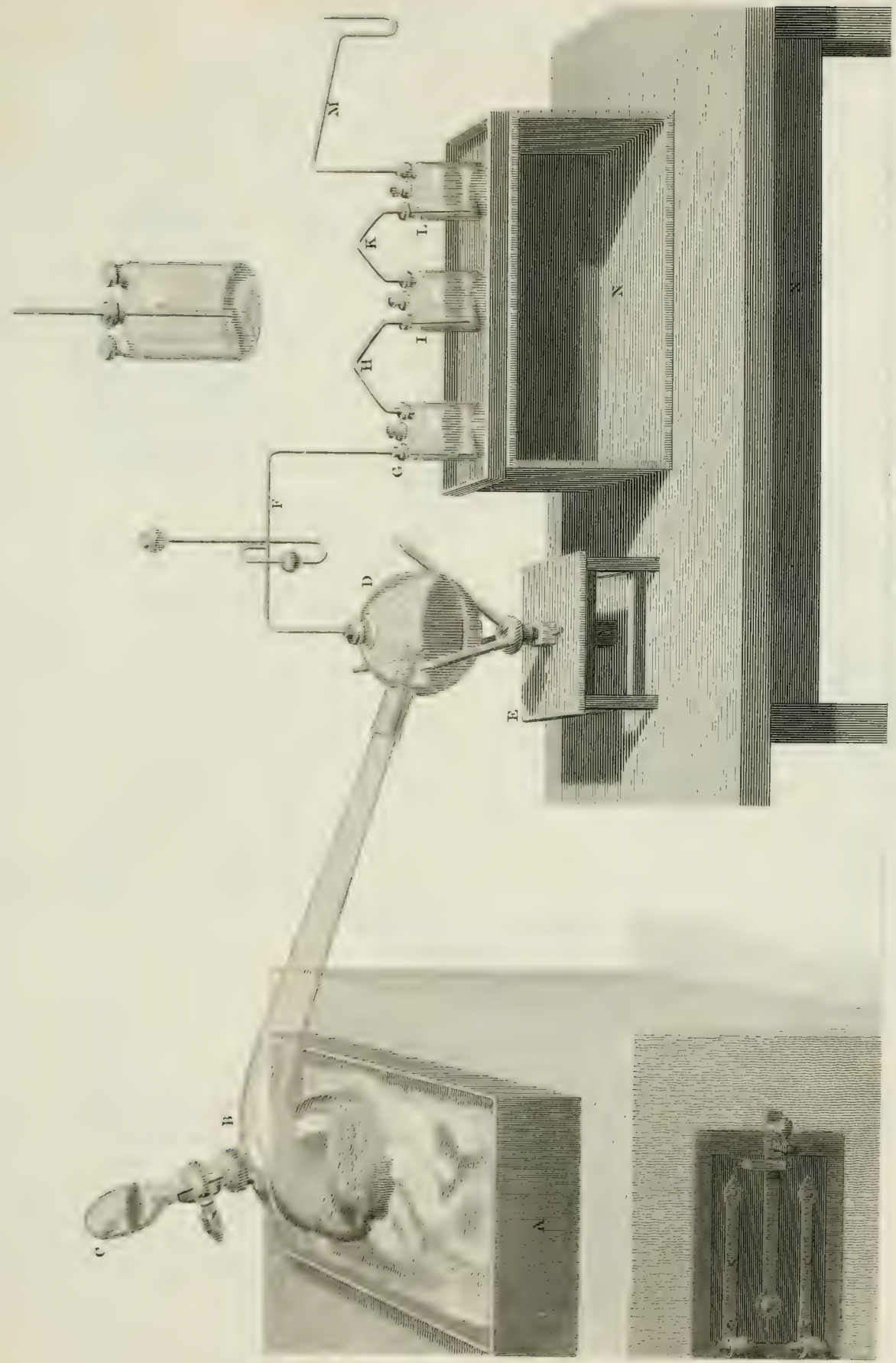


Fig. 27.



WOULFE'S APPARATUS.



Published as the Act directs, Jan^y 2^d 1803, by Longman & Recs. Paternoster Row



Fig. 1

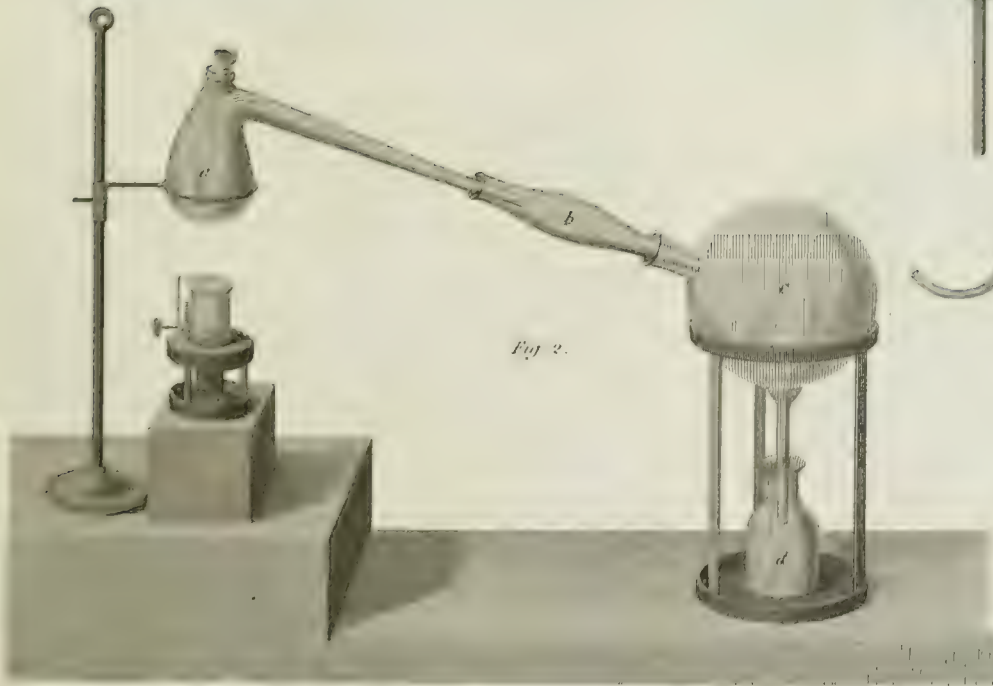


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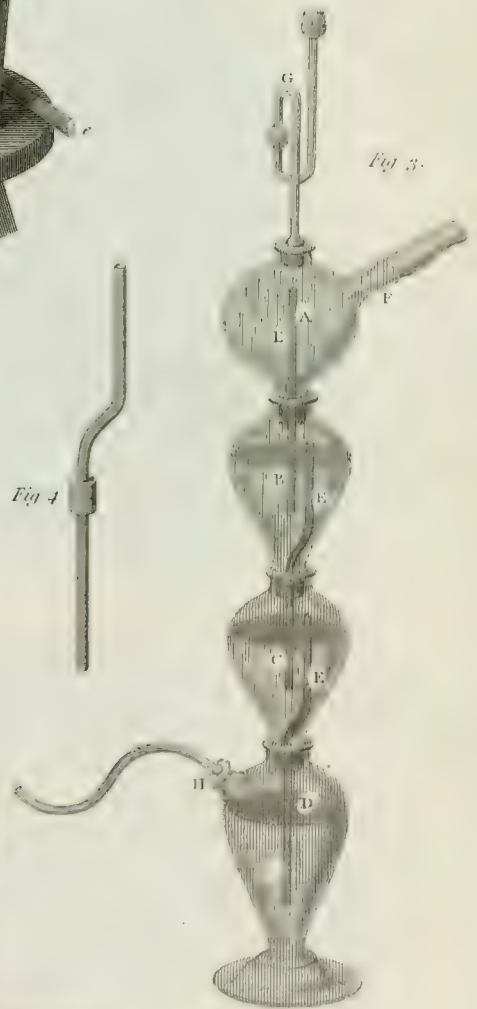


Fig. 3.

Fig. 4

BLAST FURNACE.

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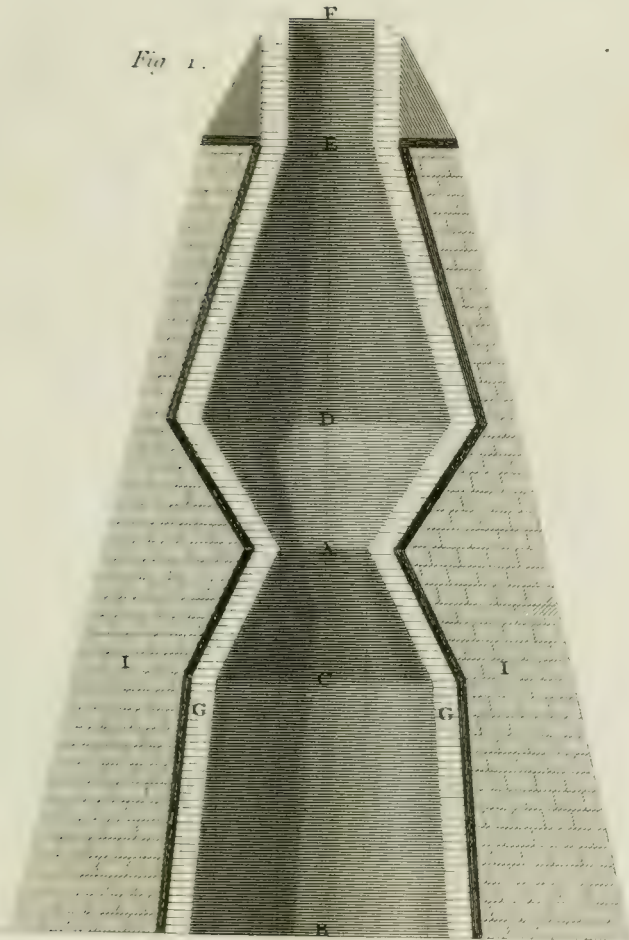


Fig. 3.

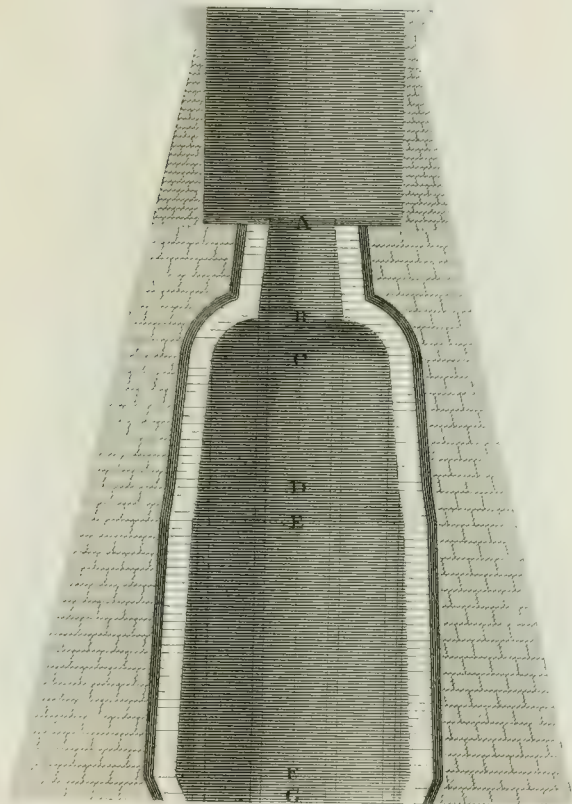


Fig. 2.

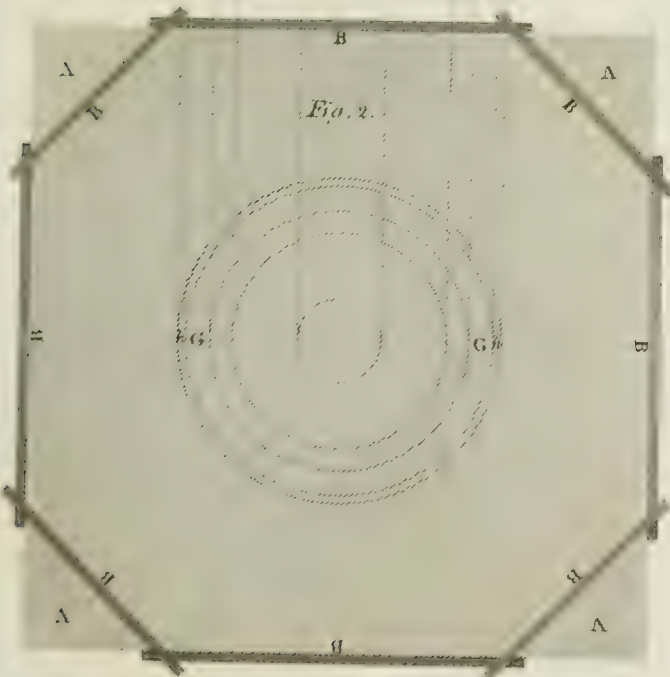
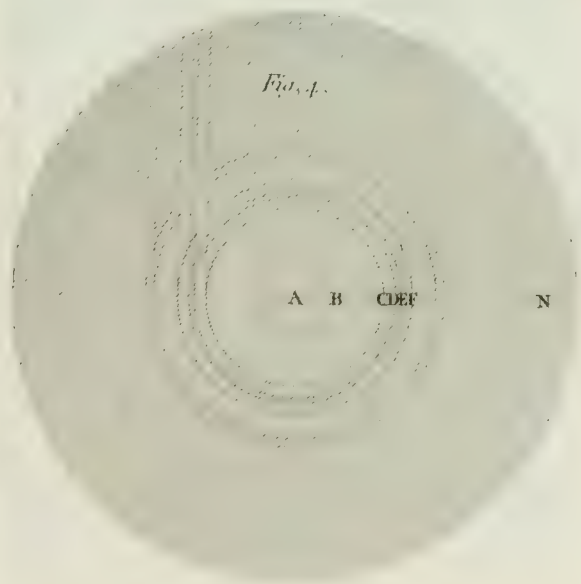


Fig. 4.



BLAST FURNACE.

Fig 3.

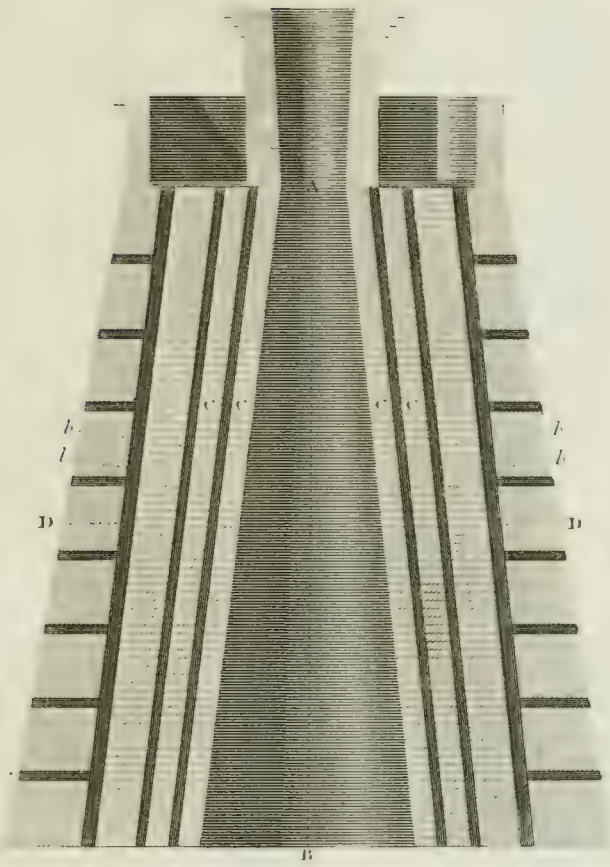


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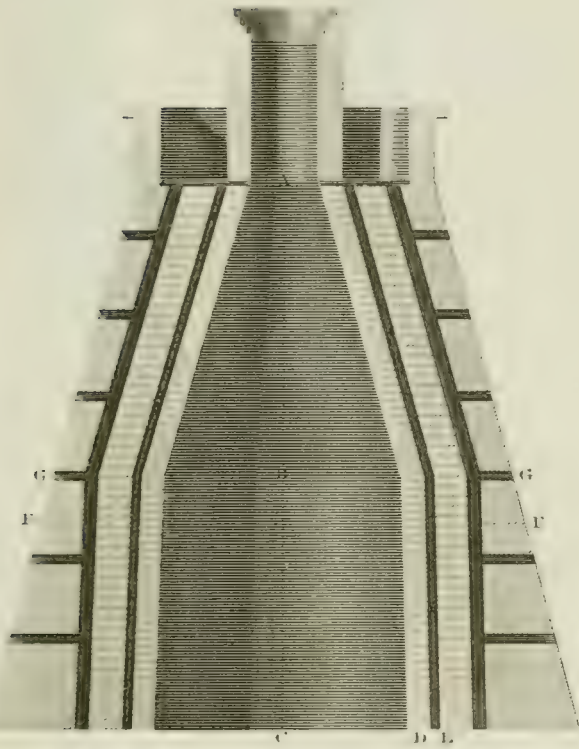


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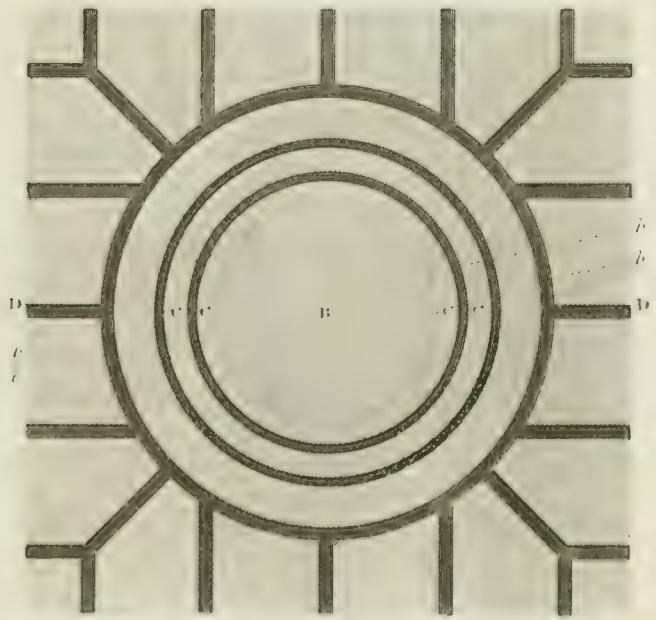


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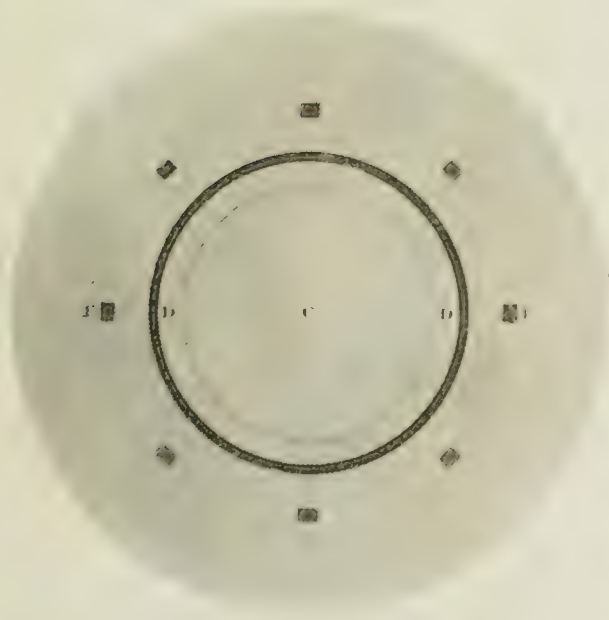


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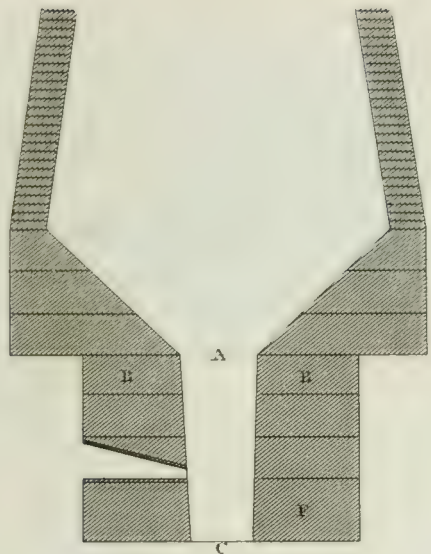


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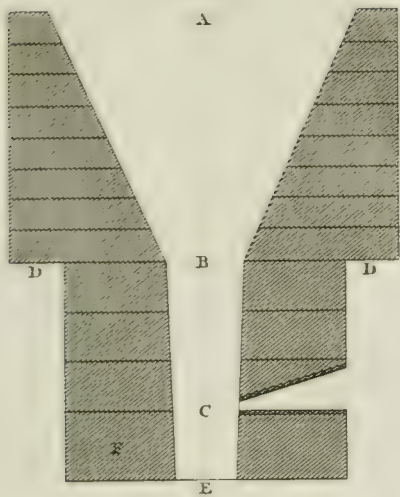


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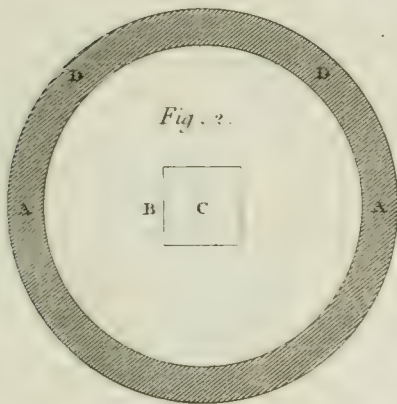


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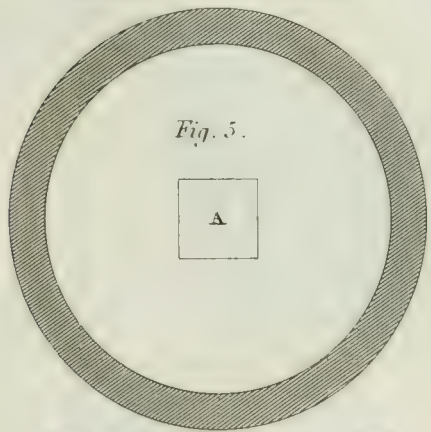


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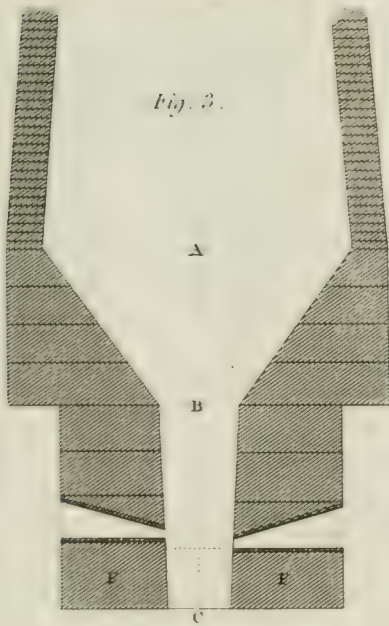


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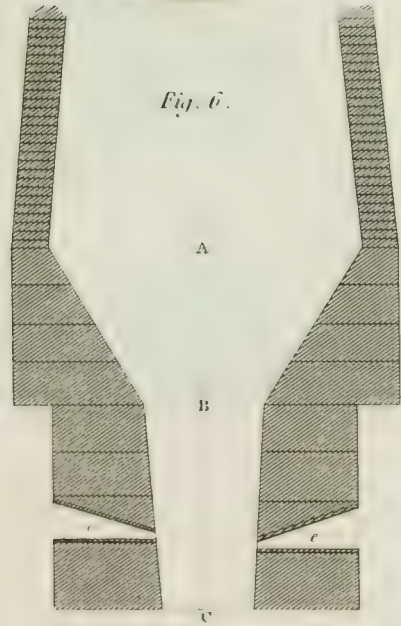


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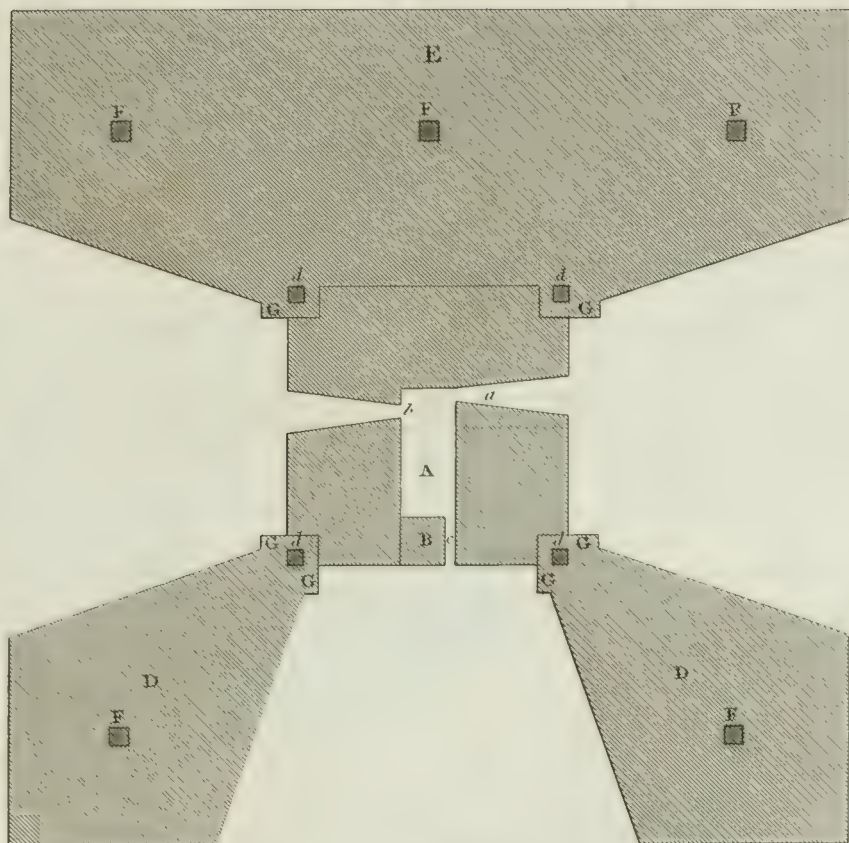


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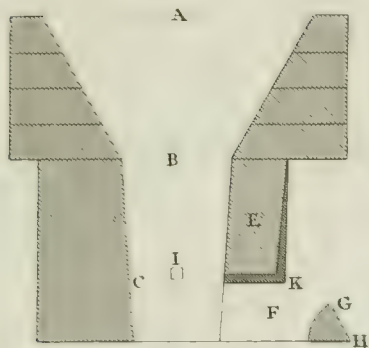


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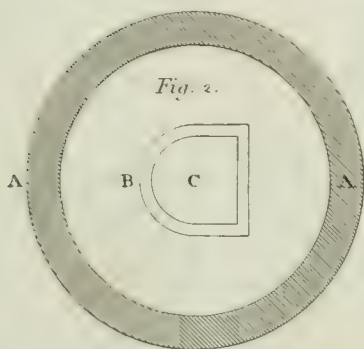


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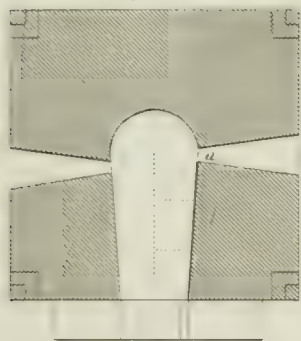


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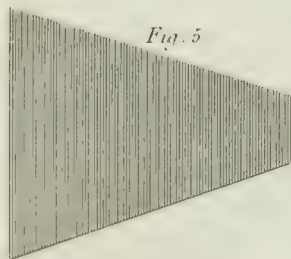


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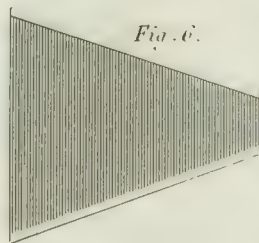


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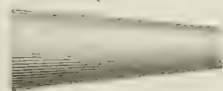


Fig. 7.

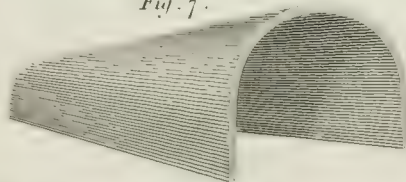


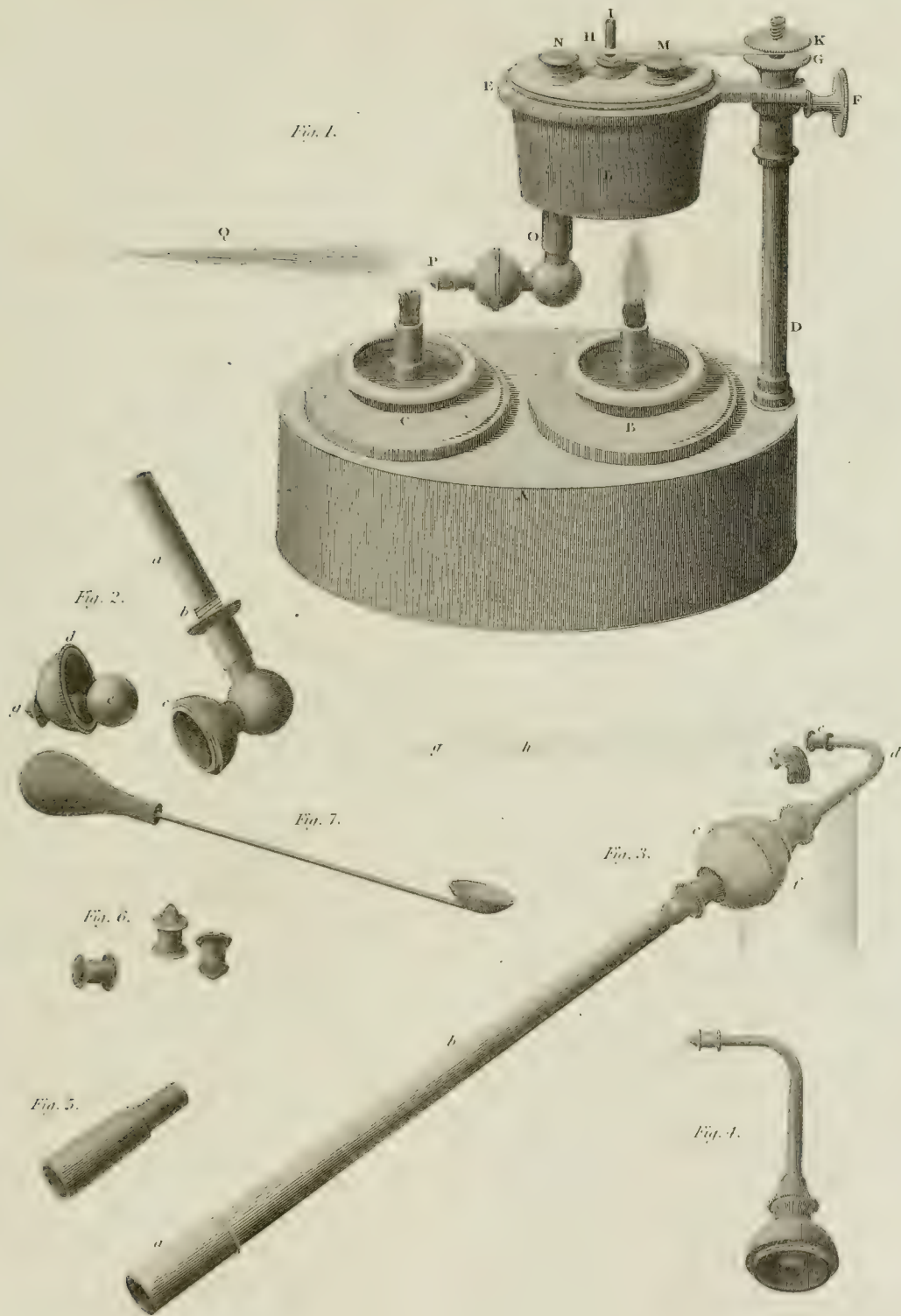
Fig. 8.



Fig. 9.



BLOWPIPE.



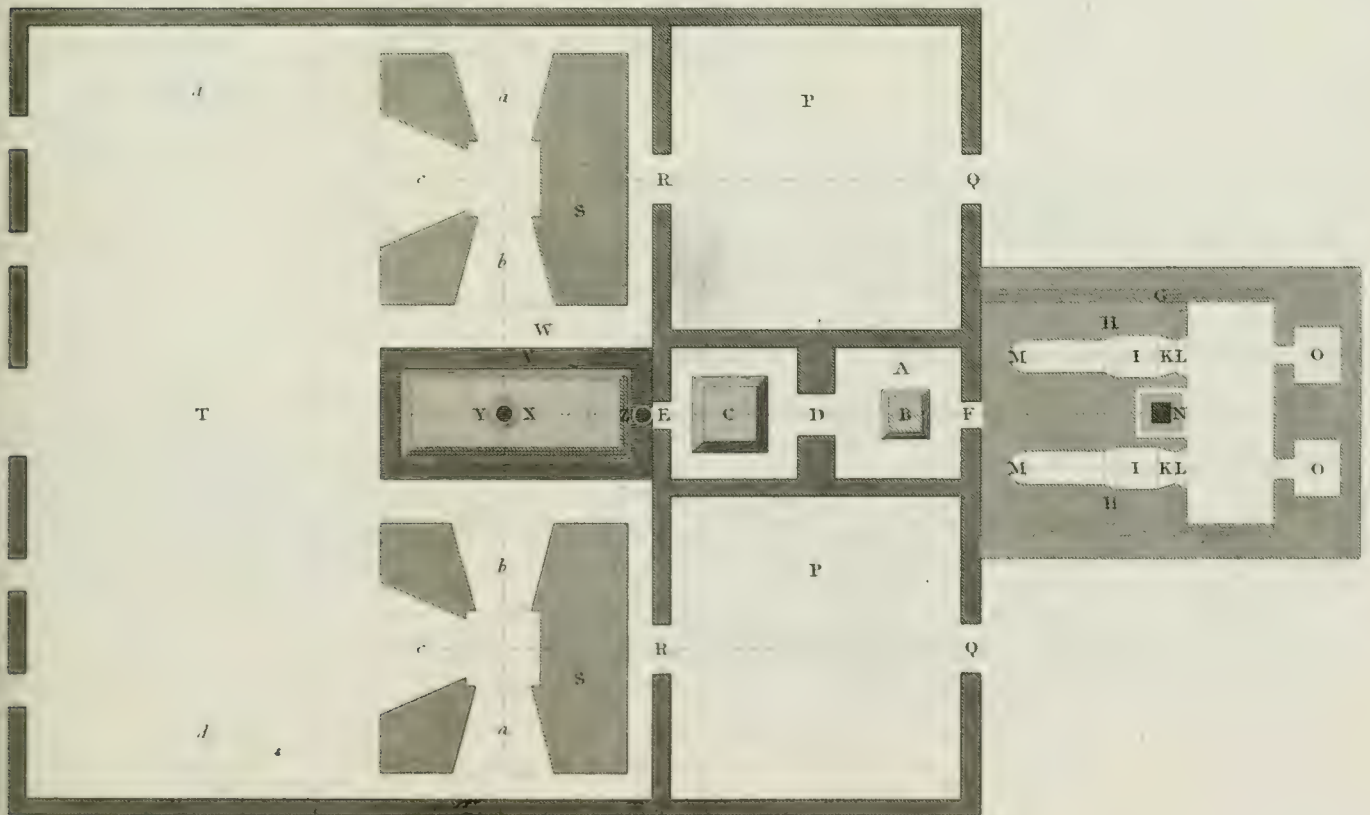
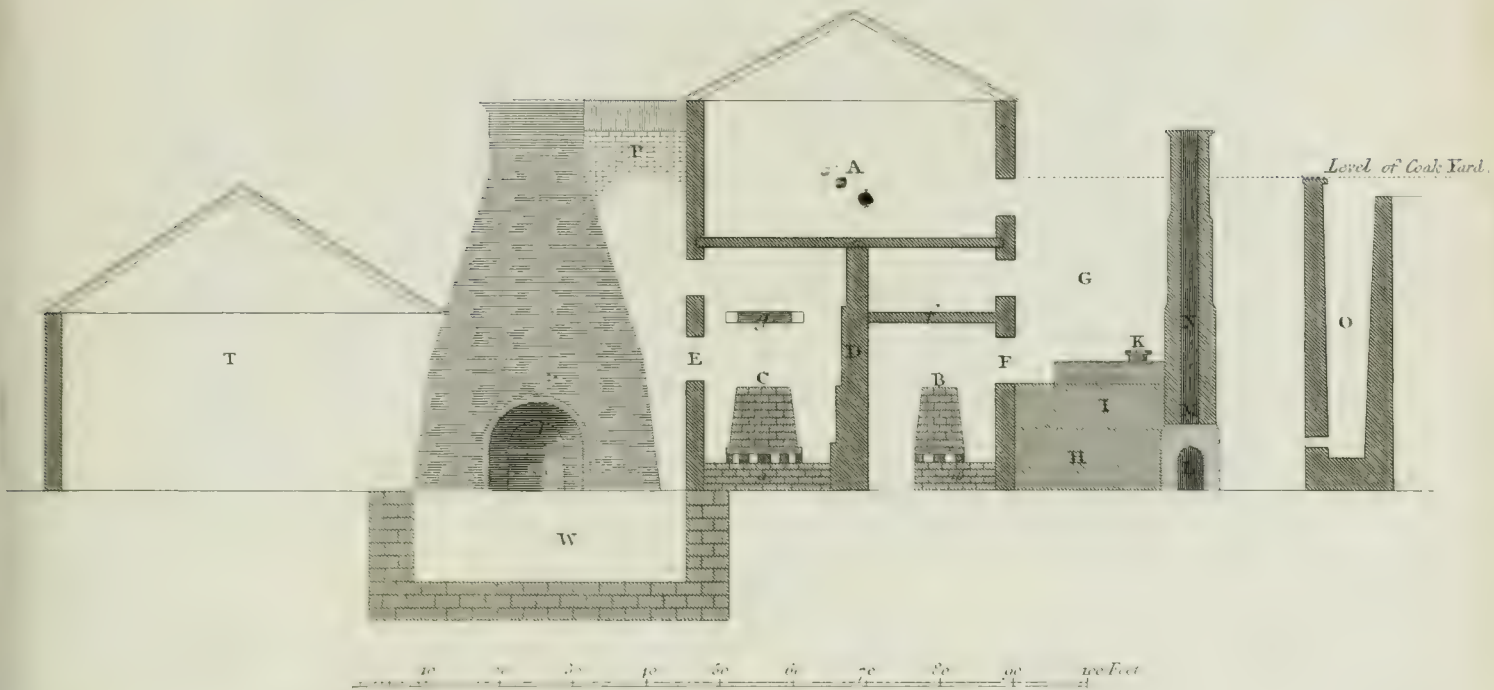
ANCIENT CHEMICAL CHARACTERS.

Retorta	Retorta	Acetum distillatum	Talcum
Distillare	Distillare	Nitrum - Natron	Arena
Calx	Precipitare	Vitriolum	Calx viva
Caput mortuum	Sublimare	Sal commune	Cornu Cervi
Crinis	Stratum super Stratum	Acidum vitriolicum	Alkali
Pulvis	Substances	Acidum Nitri	Alkali fixum
Quinta Essentia	Aurum	Acidum Muriaticum	Alkali volatile
Spiritus	Argentum	Aer	Alumen
Regulus	Ferrum	Aqua	Tartarus
Dies	Cuprum	Aqua fortis	Sal ammoniacum
Nox	Antimonium	Aqua regia	Sal Gemmae
Mensis	Argentum vivum	Ignis	Borax
Hora	Stannum	Terra	Rerugo aris
Infruments & processes	Plumbum	Terra vitrifabilis	Tutia
Crucibulum	Arsenicum	Terra fusibilis	Sulphur
Alembicum	Auripigmentum	Vitrum	Urina
Amphora	Cinnabaris	Argilla	Vinum
Balucum	Acetum - Acidum	Gypsum	Spiritus vini
Balneum Mariae			Oleum

BERGMAN'S CHEMICAL CHARACTERS.

Acid	Sugar of milk	Clay	Iron
Alkali	Distilled vinegar	Silex	Tin
Vitriol	Milk	Water	Bismuth
Phlogiston	Ants (Formicae)	Vital air	Nickel
De-phlogisticated	Fat	Matter of Heat	Arsenic
Nitre	Phosphorus	Sulphur	Cobalt
Sea salt	Prussian blue	Spirit of wine	Zinc
Aqua regia	Fixed	Ether	Antimony
Fluor	Volatile	Essential oil	Manganese
Borax	Vegetable	Expressed oil	Examples of Combination
Sugar	Mineral - Mild	Gold	Pure fixed vegetable alkali
Tartar	Pure	Platina	Vitriolated fixed-vegetable alkali
Sorrel	Lime (Calx) Caustic	Silver	Calx of Iron
Lemon (Citrus)	Barytes	Mercury	Mercury sublimate
Benzoe	Lime - Metallic calx	Lead	De-phlogisticated Muriatic acid
Amber	Magnesia	Copper	

BLAST FURNACE WORKS.



BLAST FURNACE WORKS.

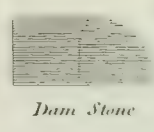
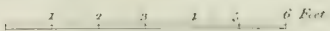
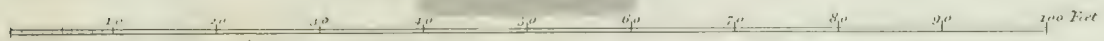
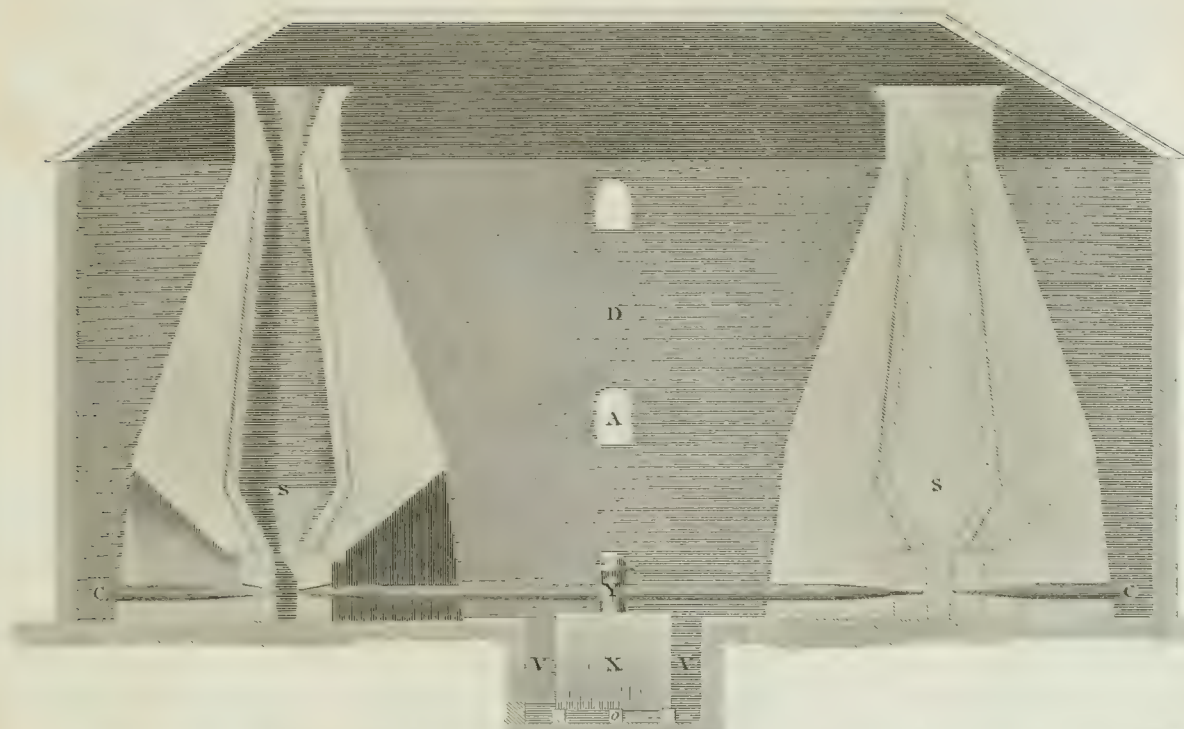
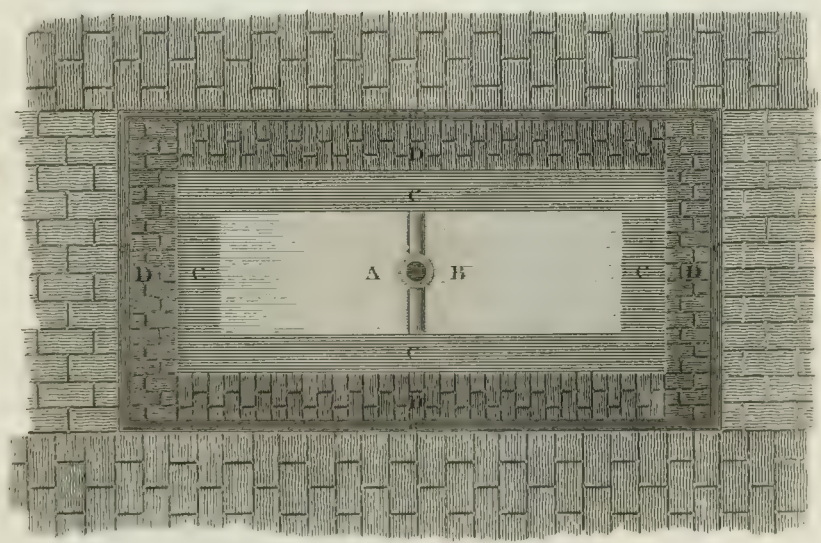
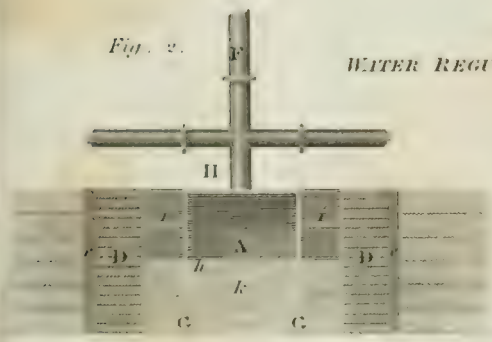


Fig. 2.

Fig. 1.



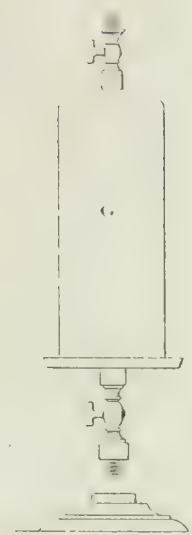
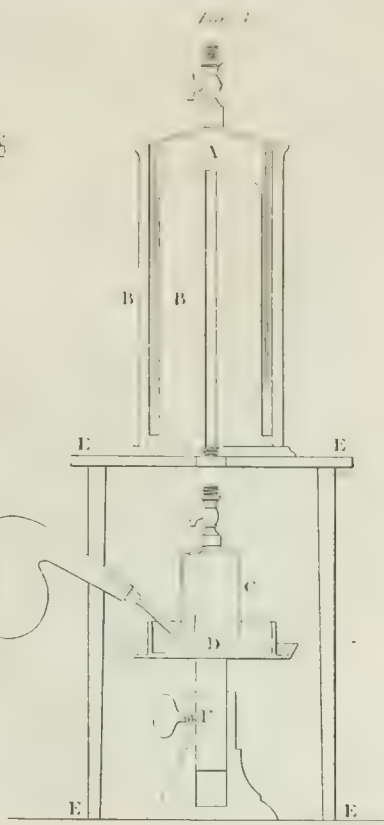
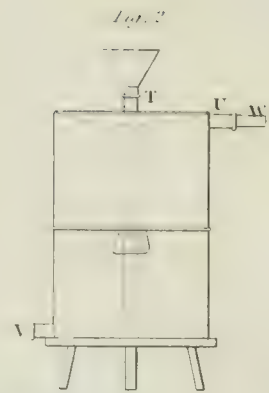
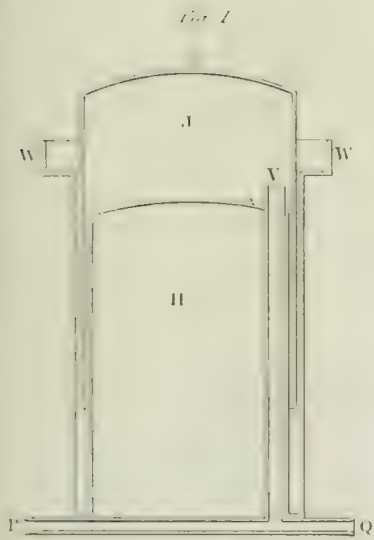


Fig. 6. SHOE LAMP.



Fig. 7.

Double BLOW PIPE.

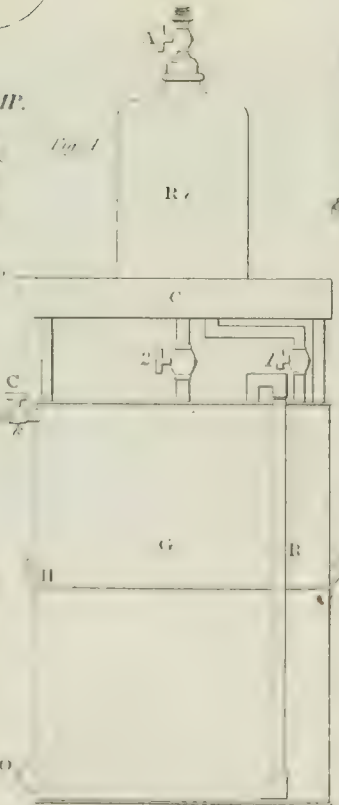
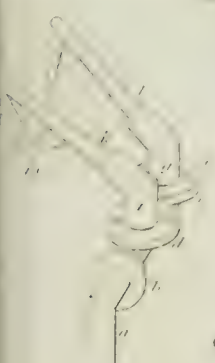
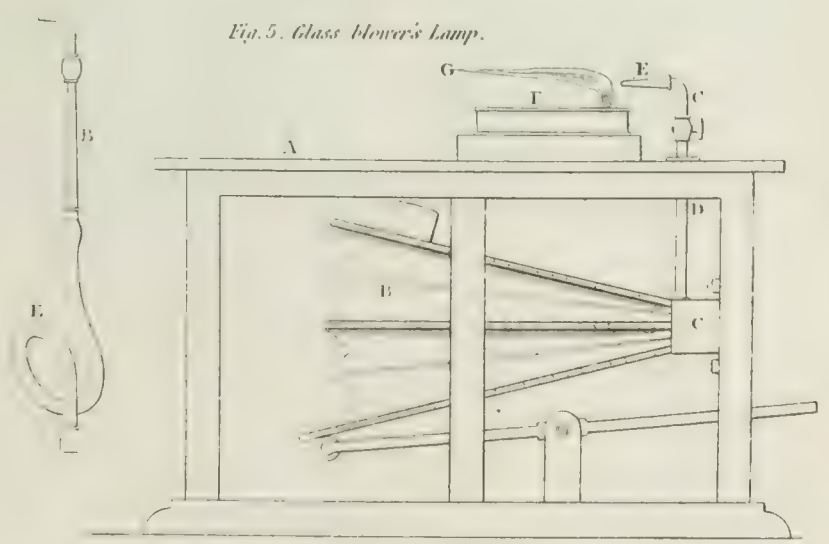


Fig. 5. Glass blower's Lamp.



AIR VAULT.

Fig. 1

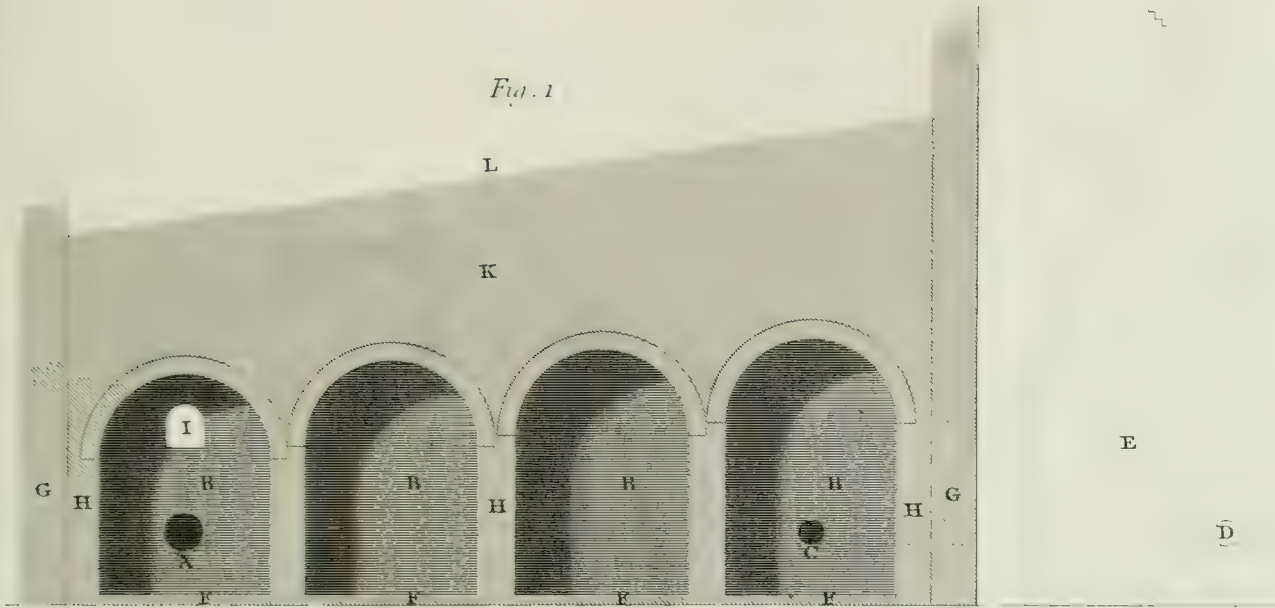
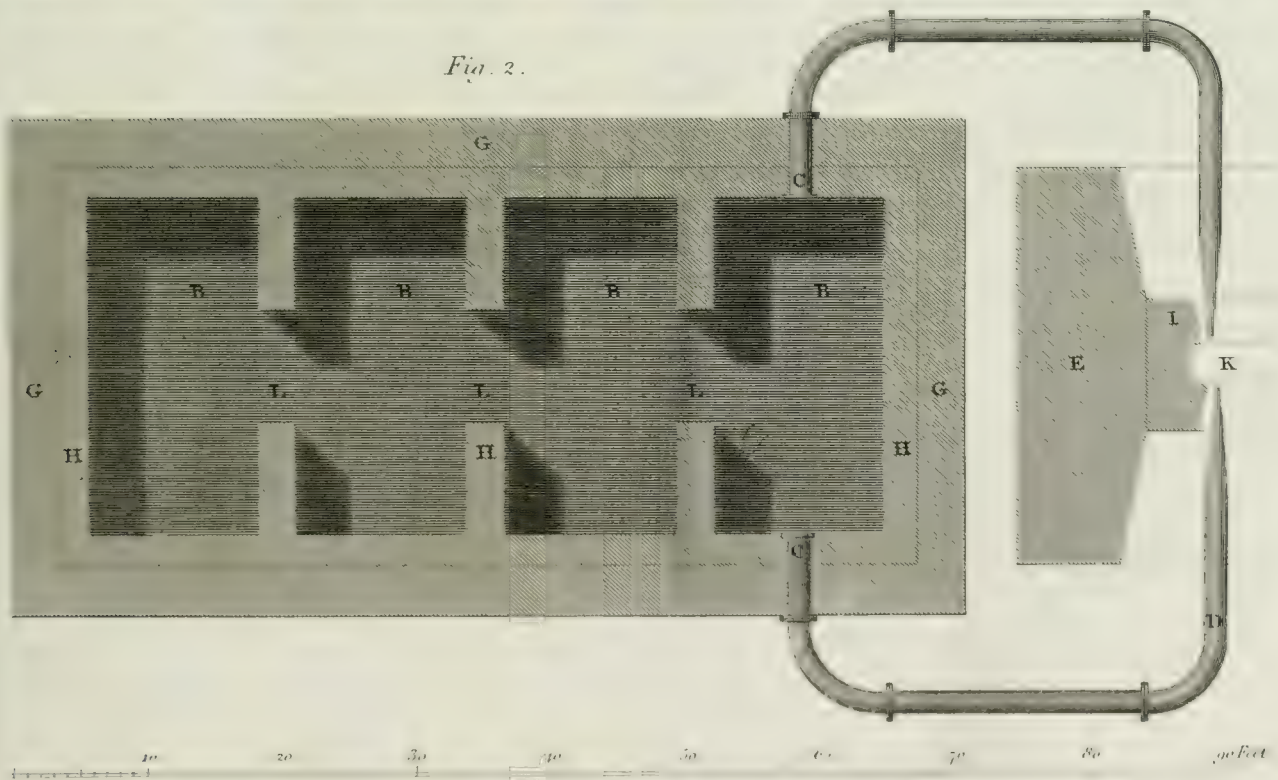


Fig. 2.



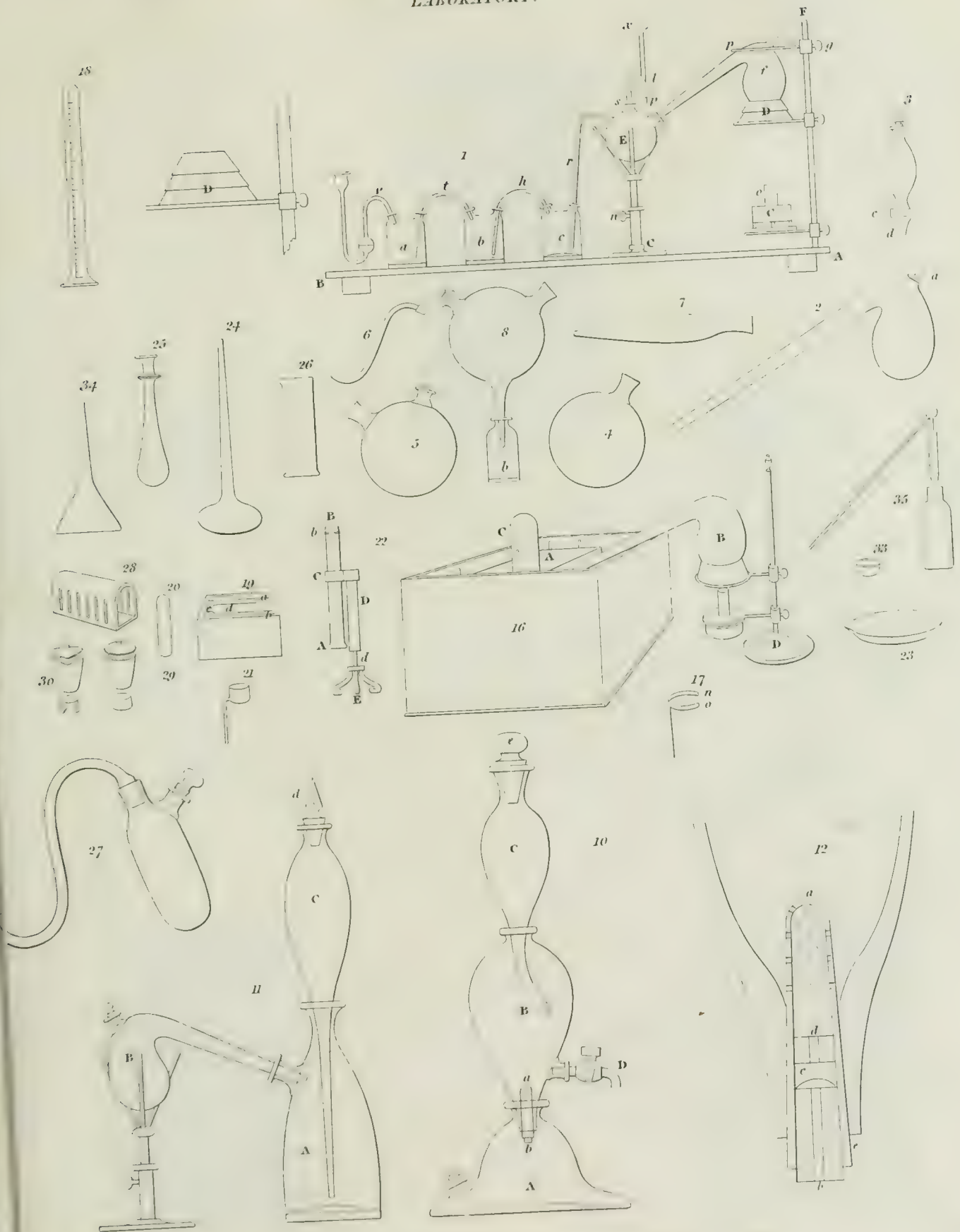


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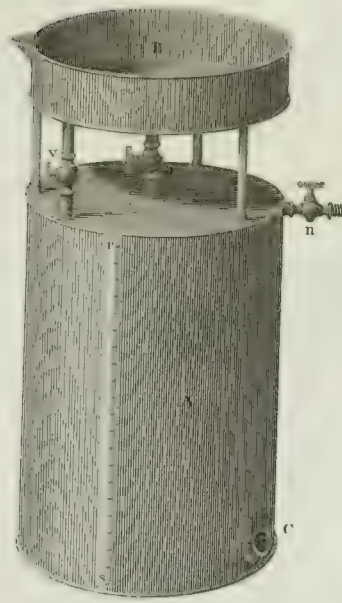


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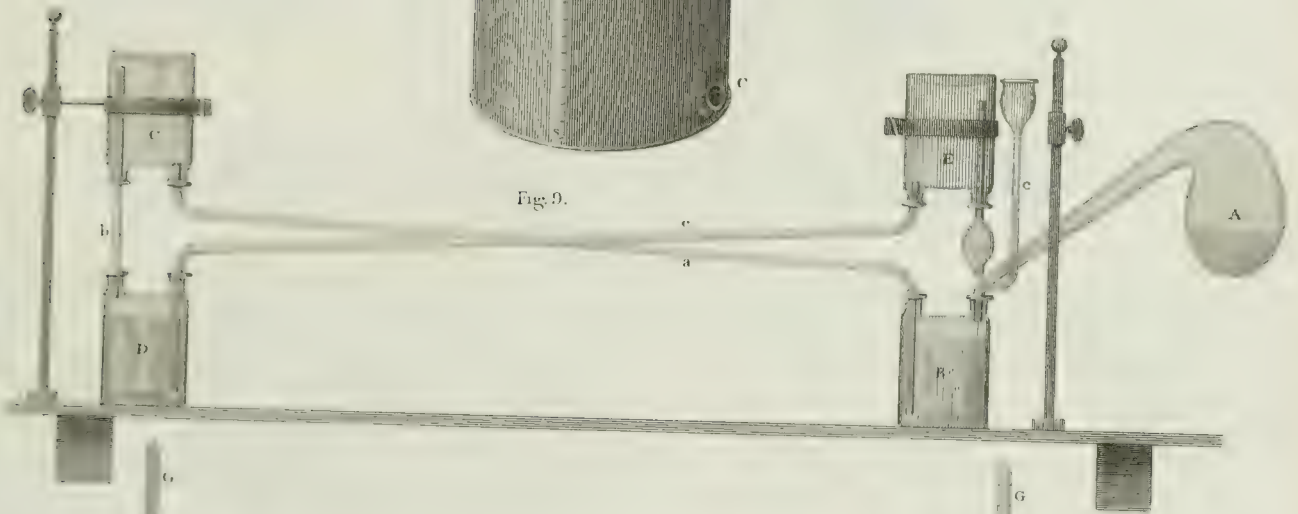


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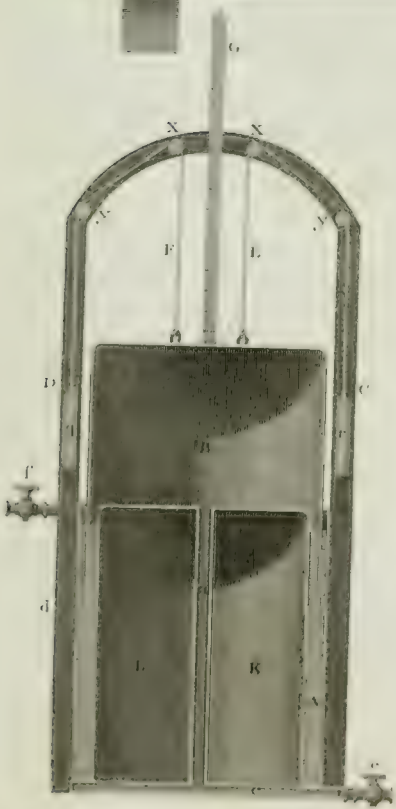
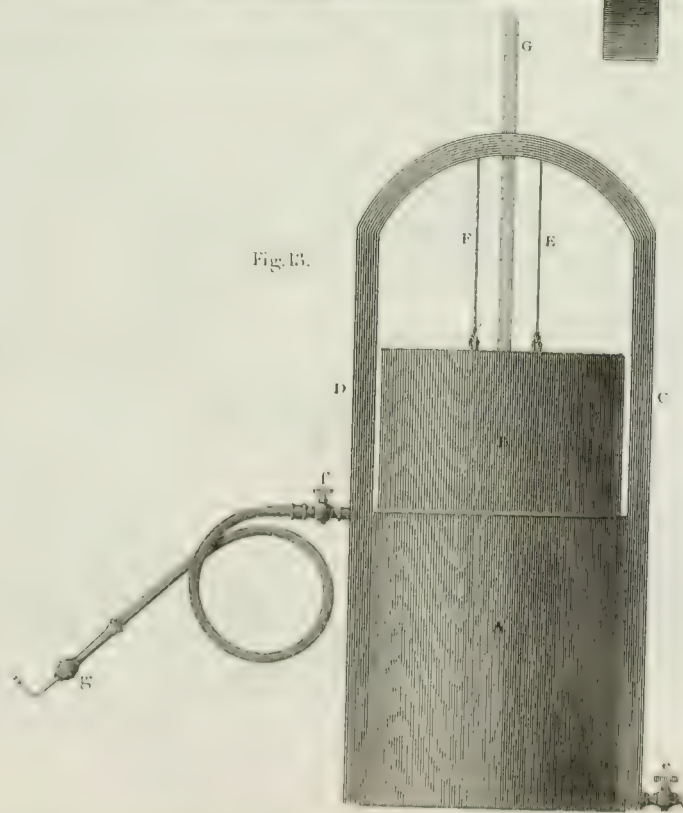


Fig. 13.



APPARATUS FOR THE DISTILLATION OF PYROLIGNEOUS ACID.

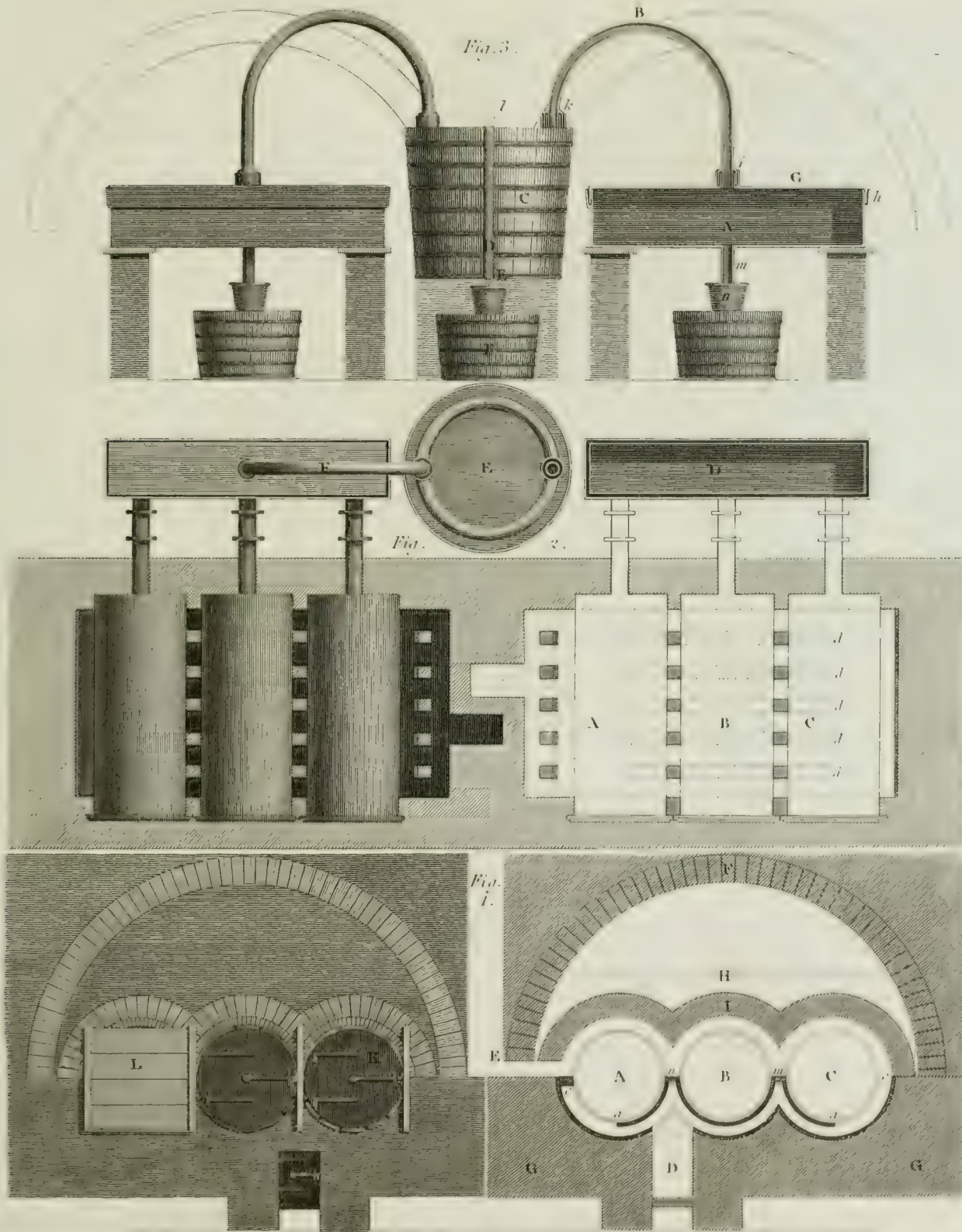


Fig. 3

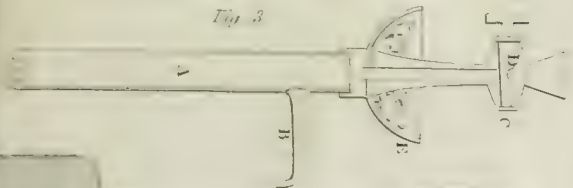


Fig. 1

Hoppe's Endonmeter



Fig. 4

Berzelius's Apparatus

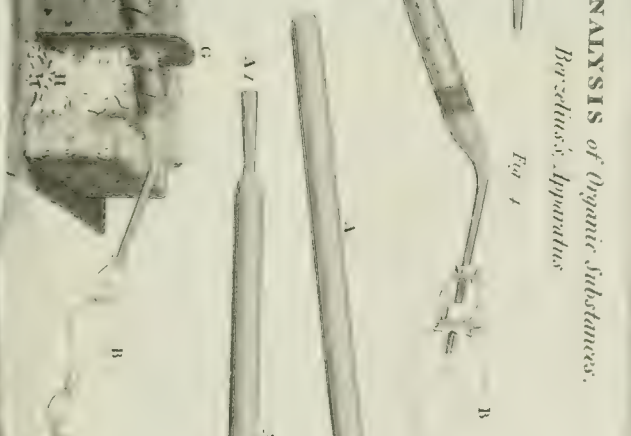


Fig. 2

Pepys's Improvement of Volta's Endonmeter

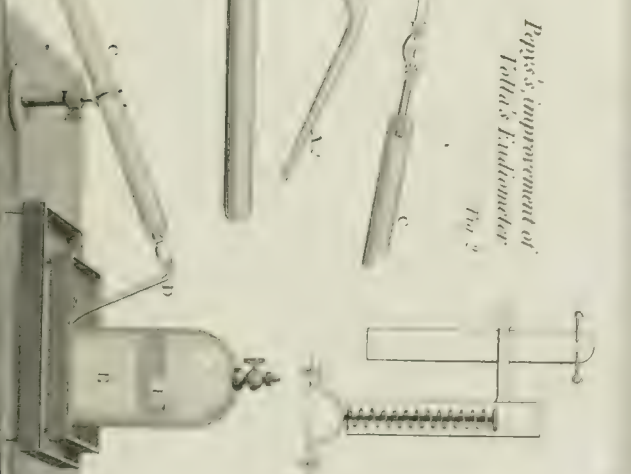


Fig. 6.

CHEMICAL	EQUIVALENTS.
Oxygen	10
Water	12
10 Hydrogen	13
Phosphorus	14
2 Oxygen	15
Calcium	16
Sodium	17
3 Oxygen	18
Iron	19
Phosphoric acid	20
Copper	21
Chlorine	22
Muriatic gas	23
Oxalic acid	24
Sulphuric acid	25
3 Oxygen	26
Ox. Copper	27
2 Carbonic acid	28
6 Oxygen	29
Oil of Turp. (S.G. 0.85)	30
(d) Nitric acid	31
Strontia	32
10 Carbon	33
Bi Carb. Ammonia	34
Sub Carb. Potash	35
Liquid Nitric acid (S.G. 1.50)	36
Barytes	37
(d) N. Lime	38
N. Soda	39
S. Potash	40
S. Strontia	41
Bi Carb. Potash	42
Mercury	43
Lead	44
Silver	45
Litharge	46
Ox. Silver	47
Sub Carb. Potash	48
(d) N. Potash	49
(e) N. Copper	50
Corros. Sublimat	51
Phosph. Lead	52
Mur. Silver	53
S. Lead	54
(e) N. Soda	55
2 Mercury	56
Protoacid	57
Calomel (2 g)	58

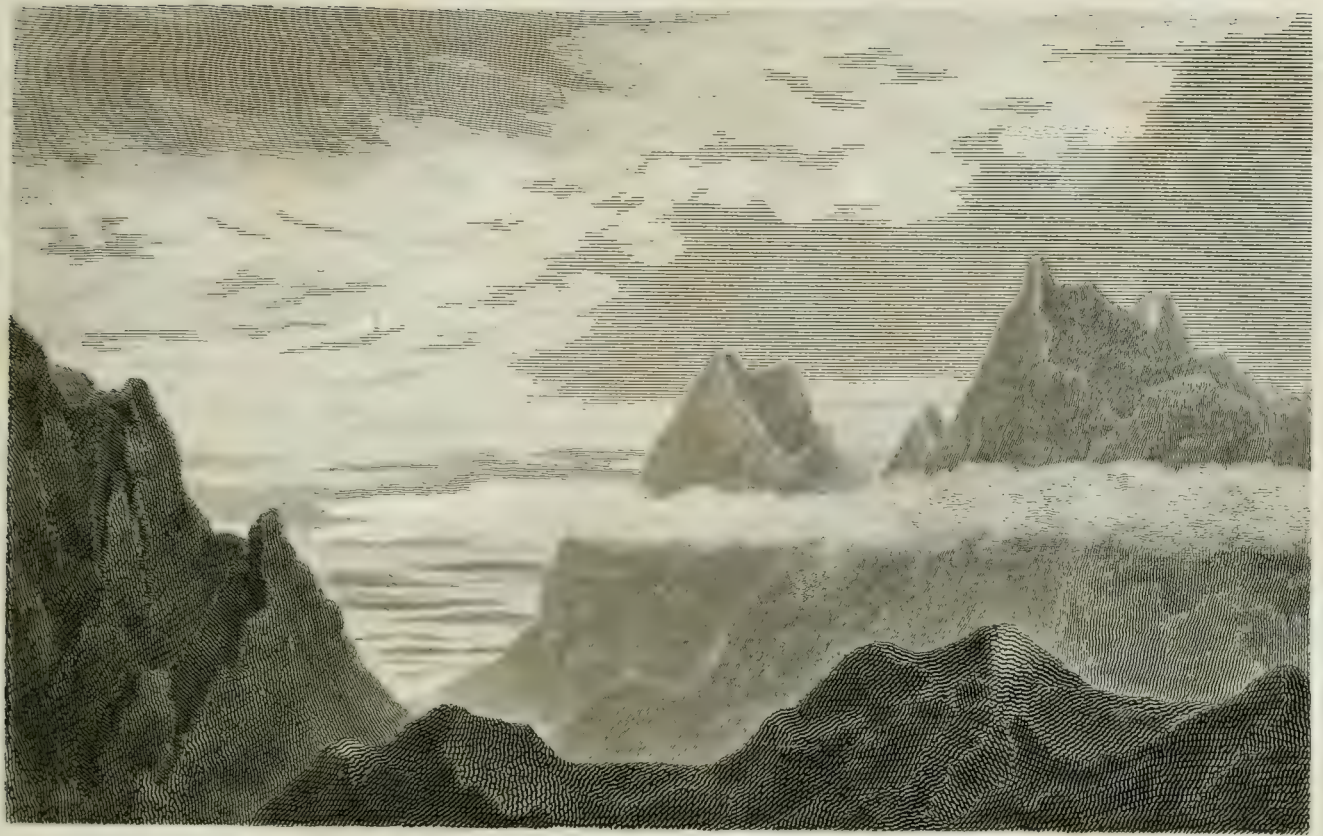
Fig. 5.

CHEMICAL	EQUIVALENTS.
Oxygen	10
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S. Strontia	40
Bi Carb. Potash	41
Mercury	42
Lead	43
Silver	44
Litharge	45
Ox. Silver	46
Sub Carb. Potash	47
(d) N. Potash	48
(e) N. Copper	49
Corros. Sublimat	50
Phosph. Lead	51
Mur. Silver	52
S. Lead	53
(e) N. Soda	54
2 Mercury	55
Protoacid	56
Calomel (2 g)	57



1. Cirrus, in different forms - 2. Cirro-stratus, subsiding on Cumuli beneath - 3. Cirrus, as seen before Thunder - 4. Cirro-cumulus, as seen before Thunder - 5. A Nimbus, flanked by Cirro-stratus, and giving an Electrical discharge - 6. A range of Cumuli, passing to Cumulo-strati, before Thunder

Drawn at the Art streets, June 25

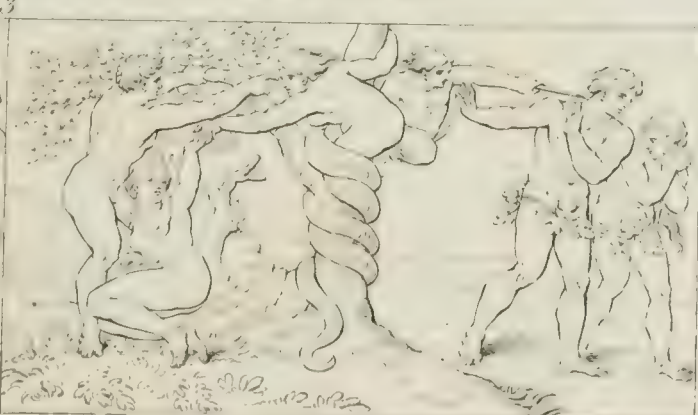
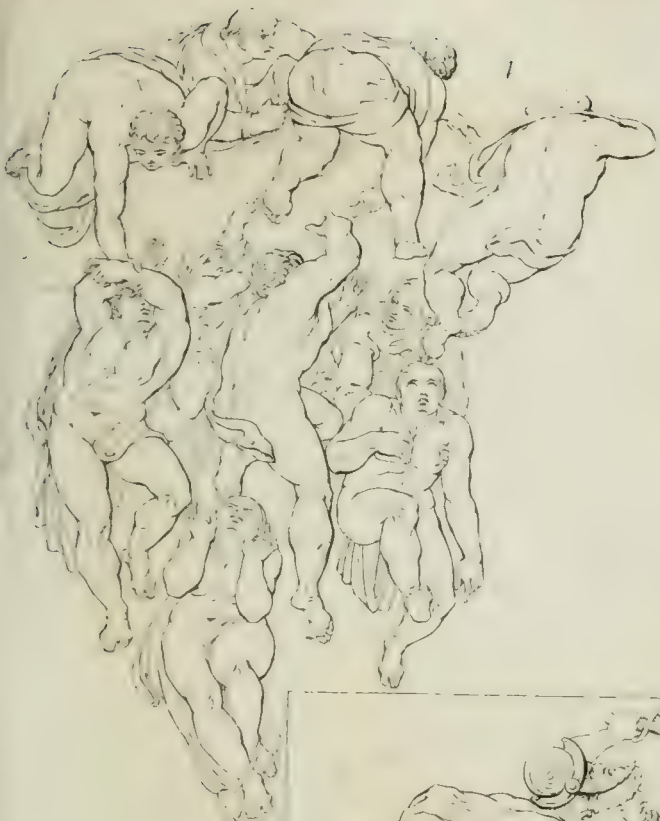


L. Kemmion del.

Milton sculp.

1. Cirro-stratus - 2. distant Cirri-strati - 3. Cirrus passing to Cirro-cumulus - 4 Cirro-stratus, Cumulus and Cumulo-stratus grouped

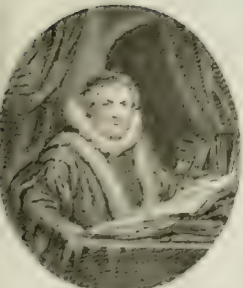
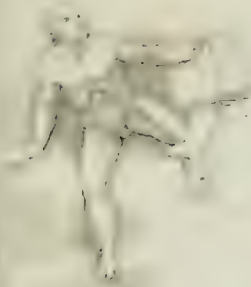
Published as the Act direct, Jan 1st 1810 by Longman Hurst, Rees & Orme, Stationer's Row.



2



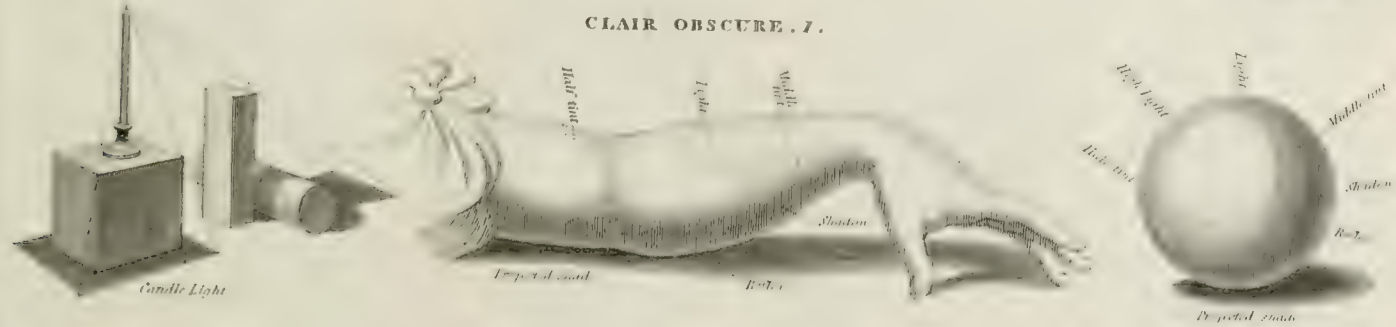
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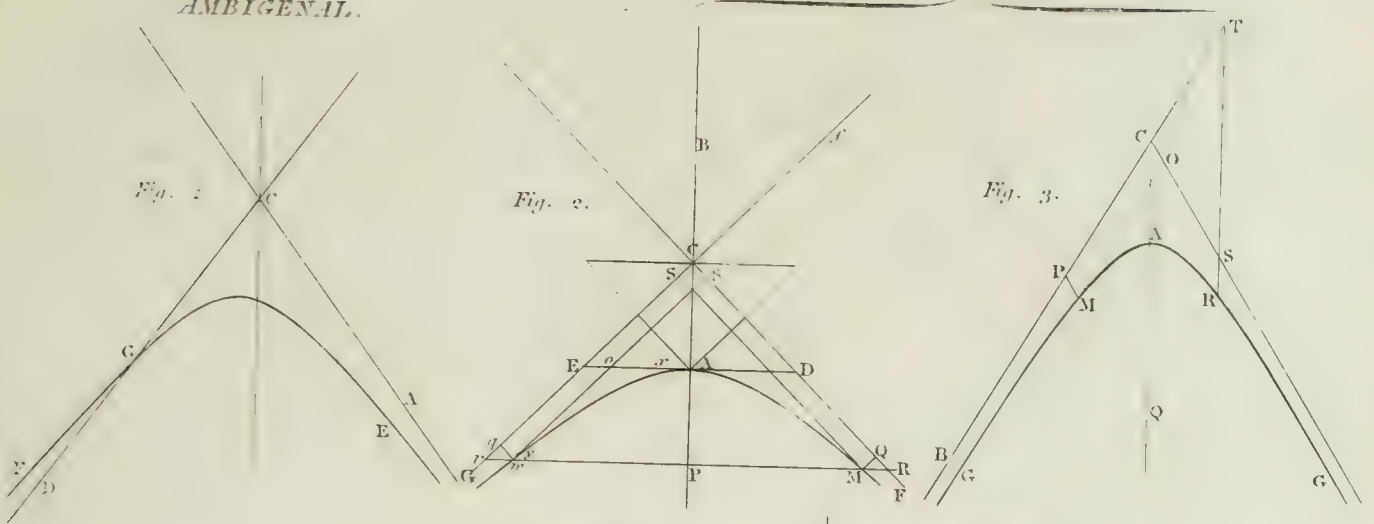
From Raphael's 'The School of Athens'

From Raphael's 'The School of Athens'

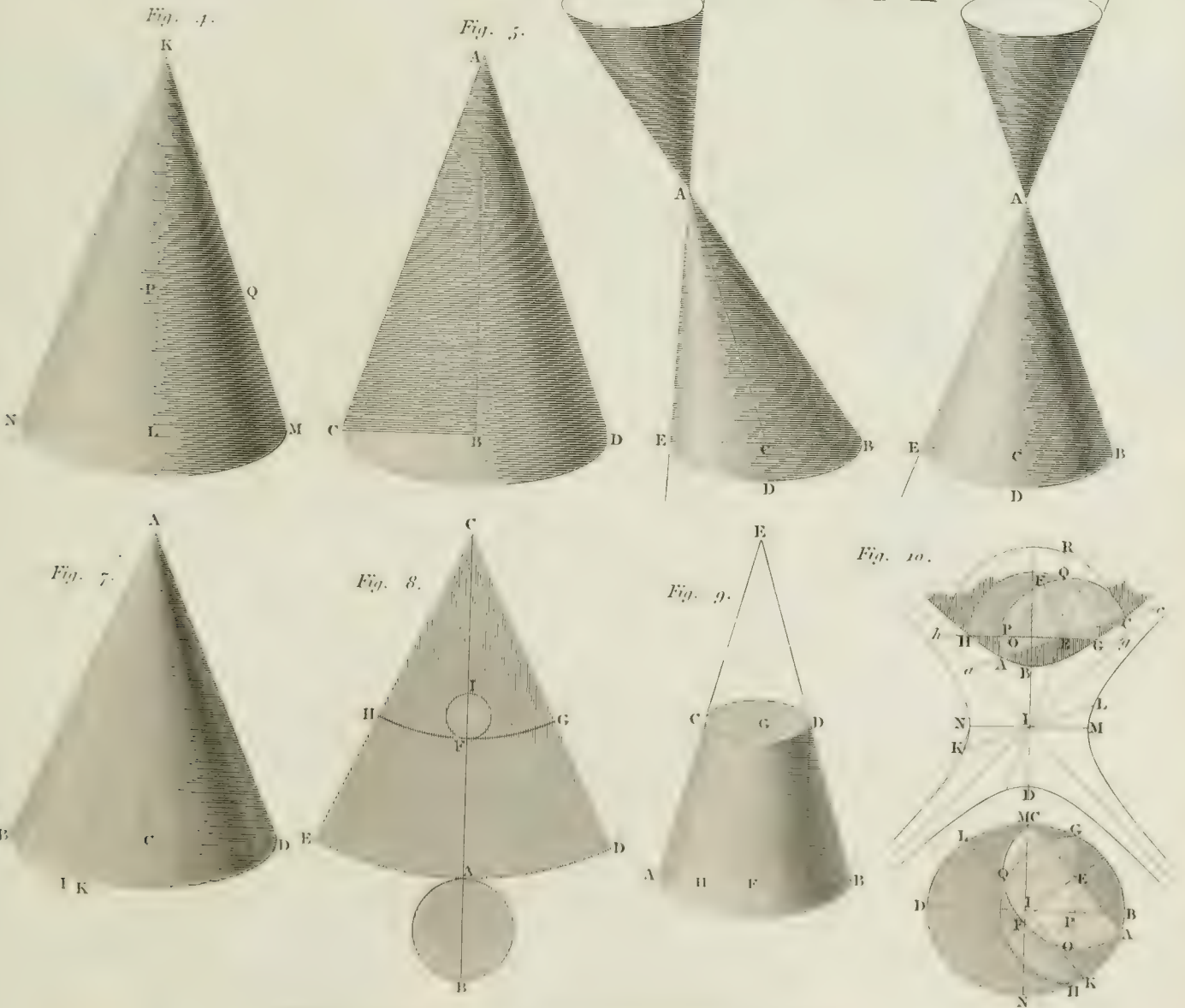
CLAIR OBTSCURE. I.



AMBIGENAL.



CONE.



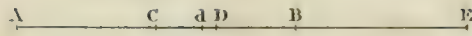


Fig. 1.

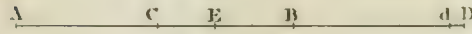


Fig. 2.

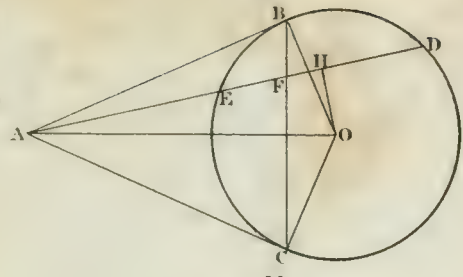


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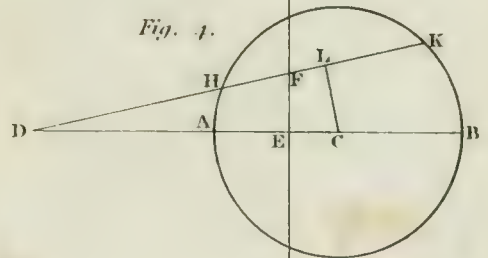


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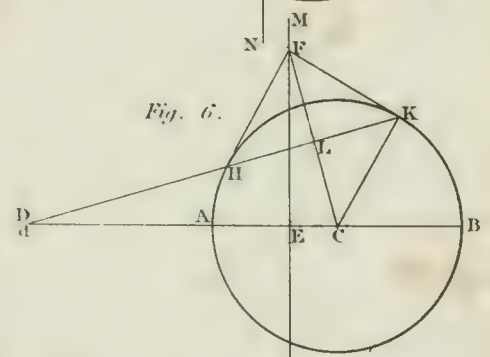


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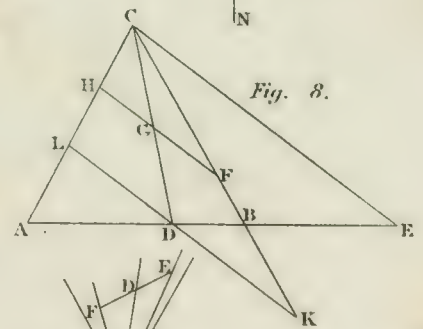


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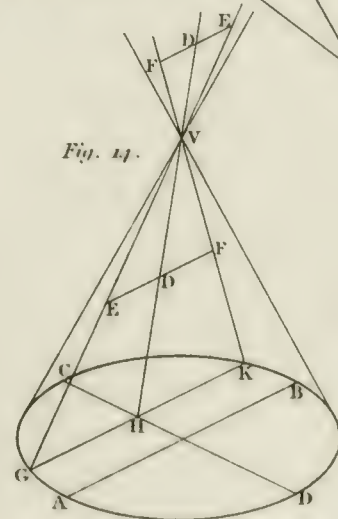


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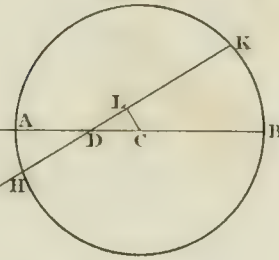


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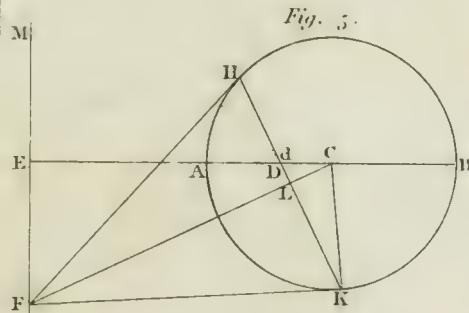


Fig. 7.

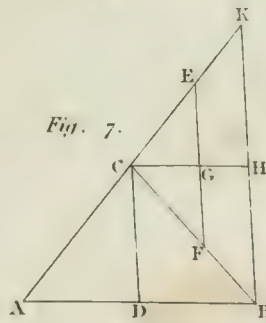


Fig. 13.

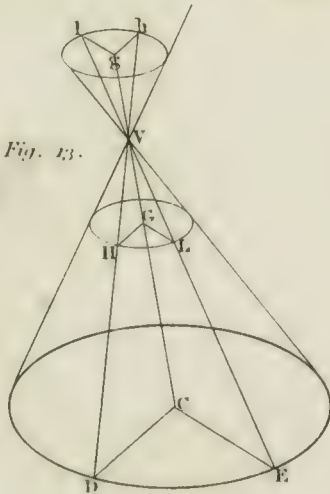


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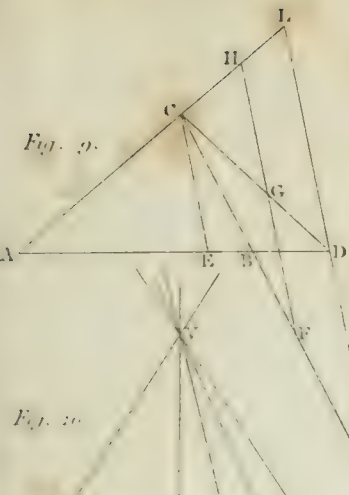


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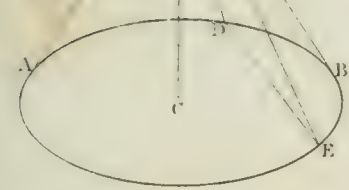


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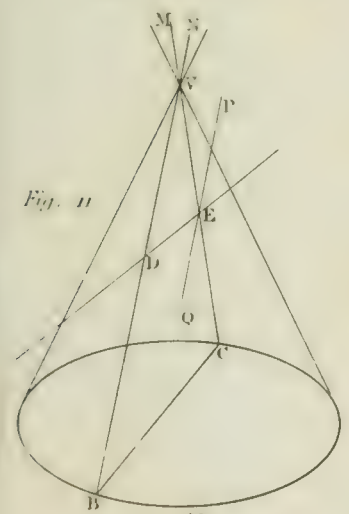
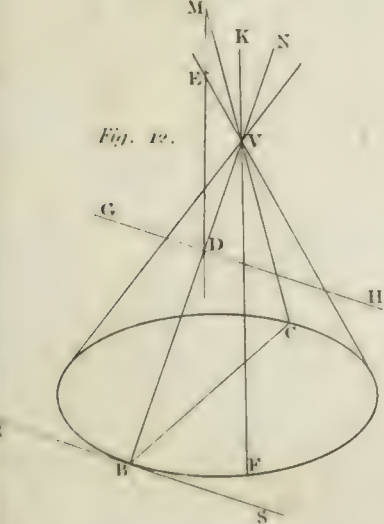


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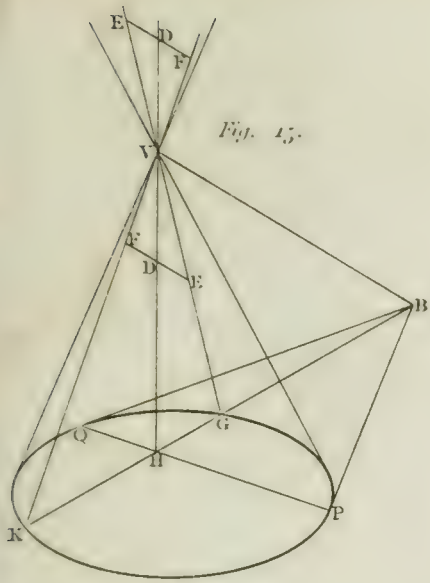


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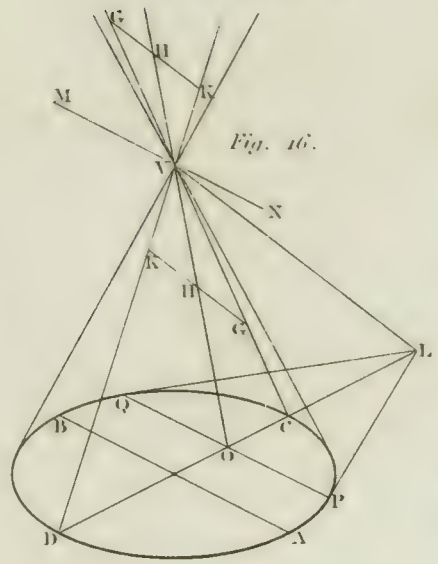


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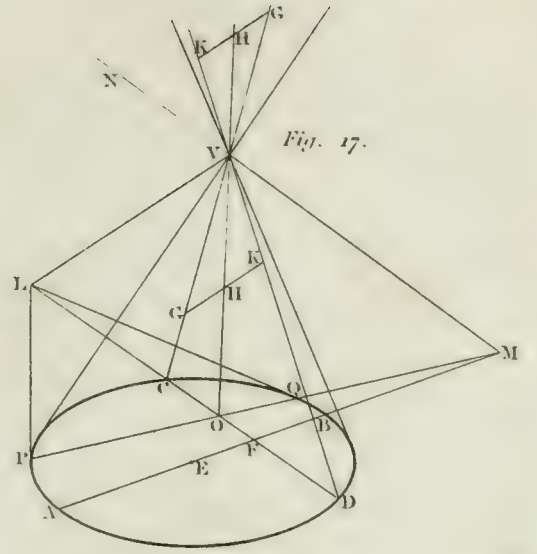


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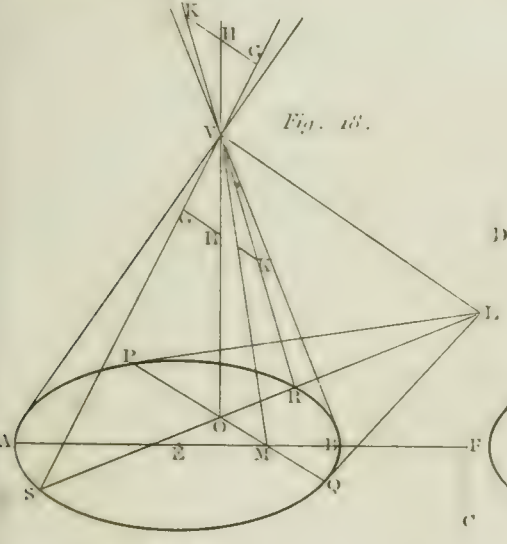


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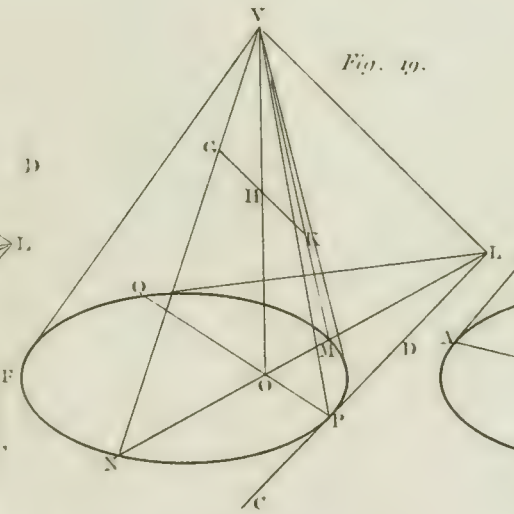


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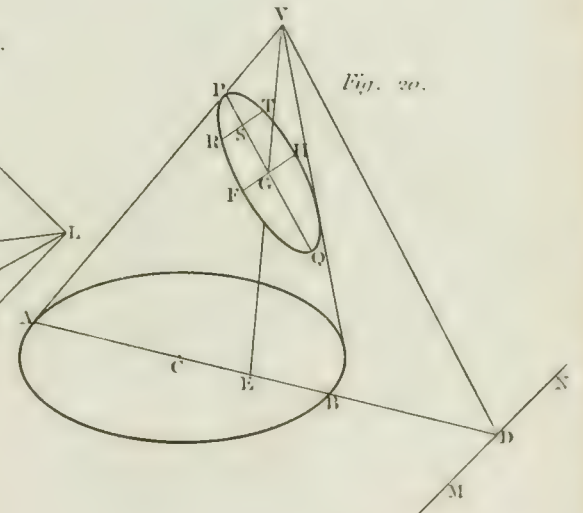


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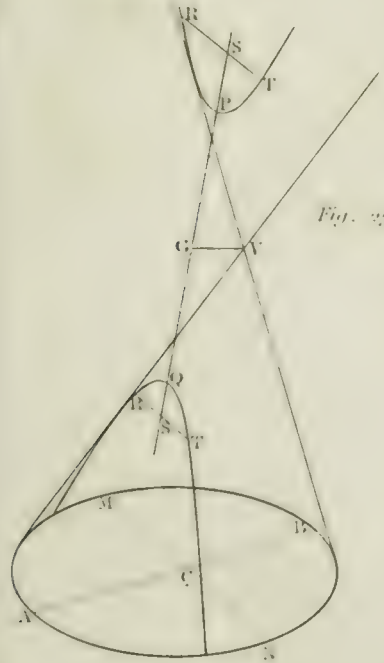


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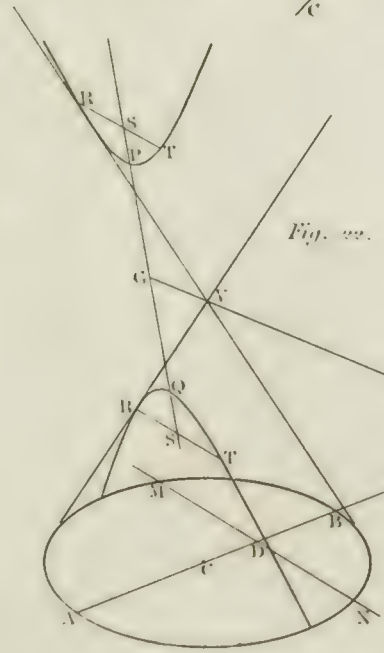


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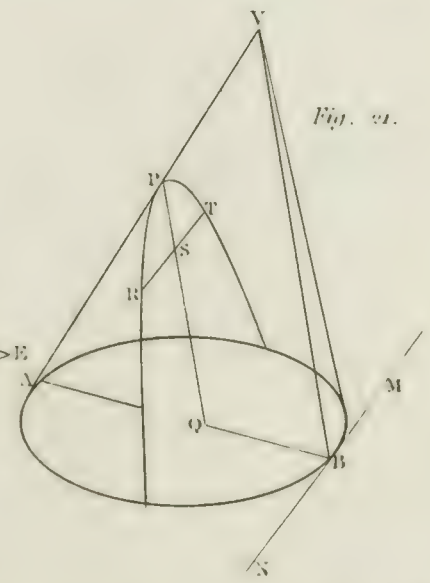


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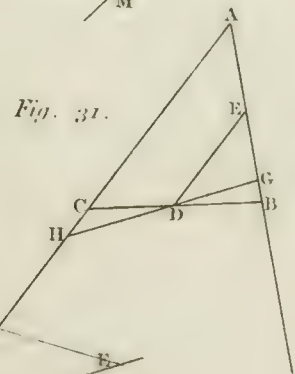
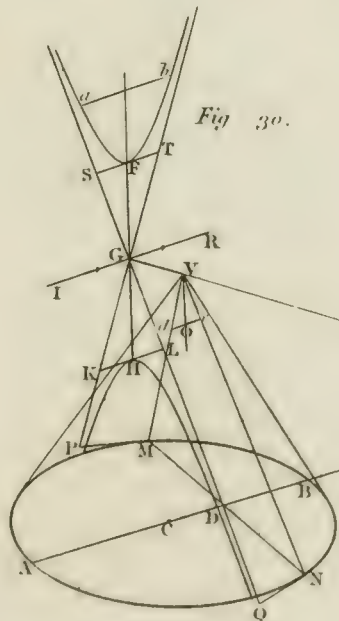
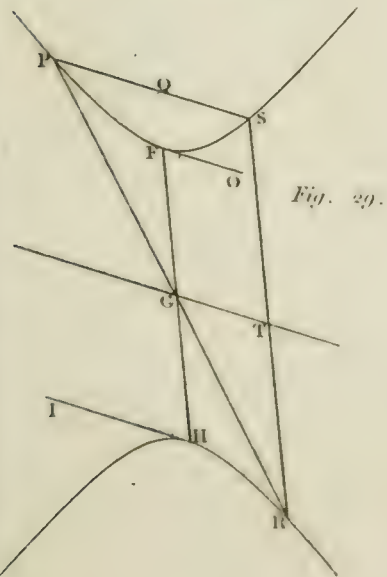
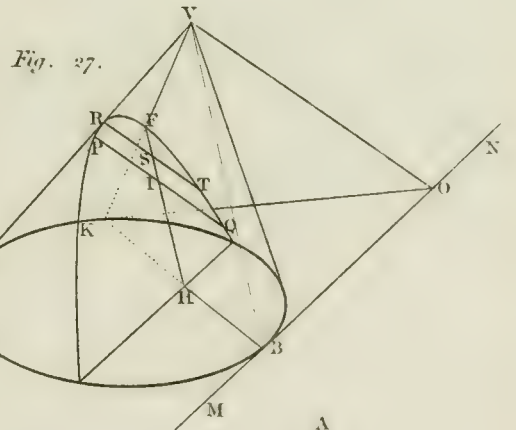
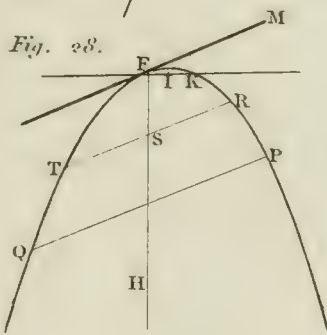
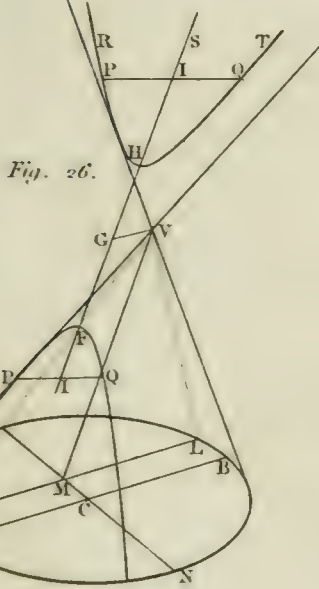
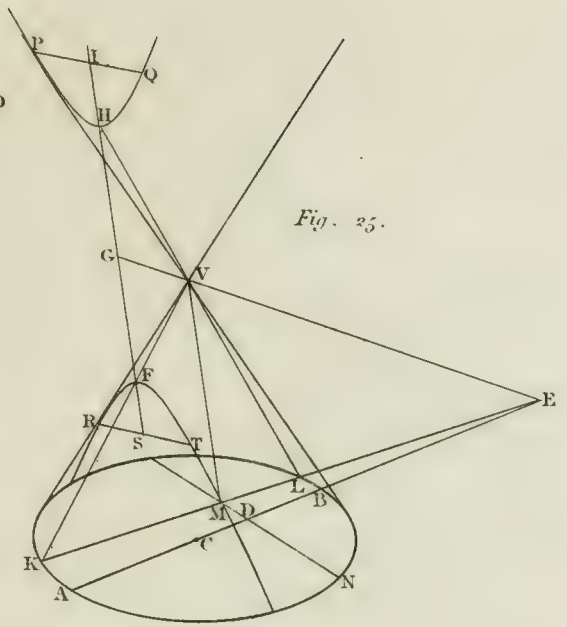
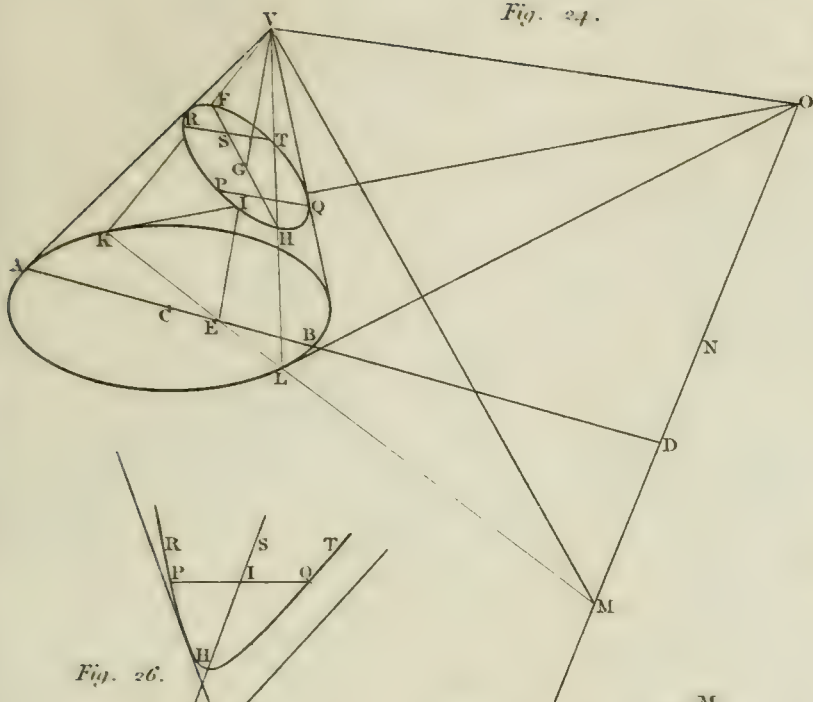


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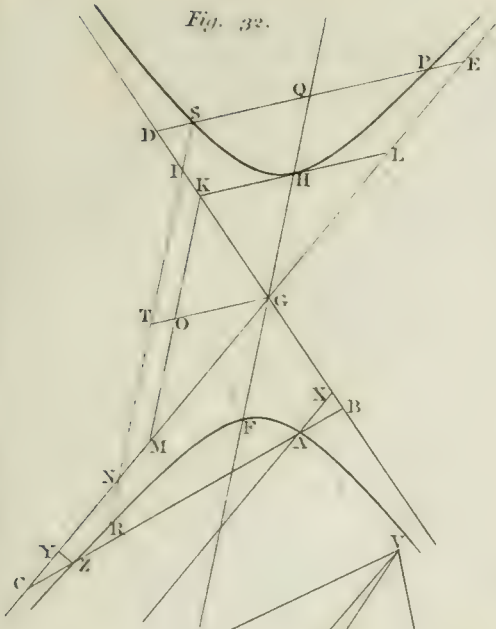


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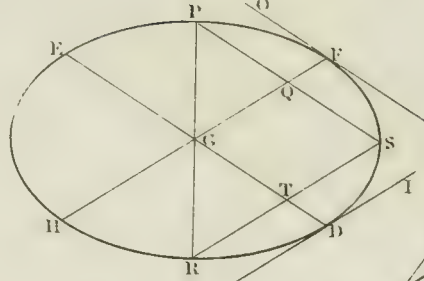


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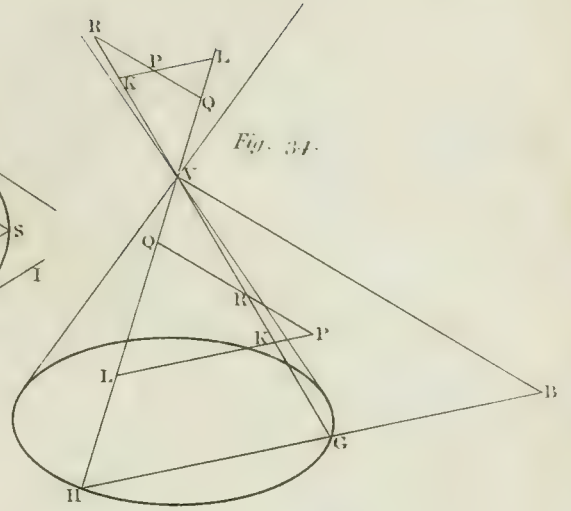


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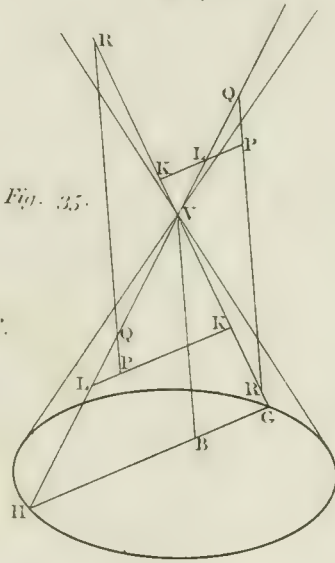
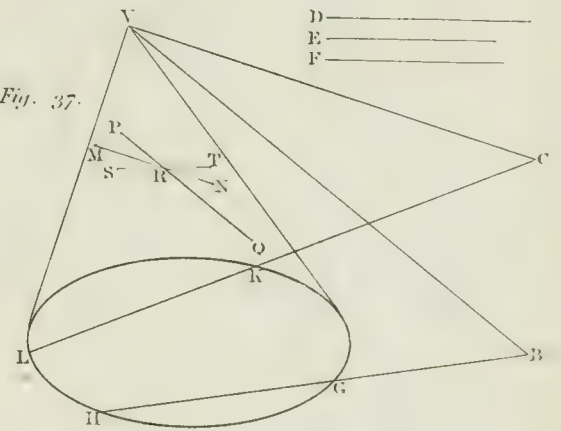


Fig. 37.



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Fig. 36.

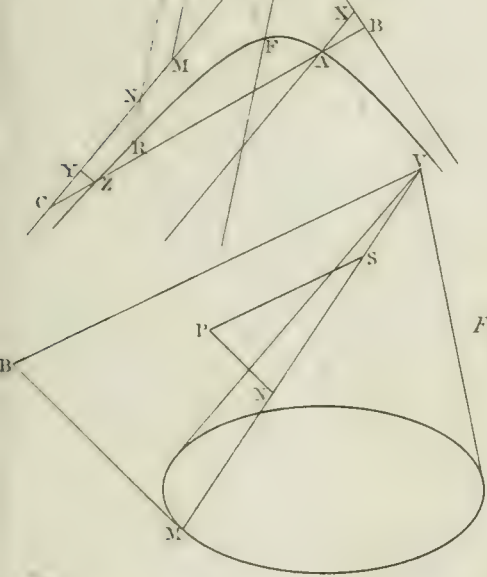


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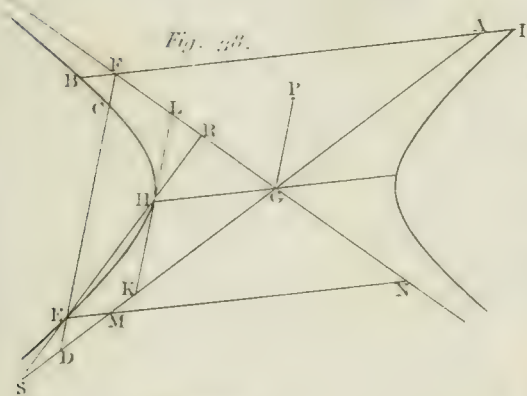


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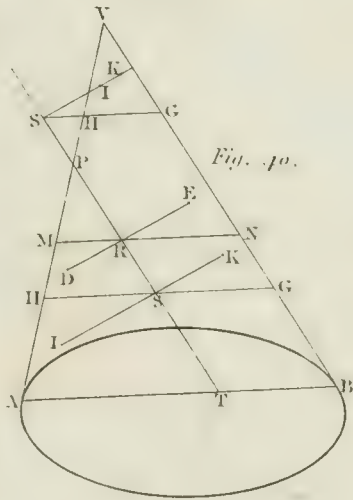


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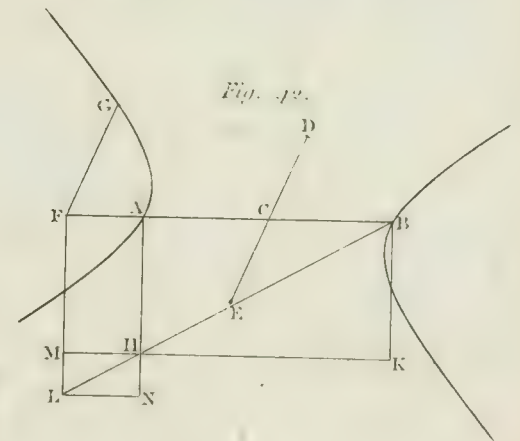


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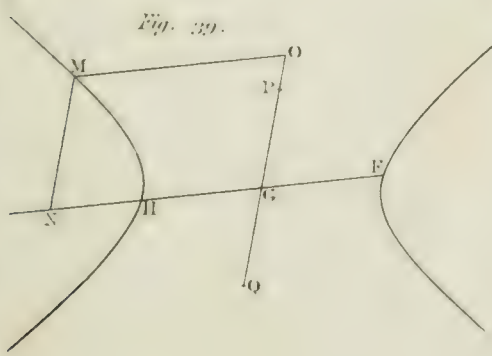


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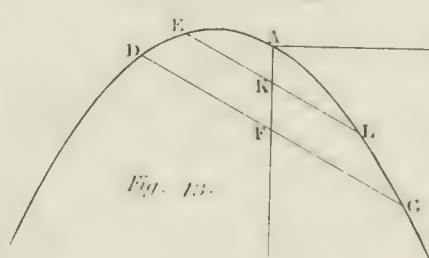
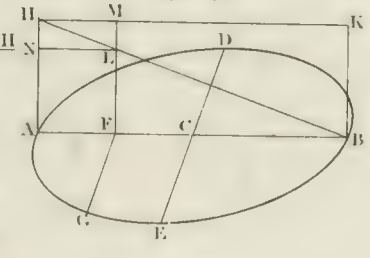


Fig. 41.



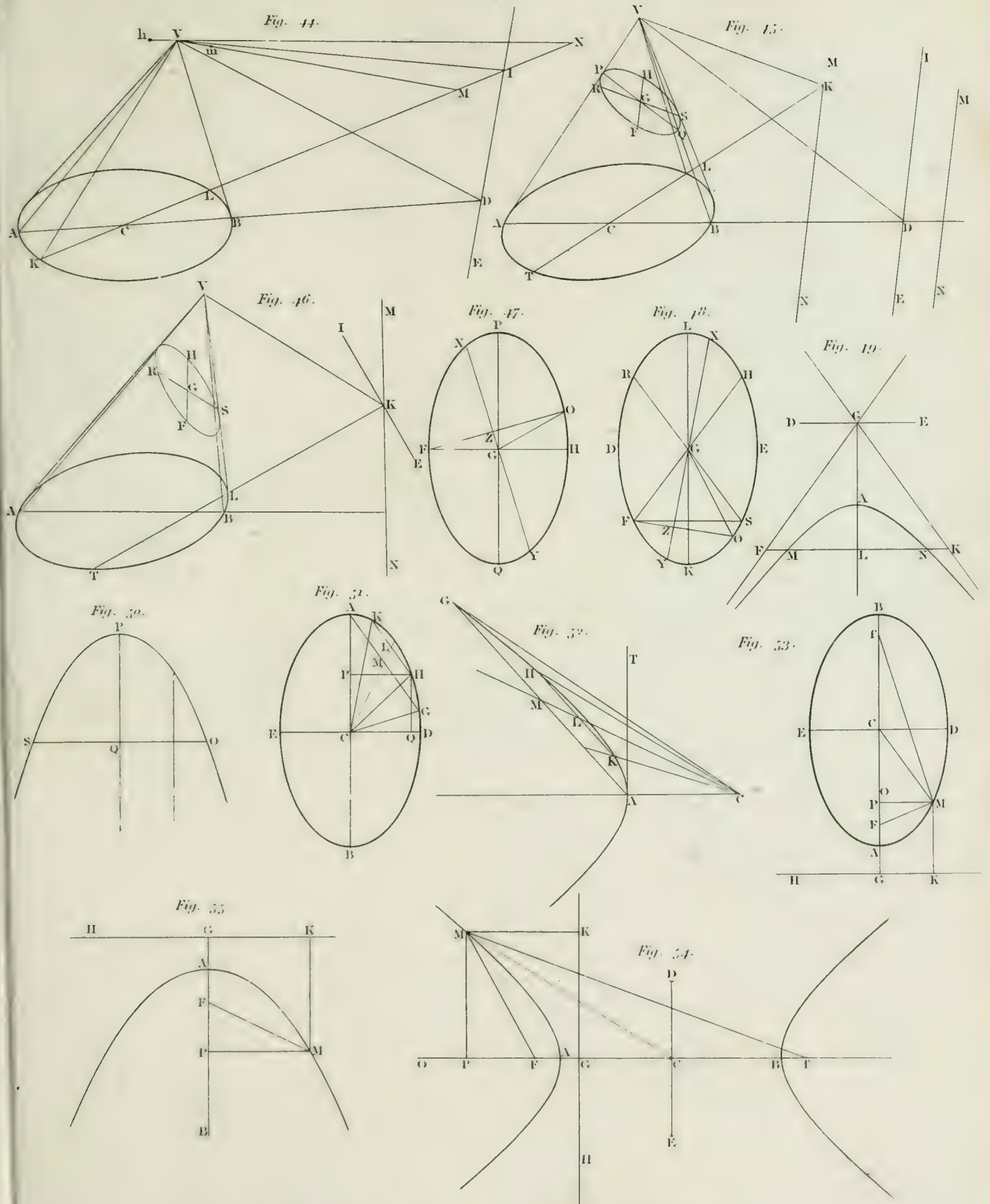


Fig. 1.

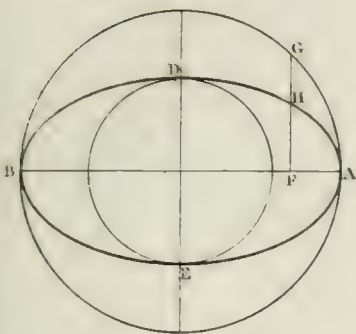


Fig. 5.

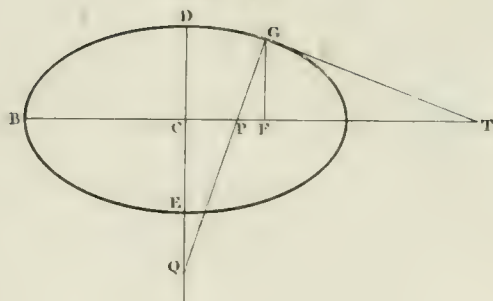


Fig. 9.

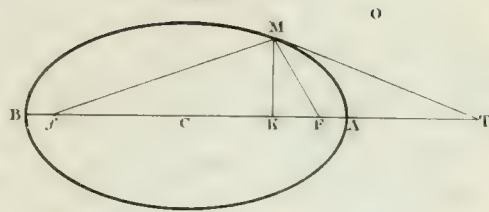


Fig. 2.

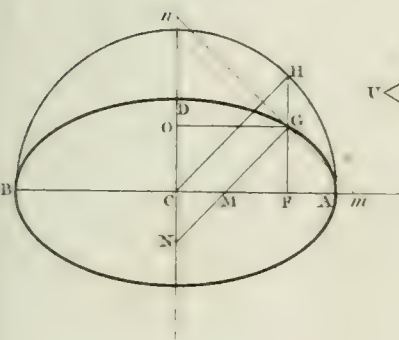


Fig. 6.

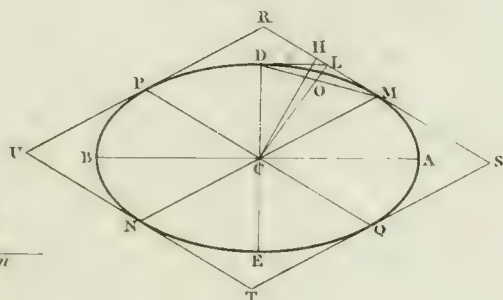


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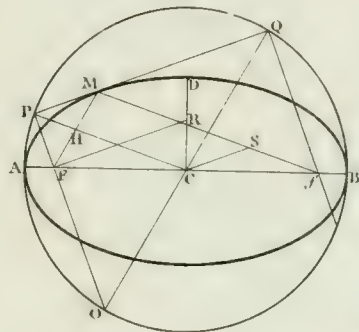


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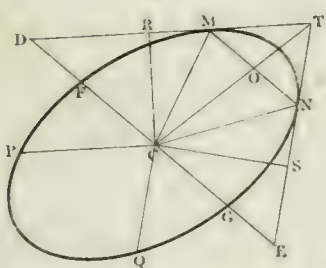


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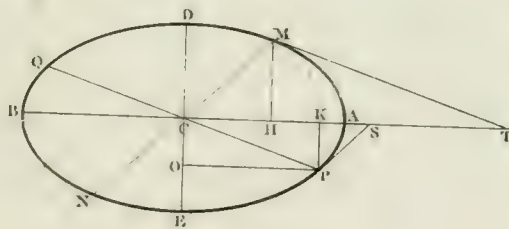


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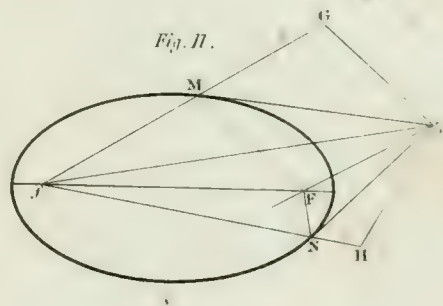


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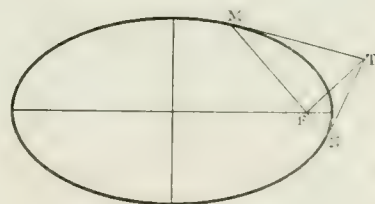


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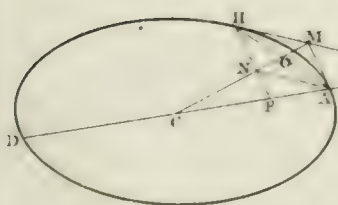


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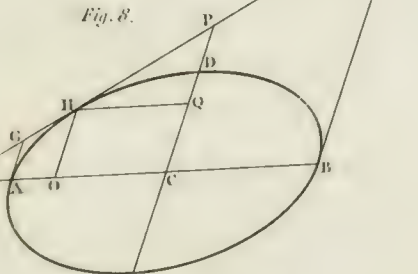
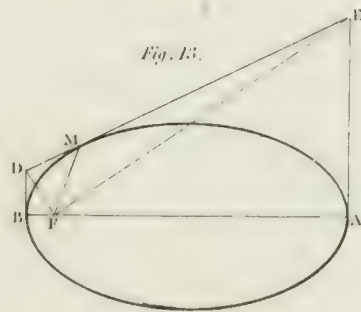
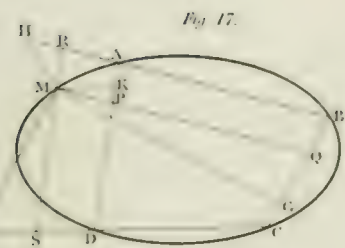
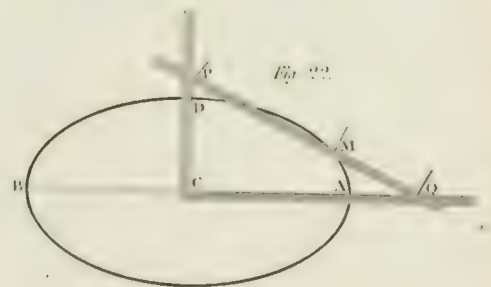
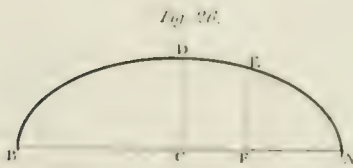
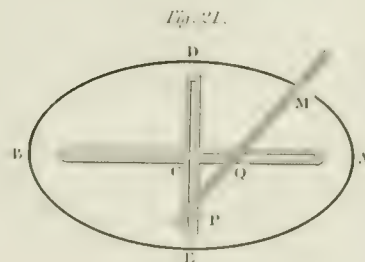
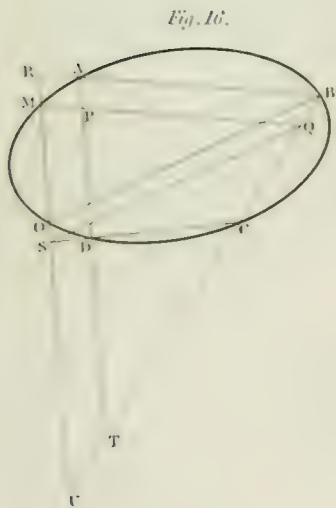
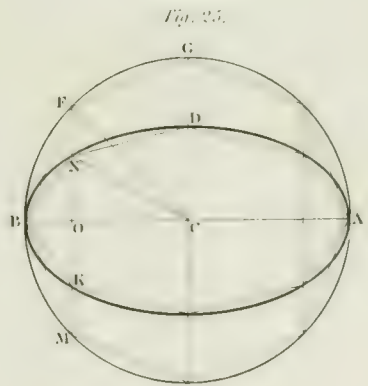
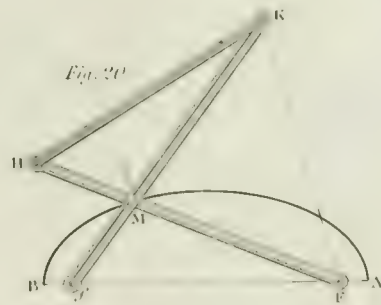
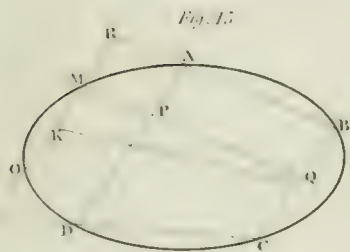
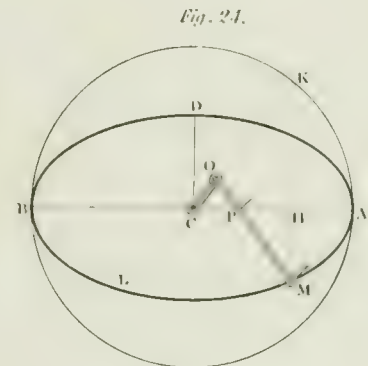
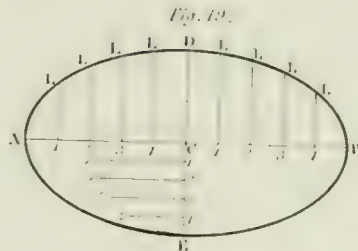
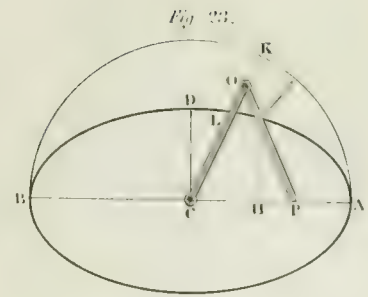
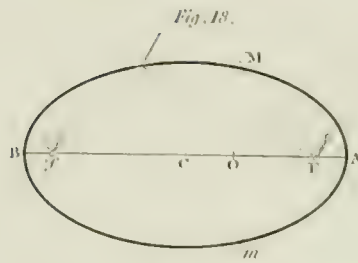
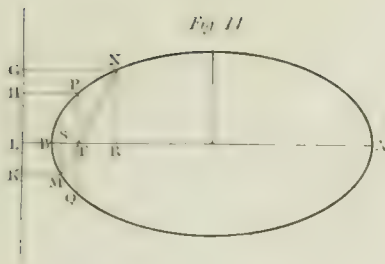


Fig. 13.





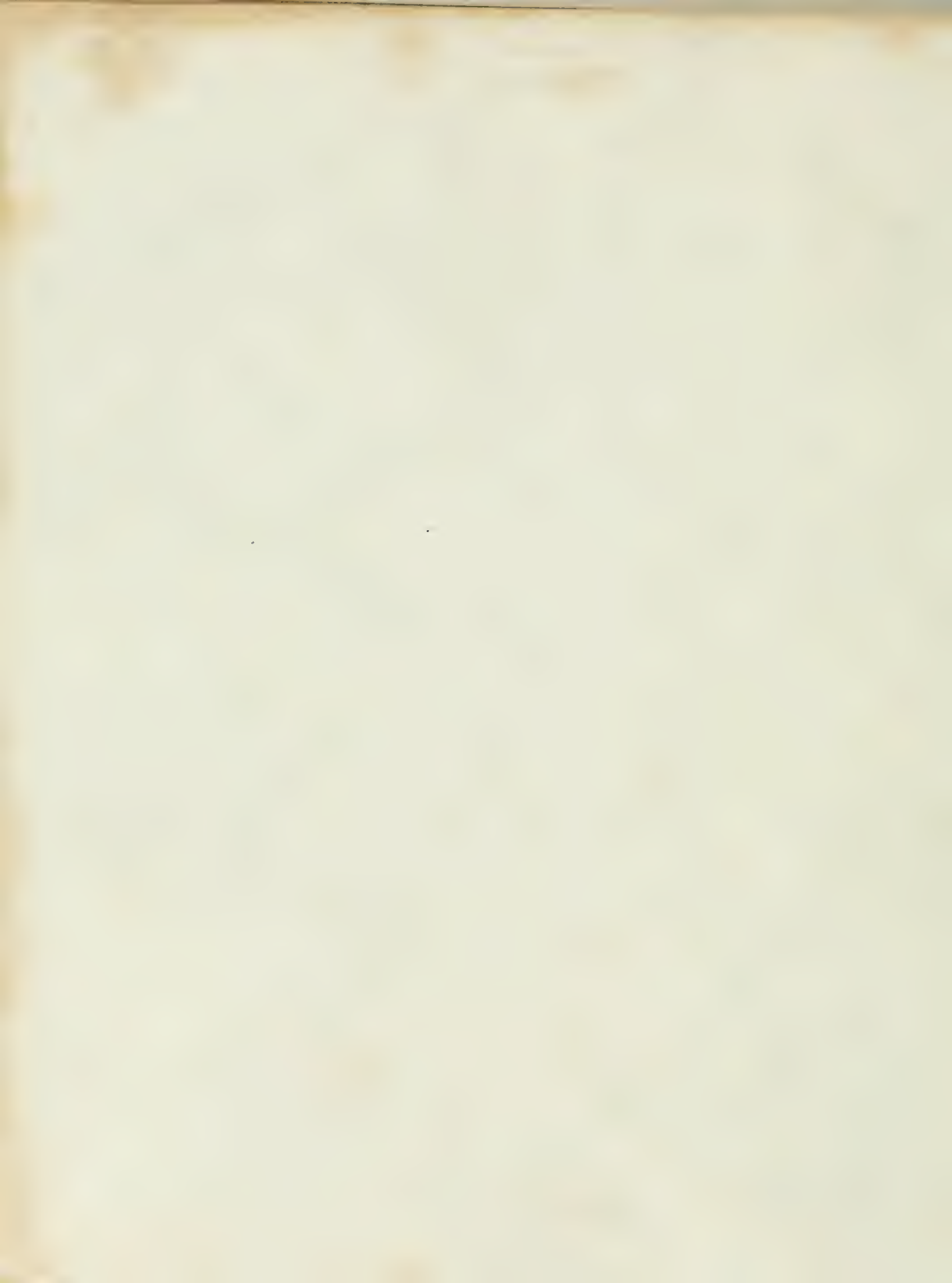


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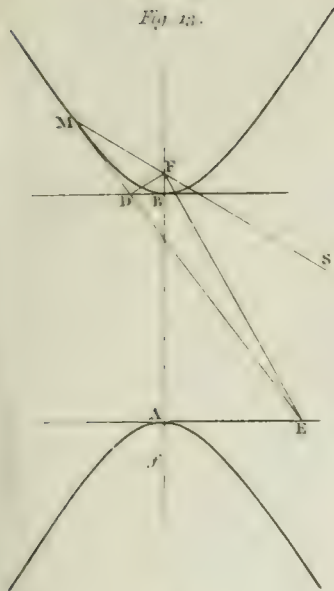


Fig. 14.

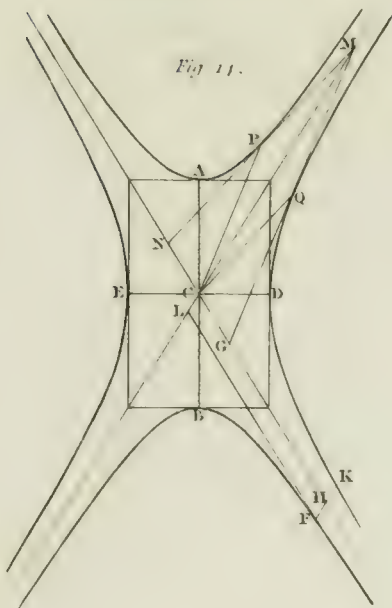


Fig. 15.

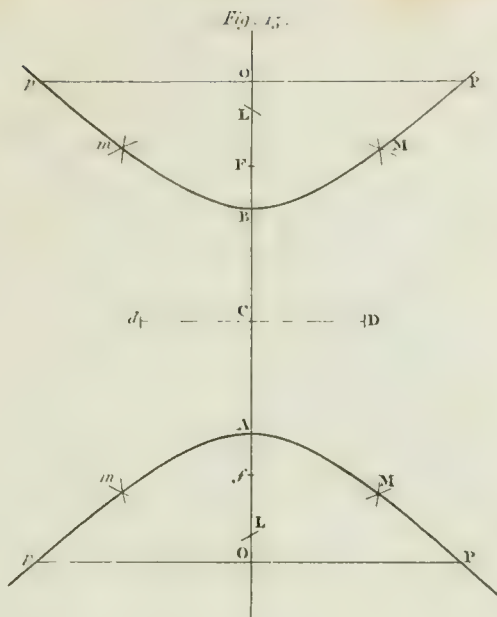


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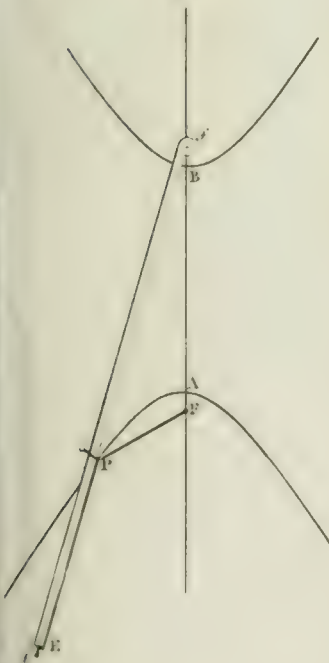


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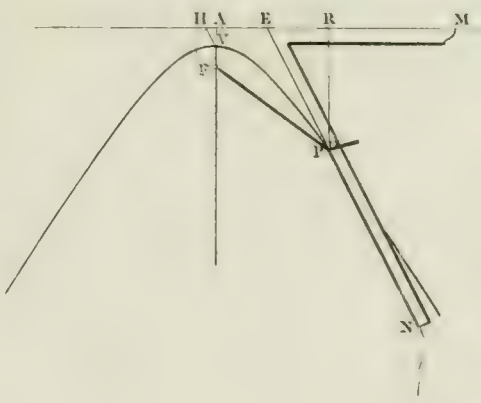


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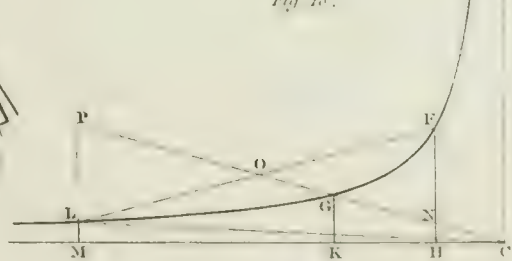


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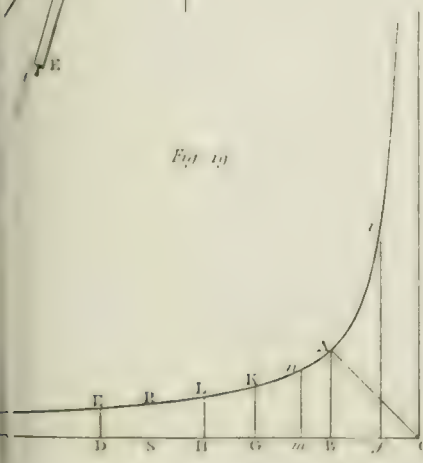


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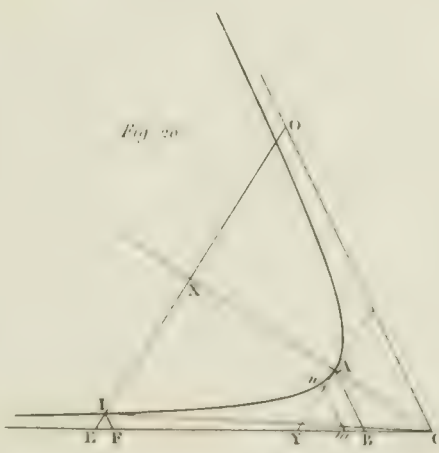
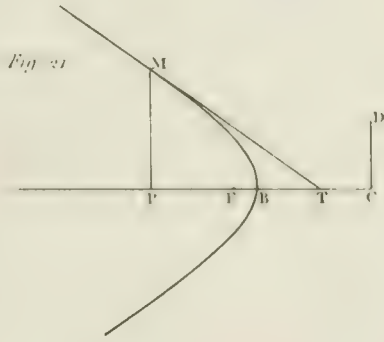


Fig. 21.



CONICS.
PARABOLA.

Fig. 1.

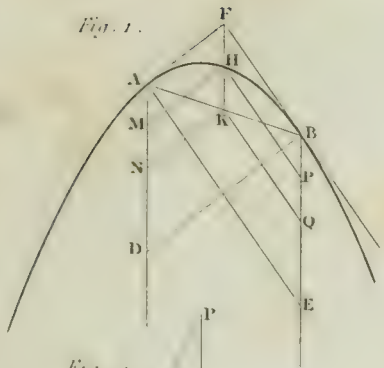


Fig. 2.

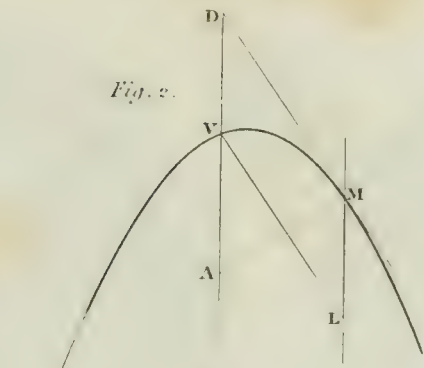


Fig. 3.

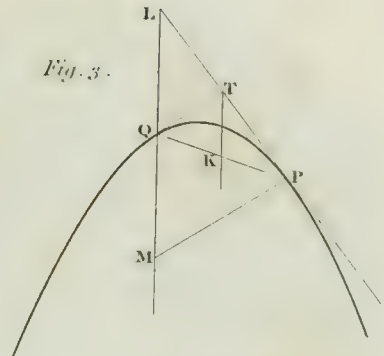


Fig. 4.

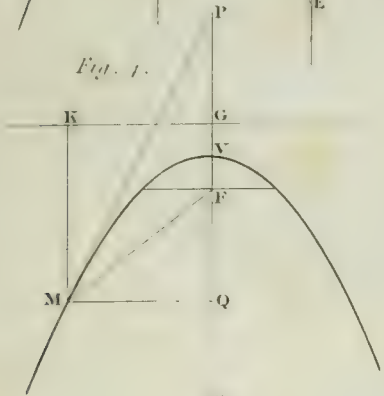


Fig. 5.

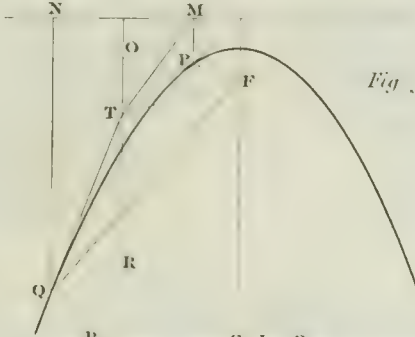


Fig. 6.

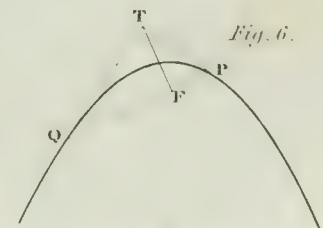


Fig. 7.

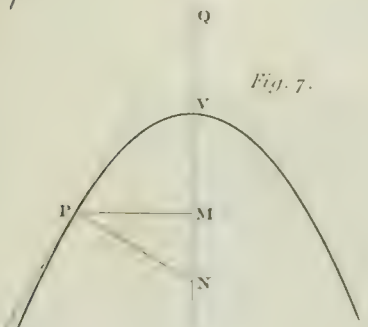


Fig. 8.

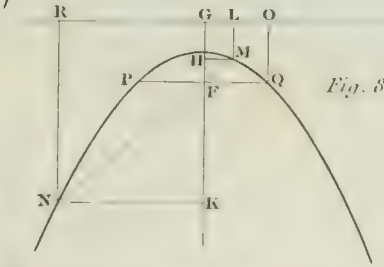


Fig. 9.

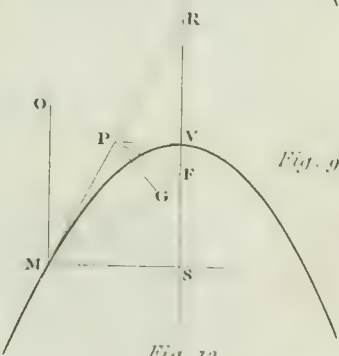


Fig. 12.

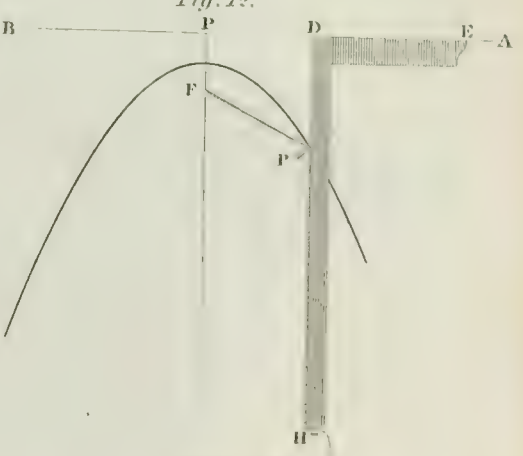


Fig. 10.

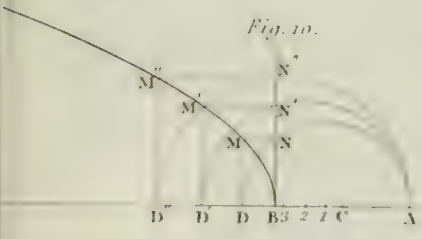


Fig. 11.

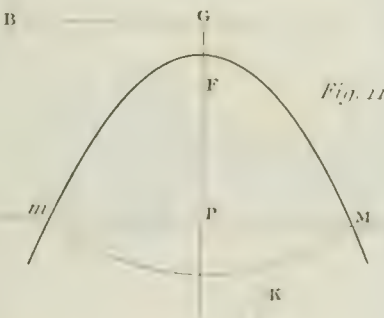


Fig. 16.

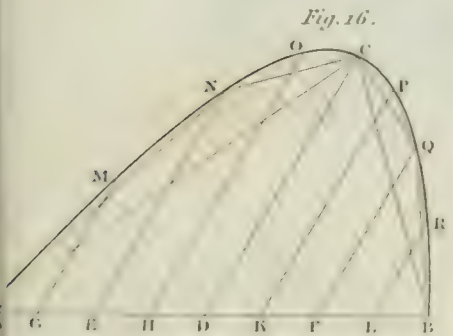


Fig. 13.

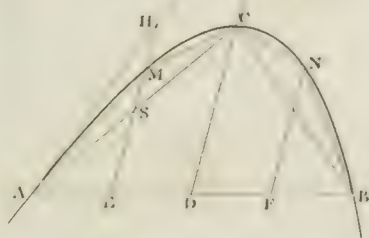


Fig. 14 & 15.

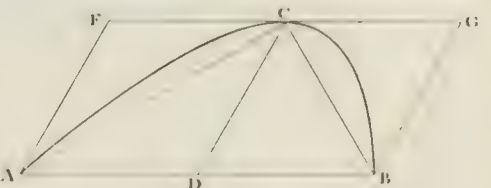


Fig. 1.



CALICO PRINTING.

Fig. 2.

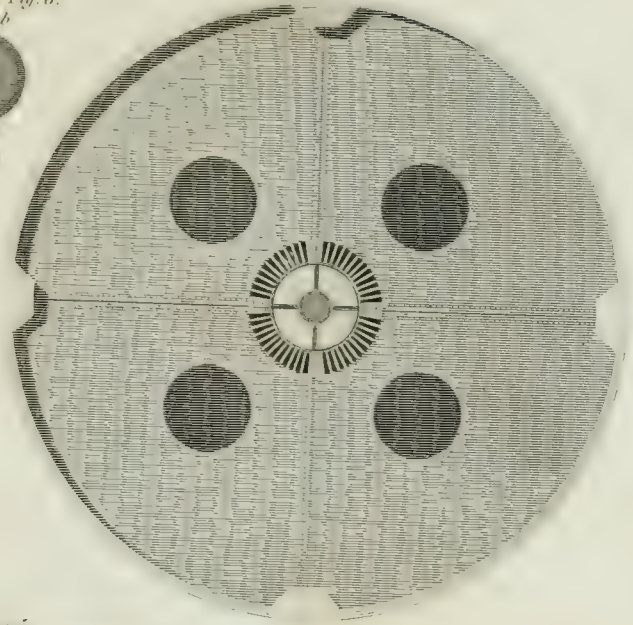


Fig. 5.

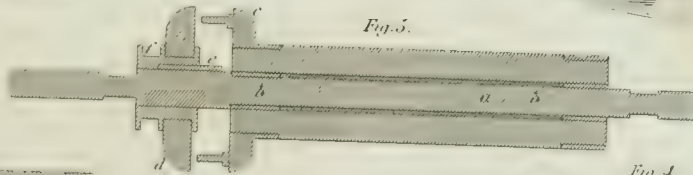


Fig. 3.

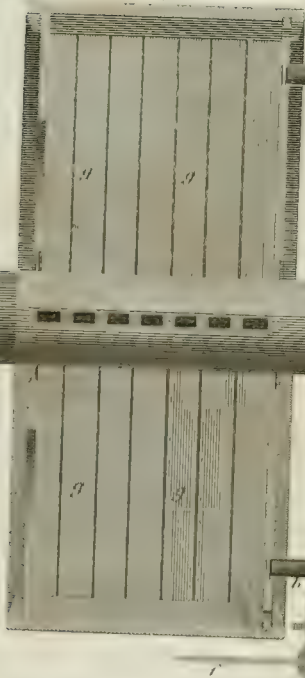
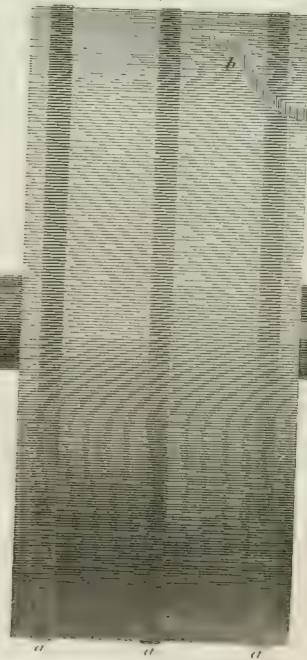
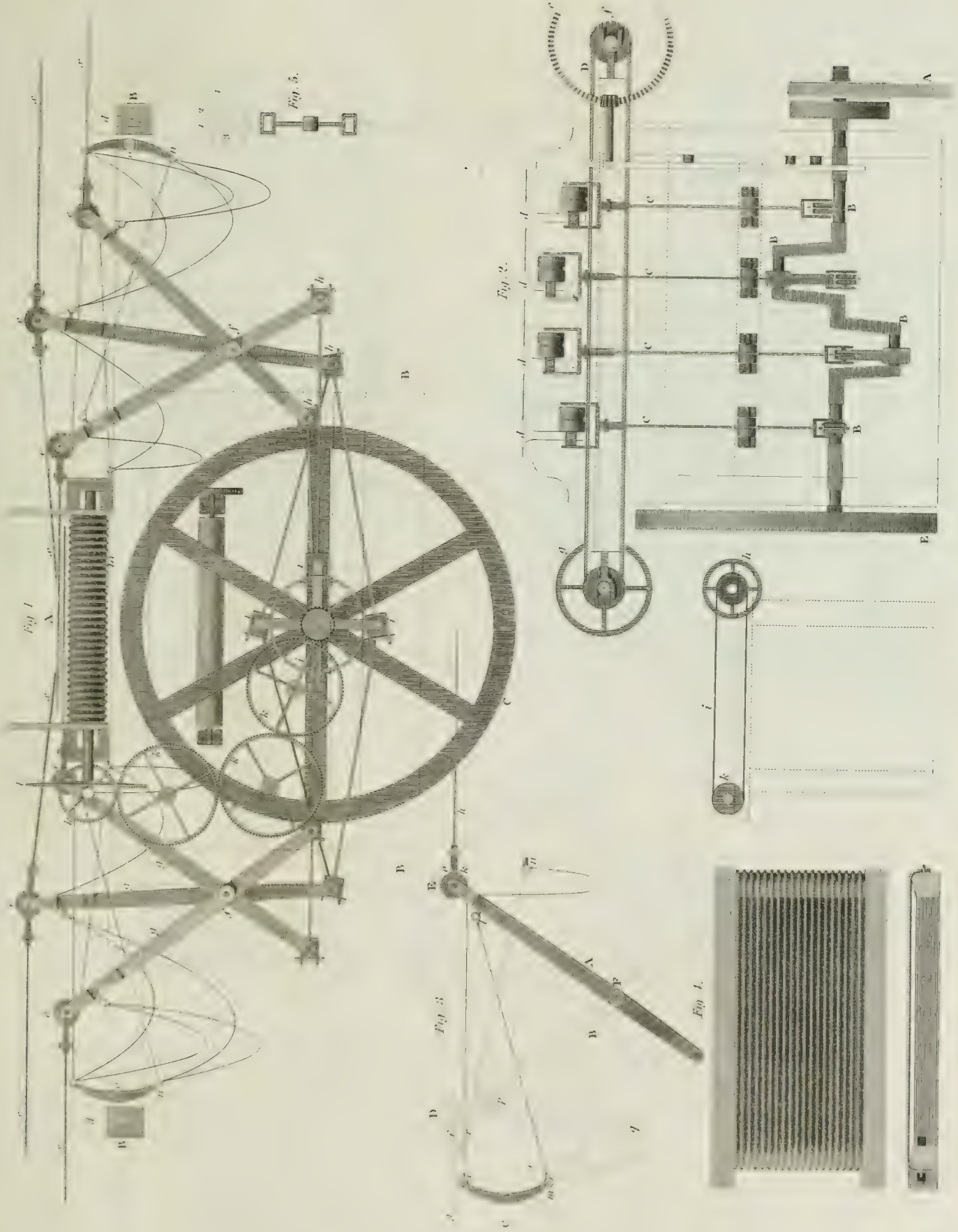


Fig. 4.



BATTING MACHINE.



COTTON MANUFACTURE,
DELLING.

Plan.

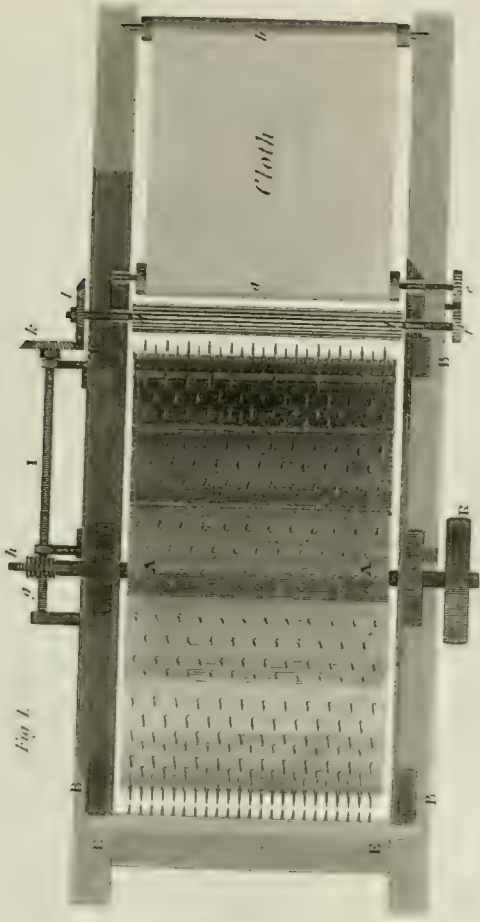


Fig. 1.

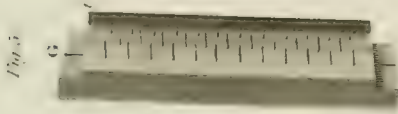


Fig. 2.

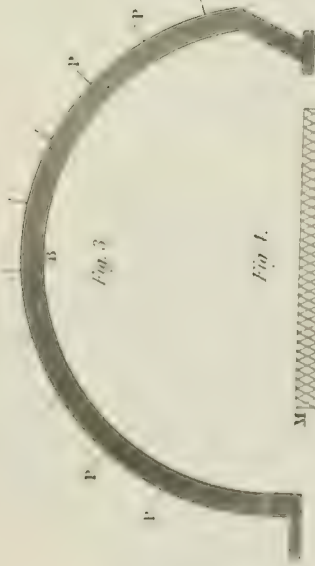
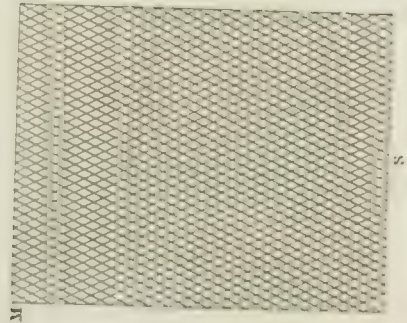


Fig. 3.

Fig. 4.



Section.

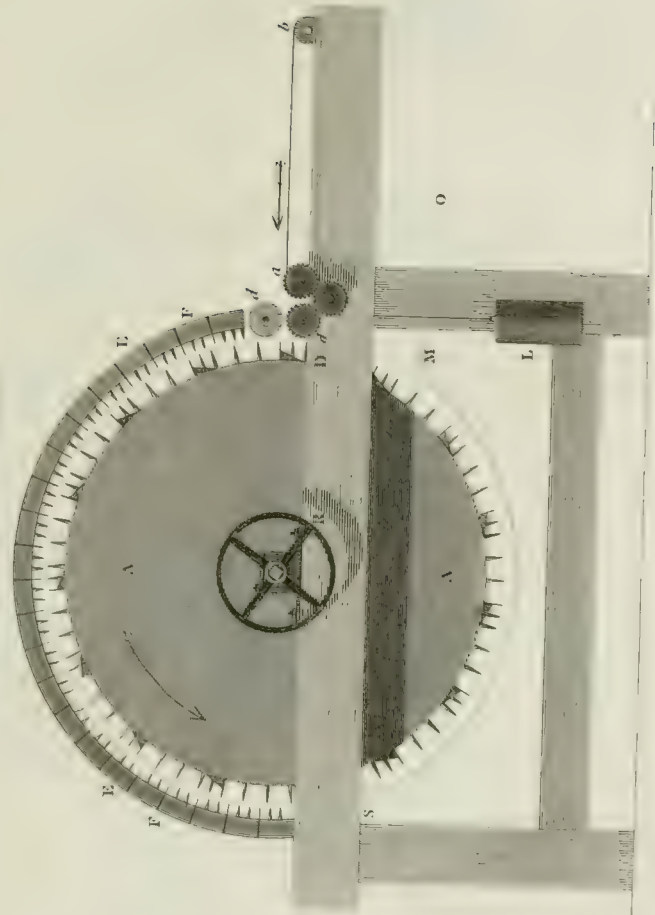


Fig. 5.

Drawn by James Barton.

Published as the Act directs, by Longman, Alcock, Bosc, Orme & Brown, Paternoster Row.

Engraved by Wilson Lowry.

CARDING.

Fig. 1. Plan

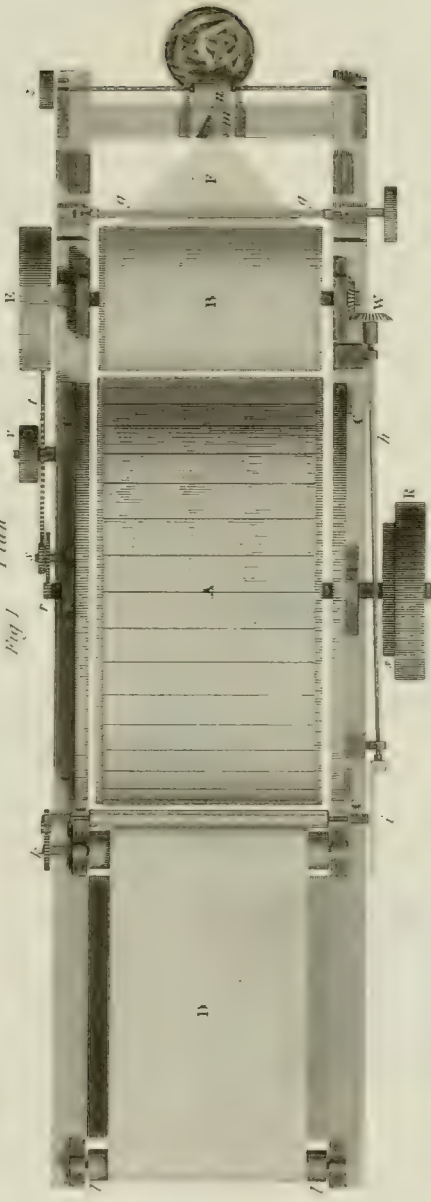


Fig. 2.

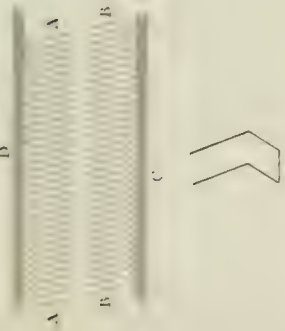


Fig. 3.

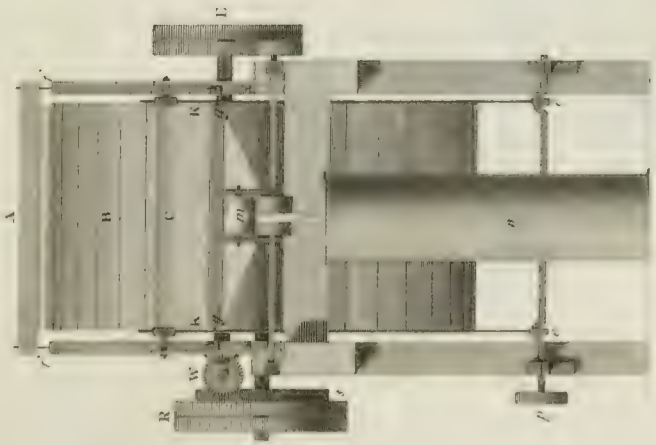
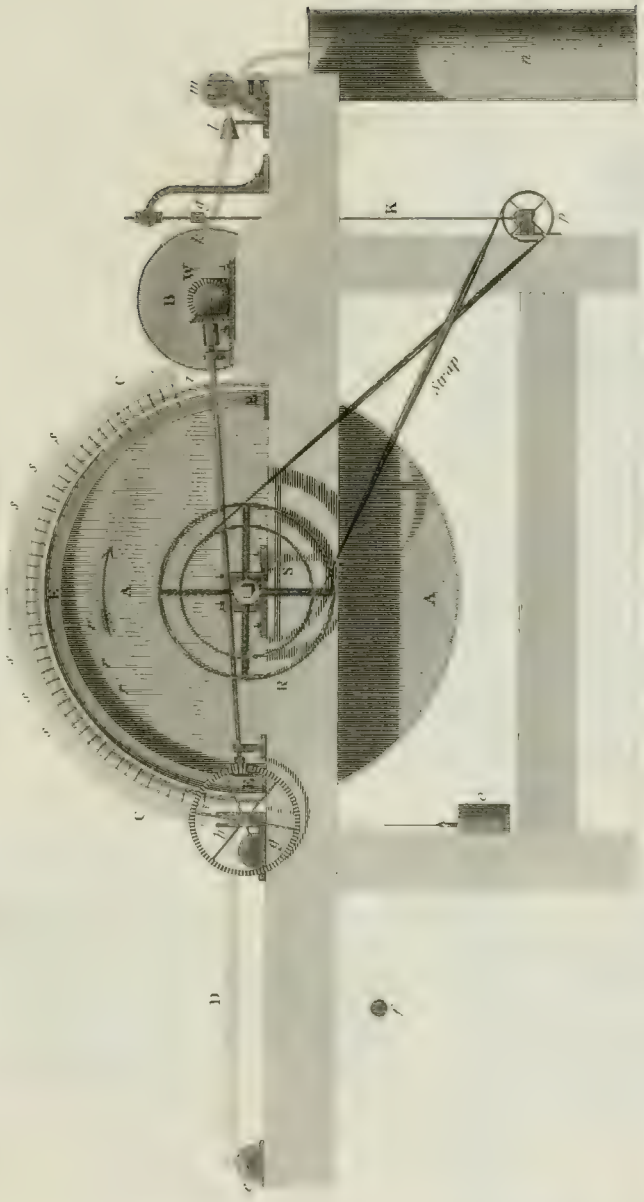
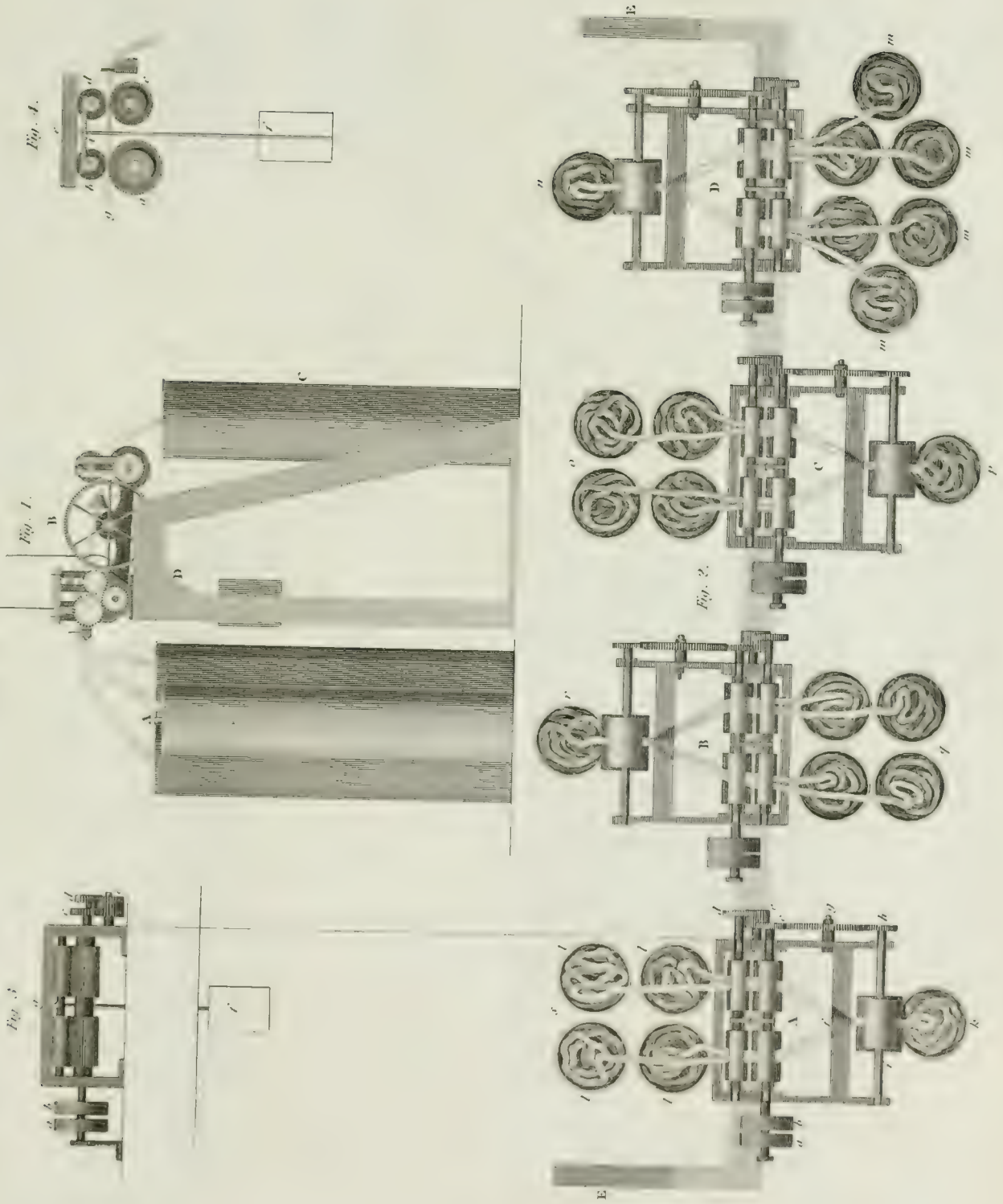


Fig. 2. Section



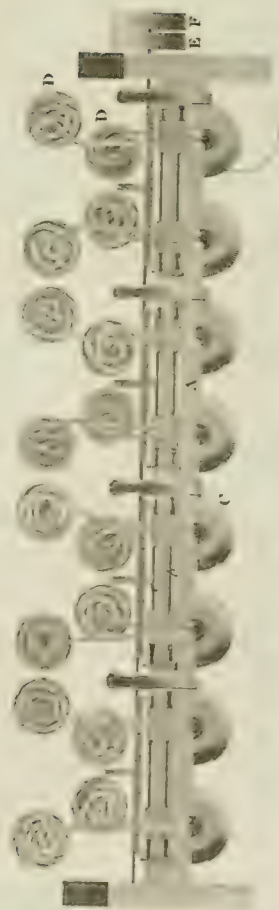
COTTON MANUFACTURE.

DRAWING FRAME.

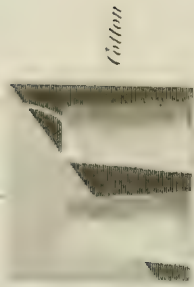


COTTON MANUFACTURE.

ROILING C.A.V. FRAME.

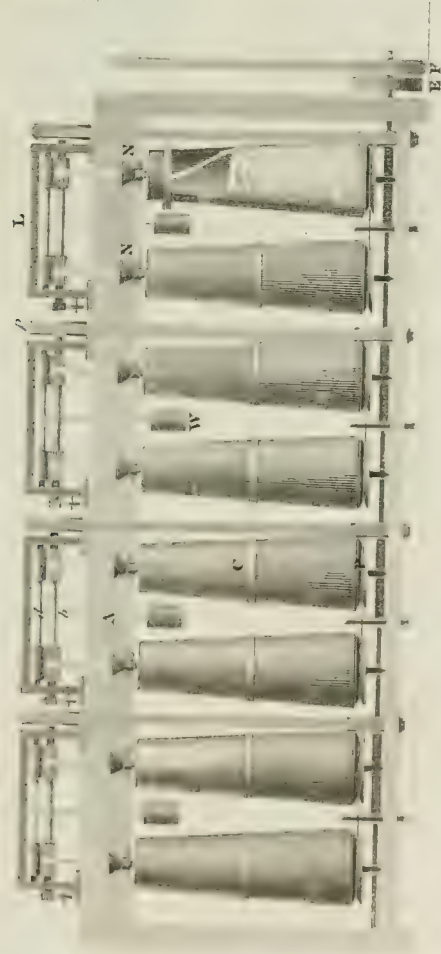


Winding Block



Cotton

- A Roller beam.
- b Front Roller.
- c Back Roller.
- d Top front Roller.
- C Revolving Gaa.
- W Roller weights.
- P Gaa Pulley.
- DB Back Gaa.
- E Driving Pulley.
- F Loose Pulley.
- NN Gaa Frames.
- L Clearer.
- p Front roller Pulley.
- k k Bobbins.



COTTON MANUFACTURE.
ROYING FRAME termed DOUBLE SPEEDER.

Fig. 1. Elevation in Front.

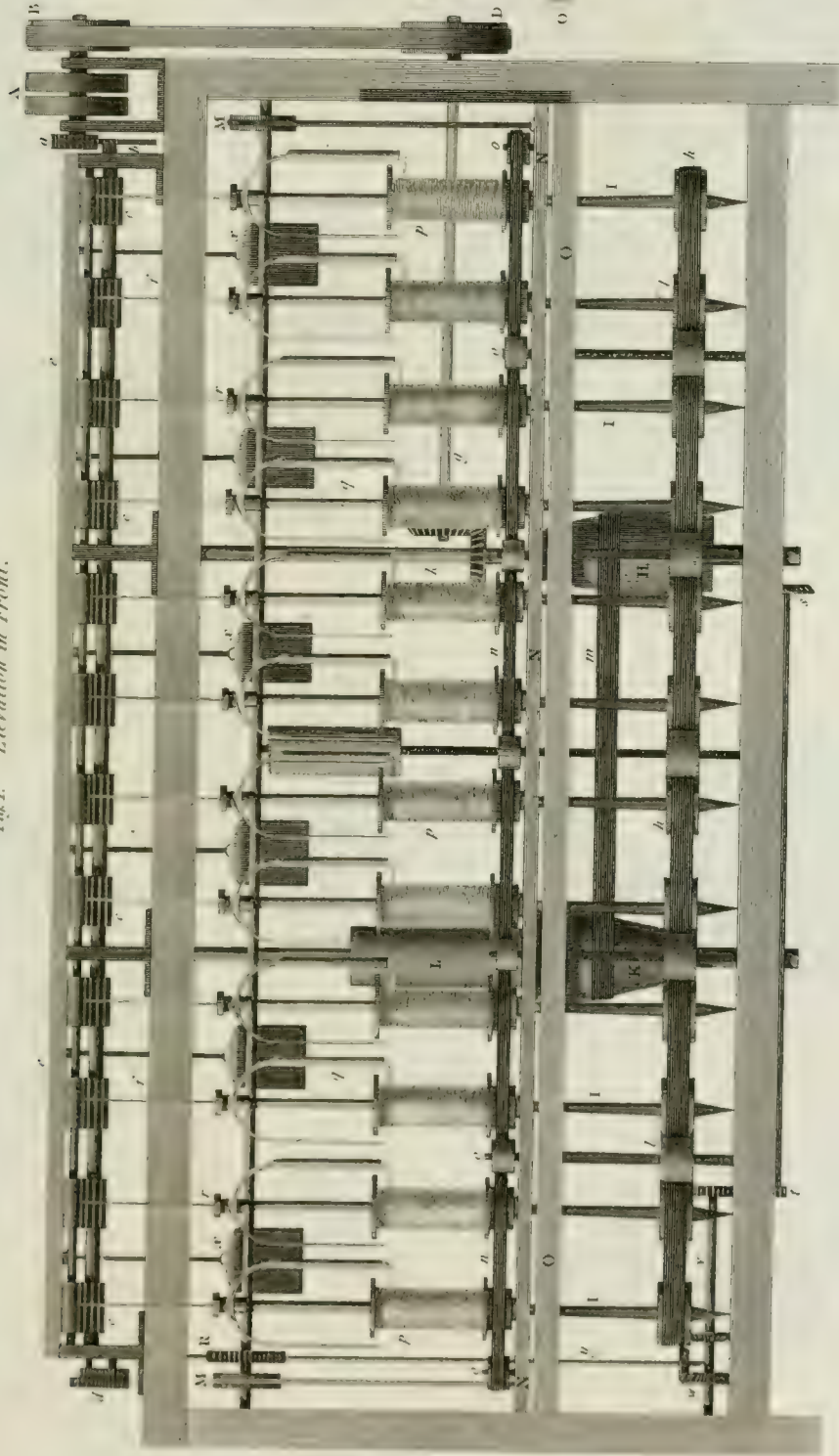
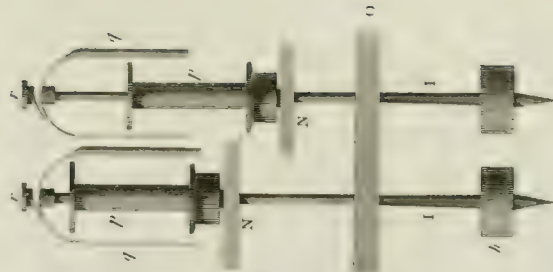


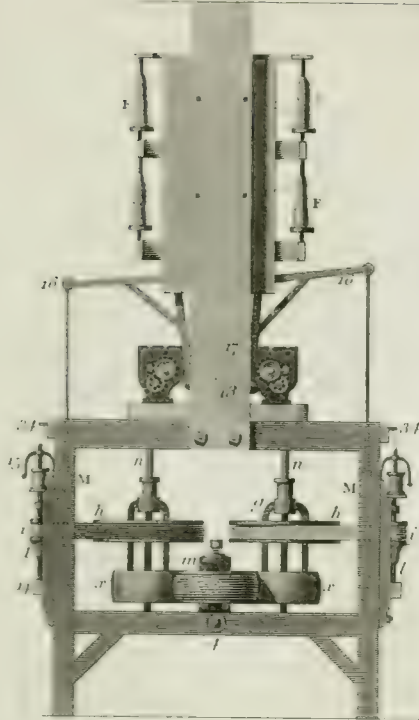
Fig. 2 & 3.



COTTON MANUFACTURE.

WATER SPINNING FRAME.

End View. Fig. 2.



Elevation. Fig. 1.

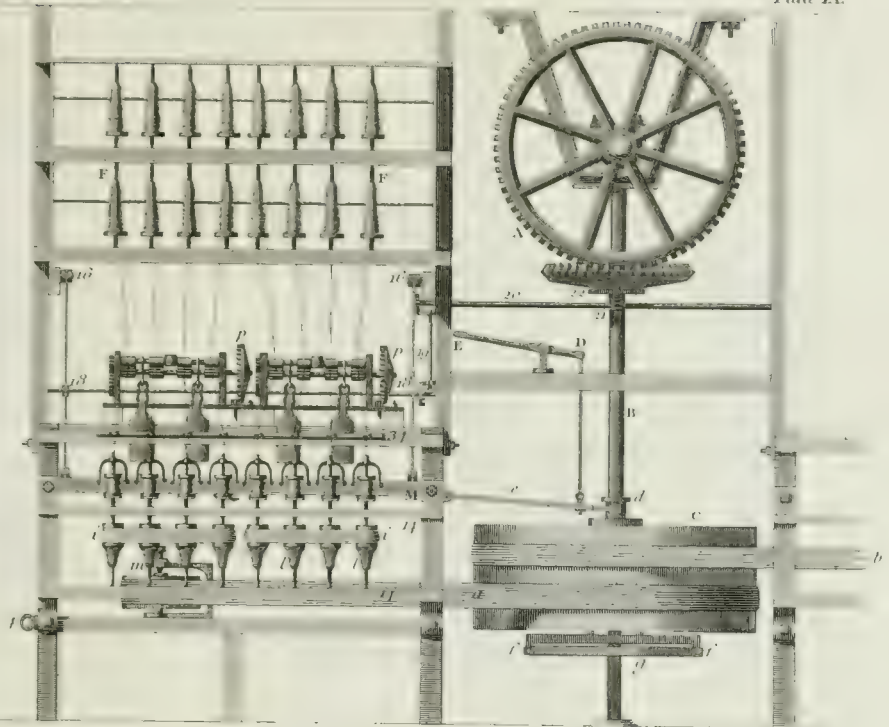
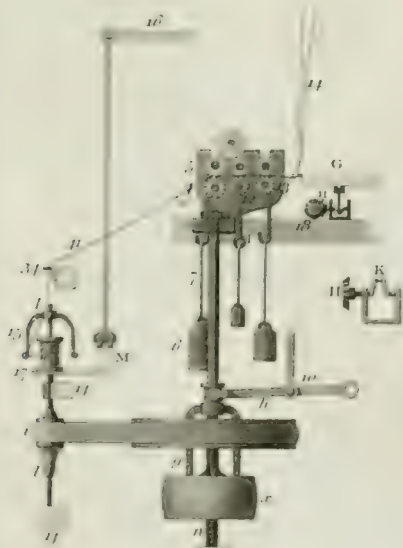
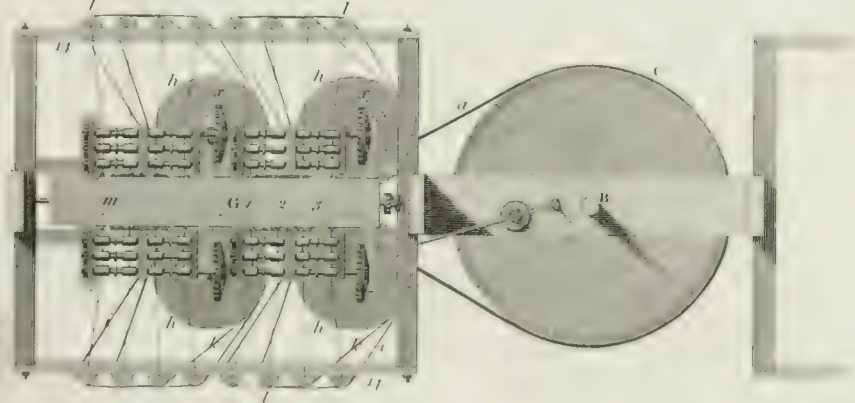


Plate IX.

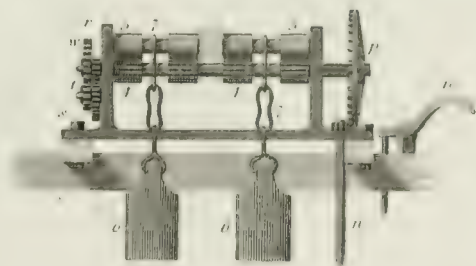
Plan. Fig. 3.



Spindle enlarged. Fig. 4.



End View. Fig. 6.



Elevation of Rollers. Fig. 5.

COTTON MANUFACTURE.
 THROSTLE SPINNING FRAME.

Fig. 1.

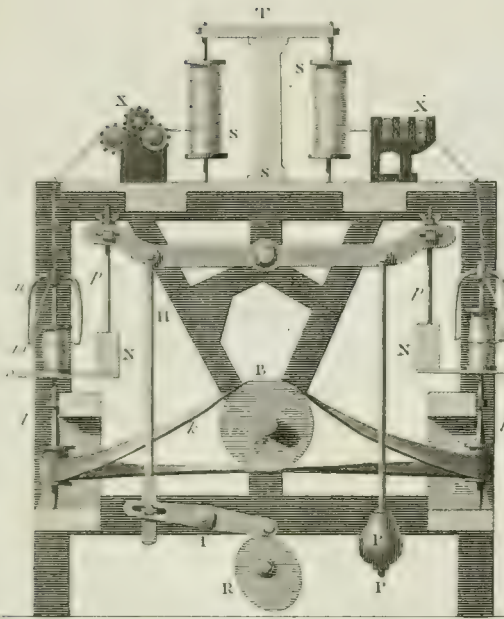


Fig. 2.

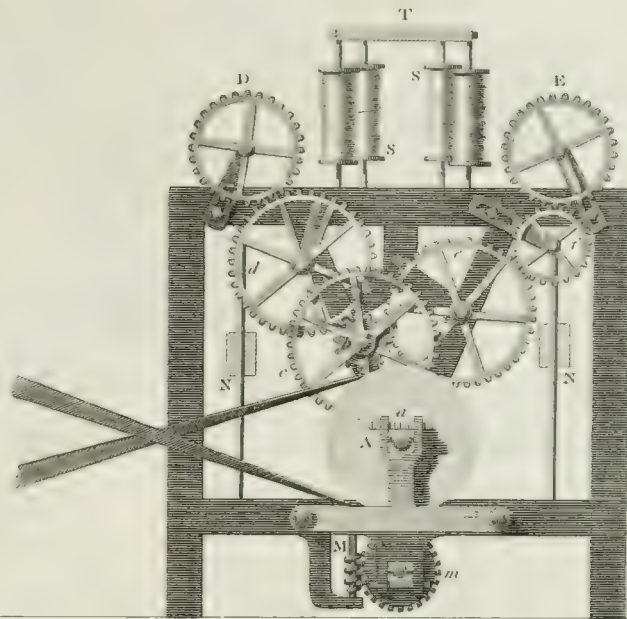
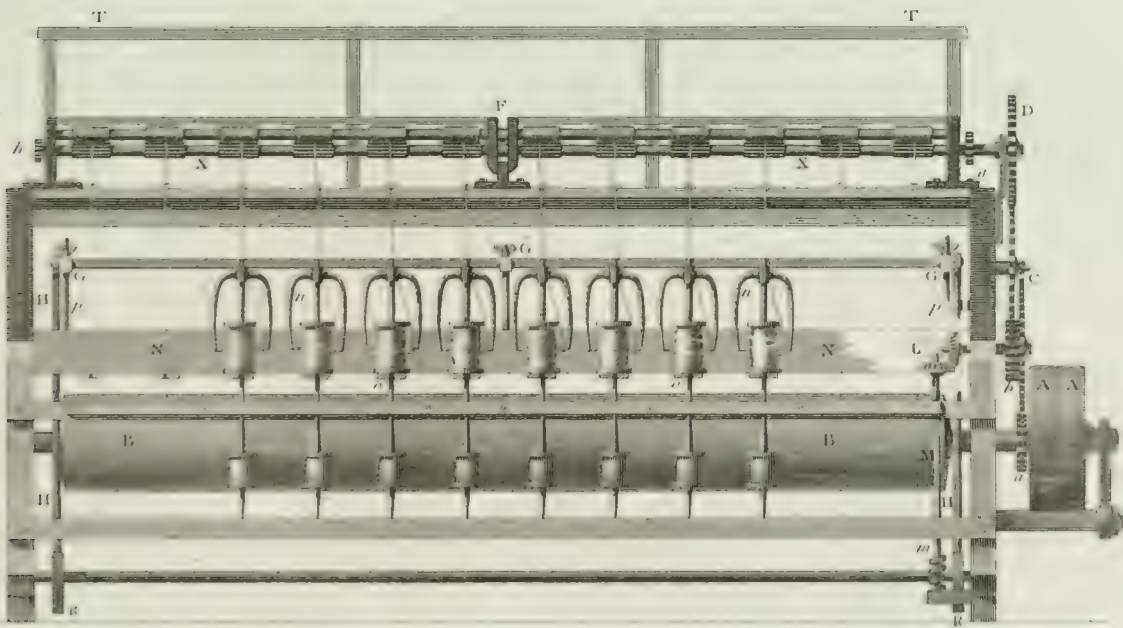
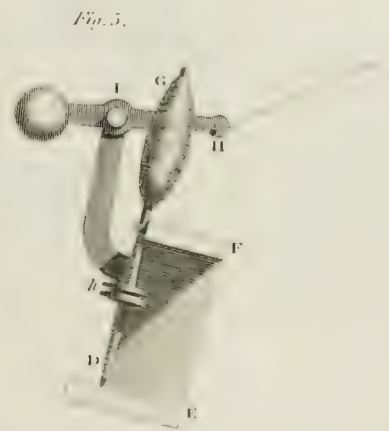
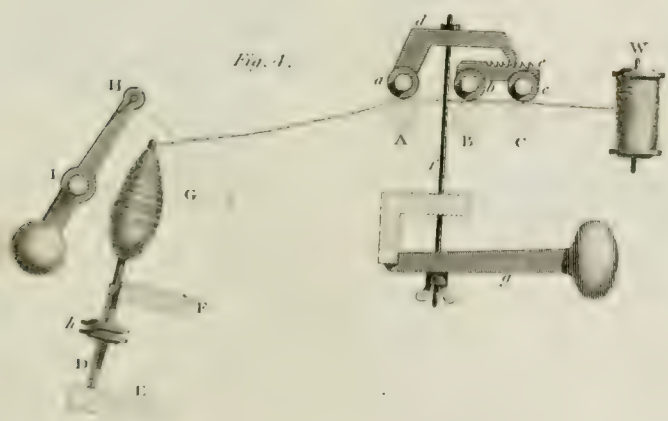
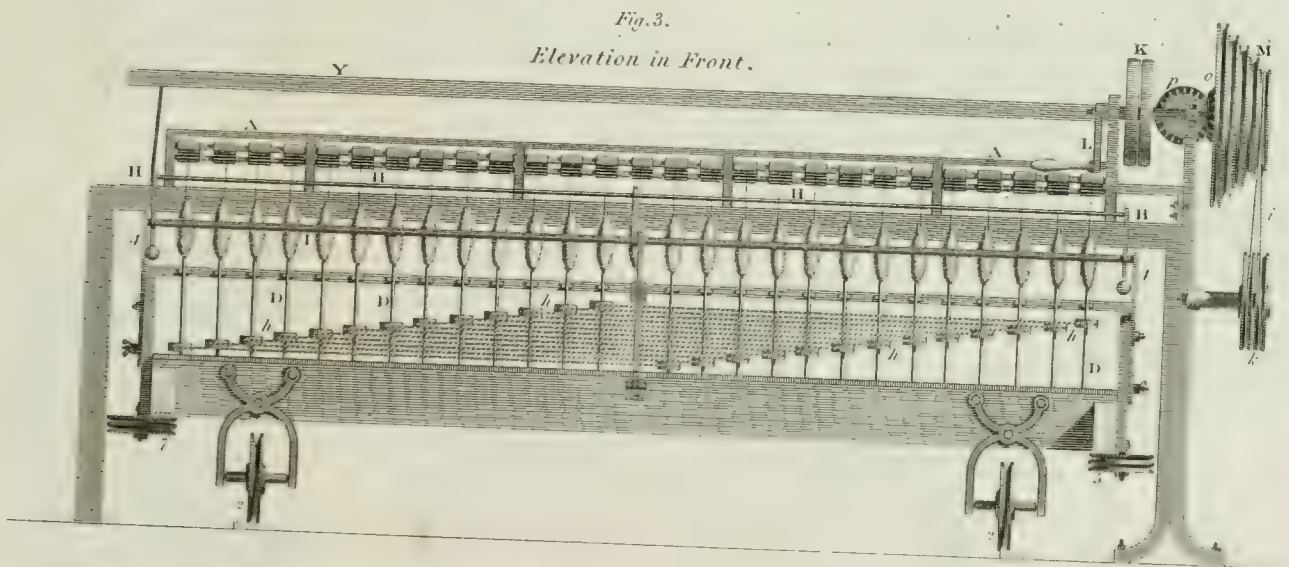
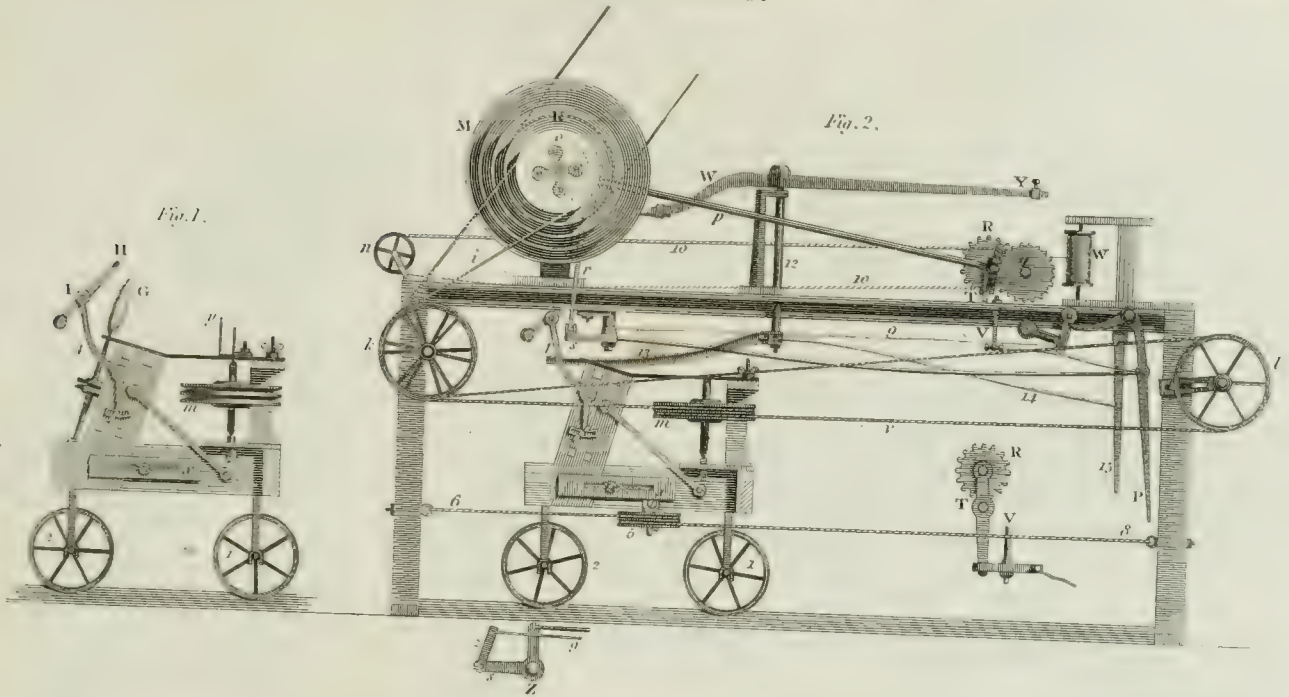


Fig. 3.

Elevation in Front.







REELING.

Fig 1

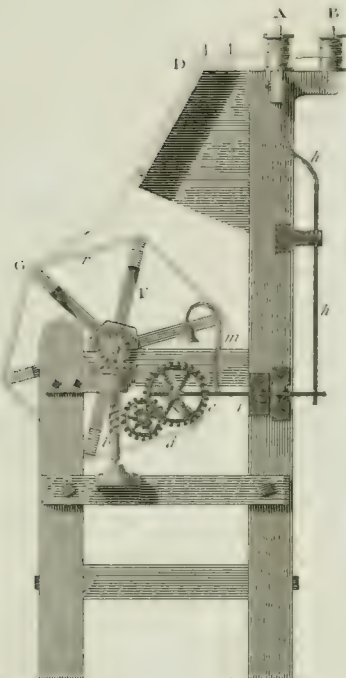
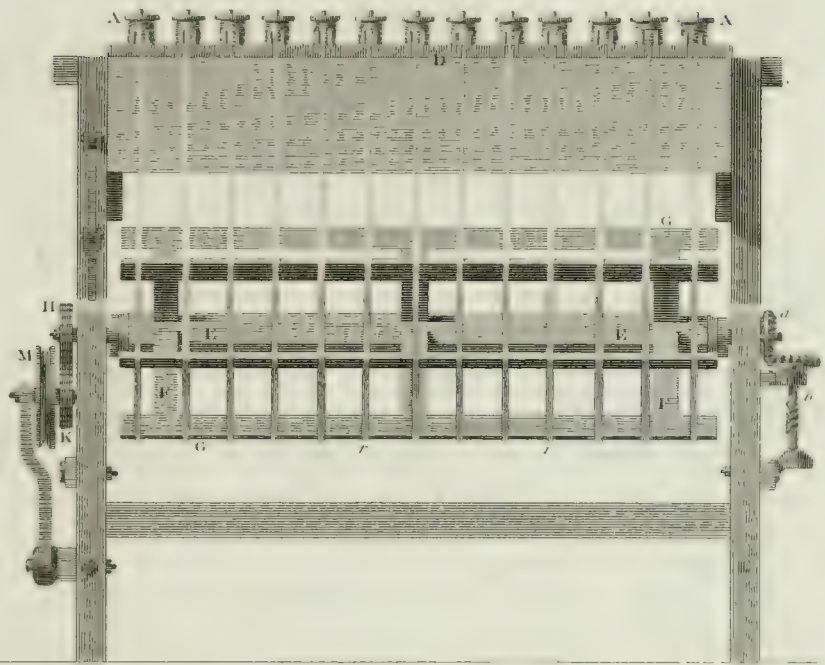


Fig 2



Machine for winding sewing cotton into Balls

Fig 3

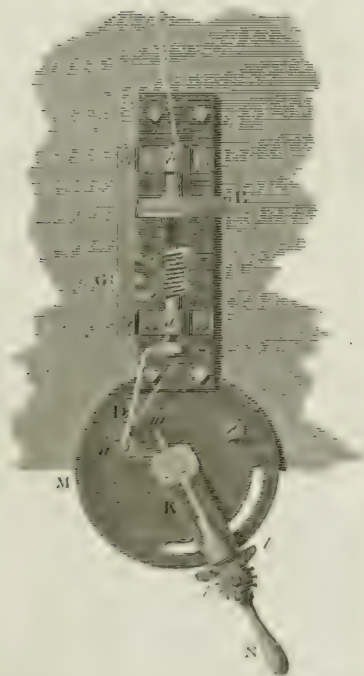


Fig 5

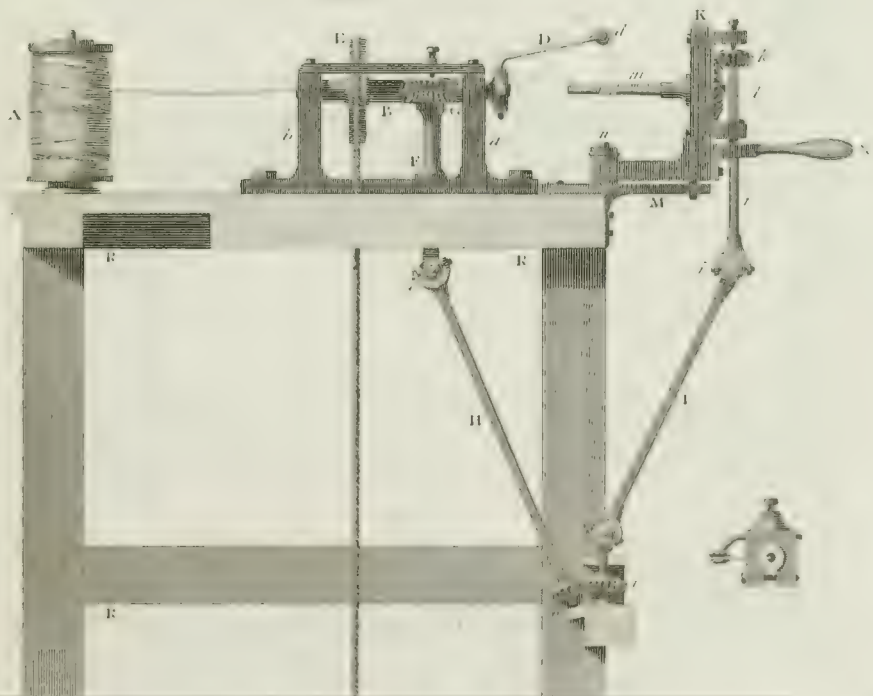


Fig. 2.

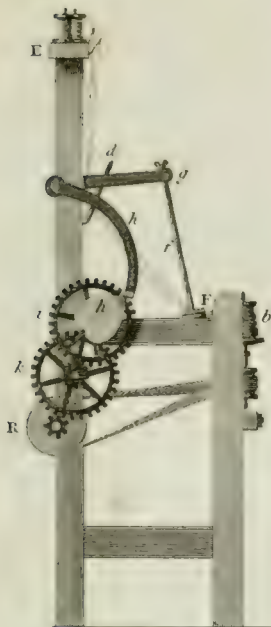
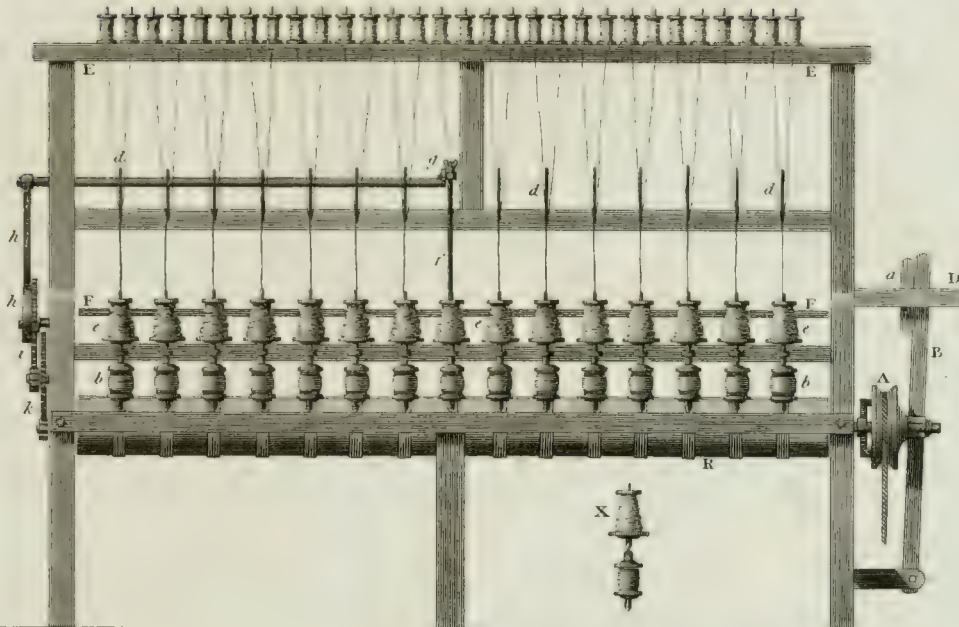
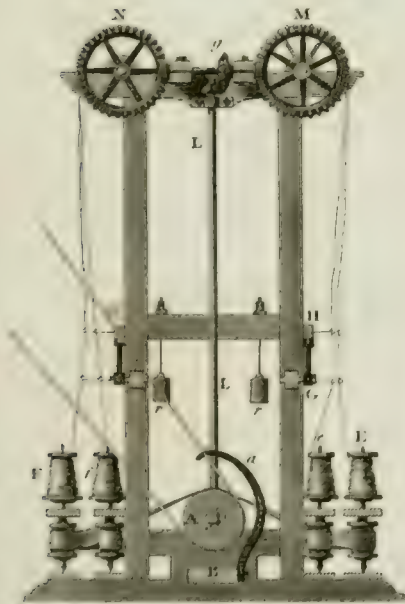


Fig. 1. DOUBLING MACHINE.

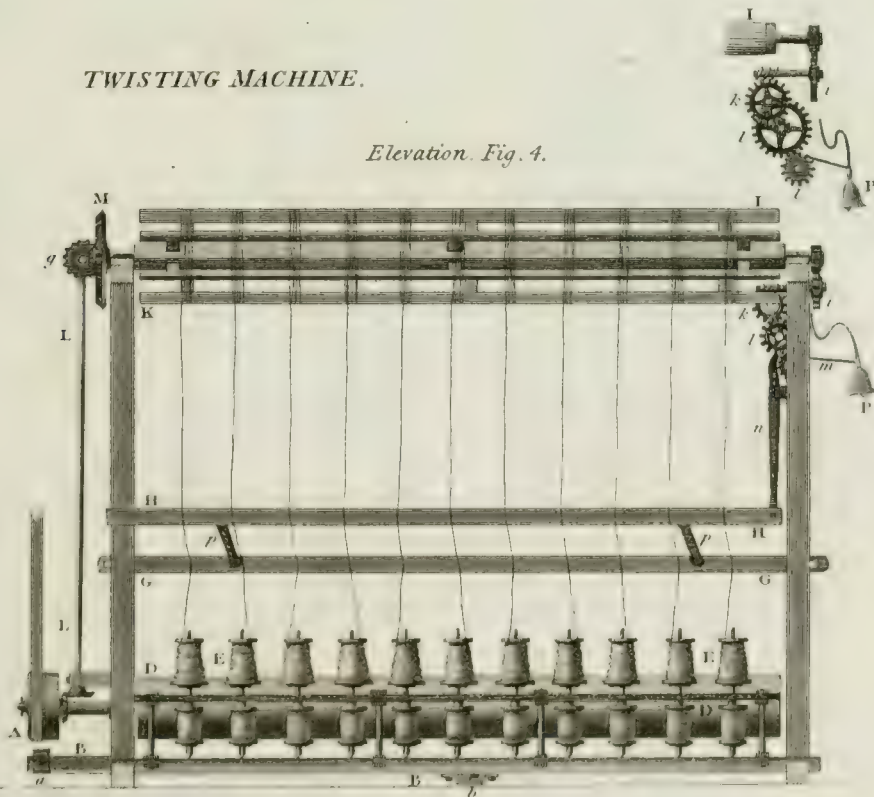


TWISTING MACHINE.

End View. Fig. 3.

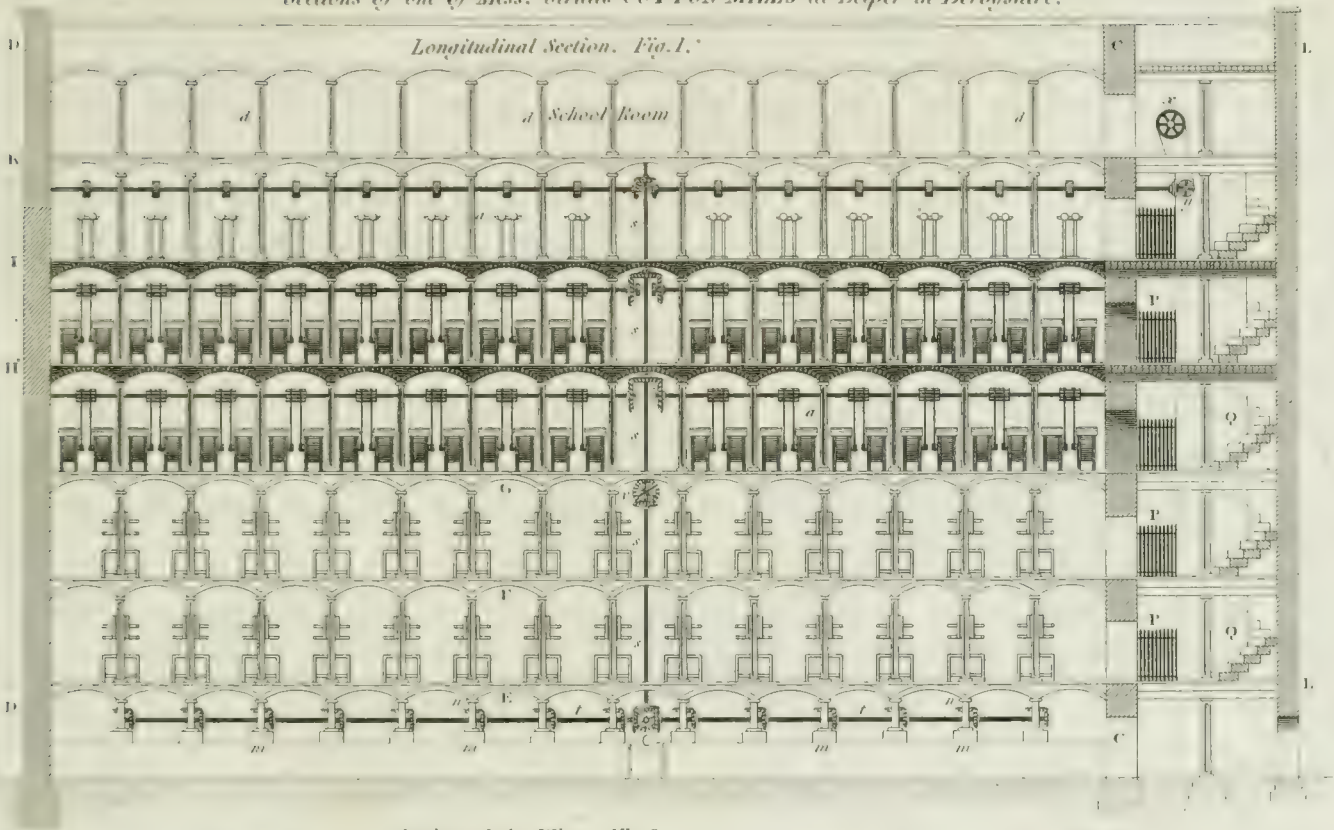


Elevation. Fig. 4.



Sections of one of Messrs Strutt's COTTON MILLS at Belper in Derbyshire.

Longitudinal Section. Fig. 1.



Section of the Wing. Fig. 3.

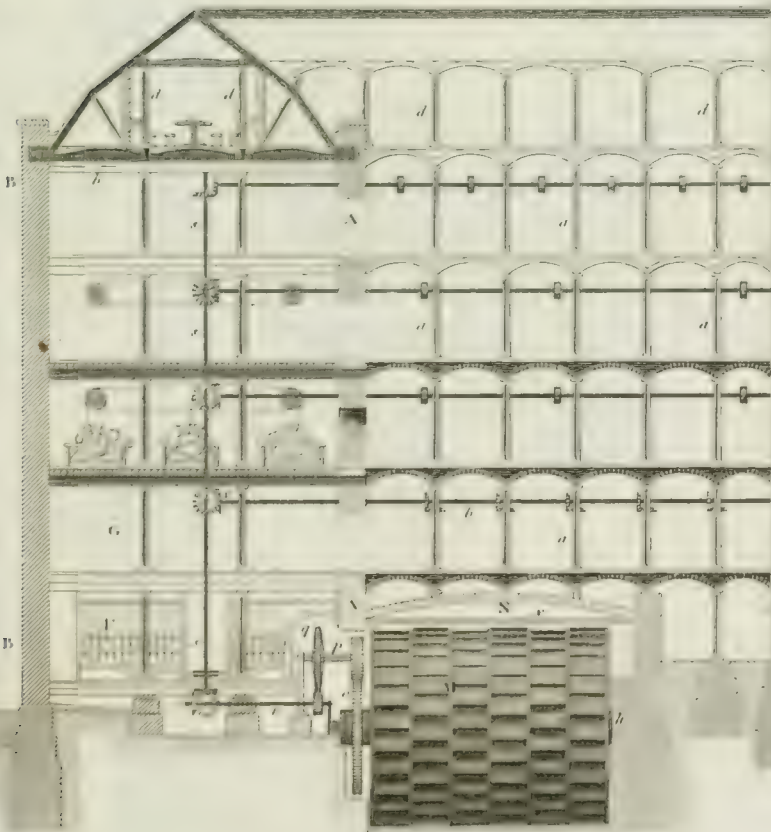


Fig. 2.

Cross Section

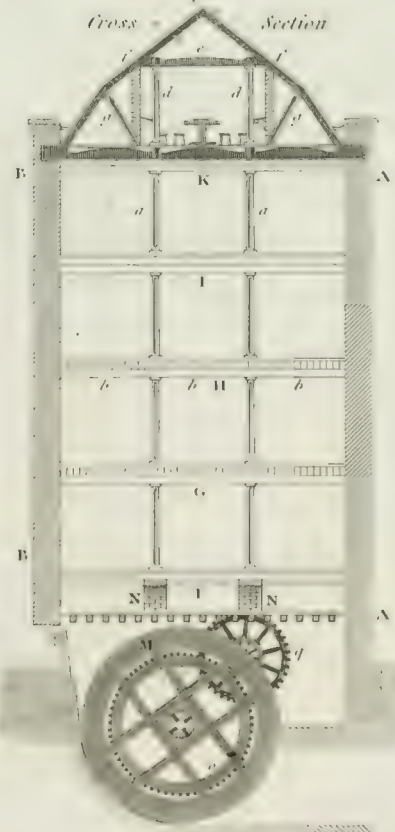


Fig. 1. Two Troughs of a Grinding Mill.

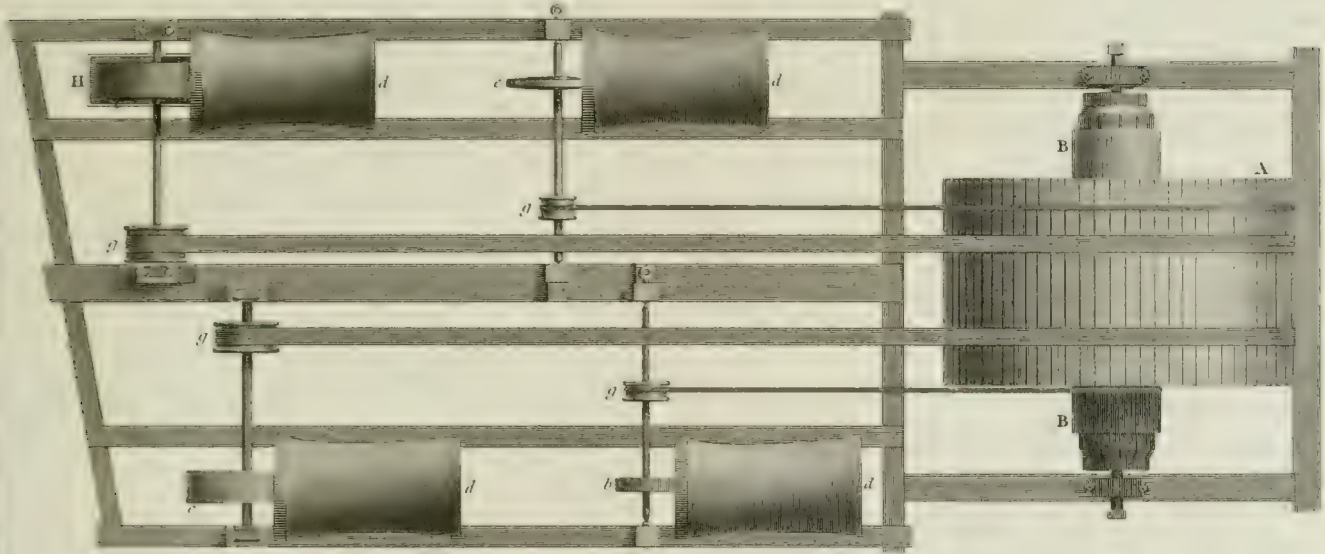


Fig. 3. Pressing Vice.

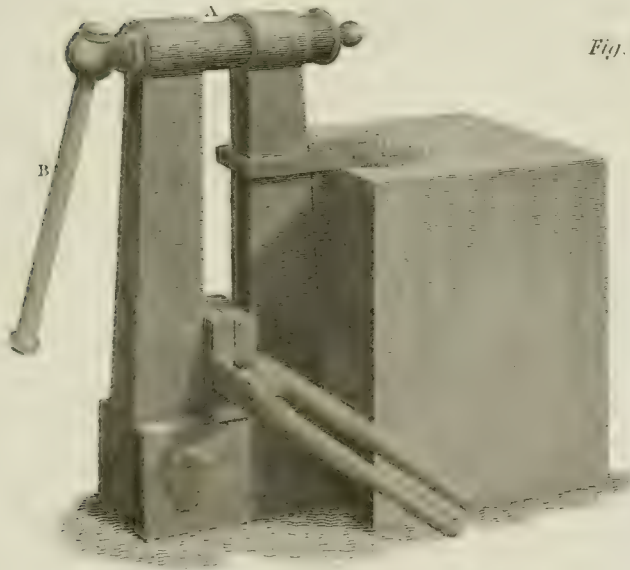


Fig. 2. Tongs for pressing Knife Handles.

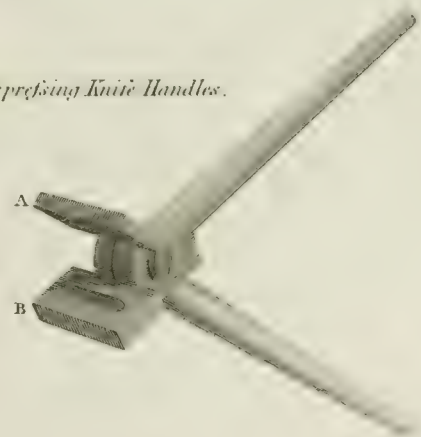


Fig. 2.

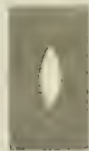


Fig. 3. Spring Drill.



CYCLOID.

Fig. 1.

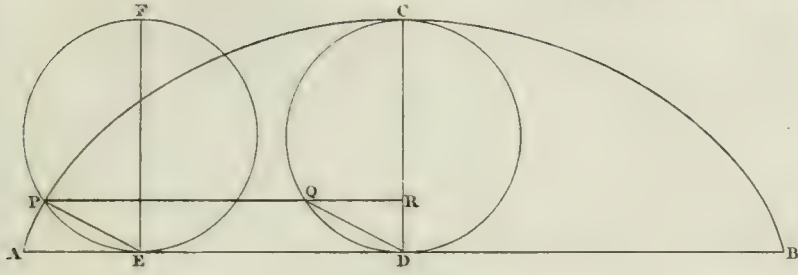


Fig. 2.

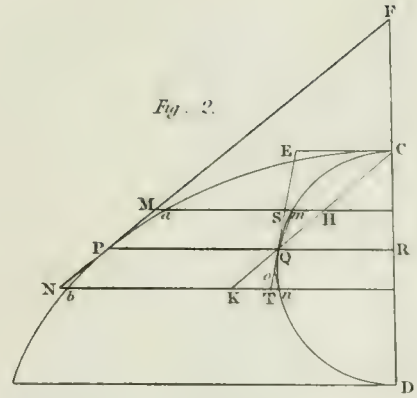


Fig. 3.

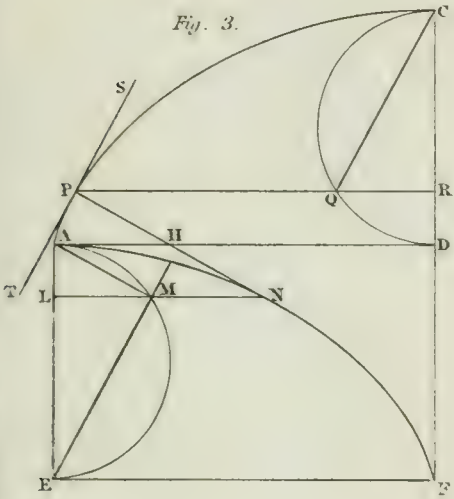


Fig. 4.

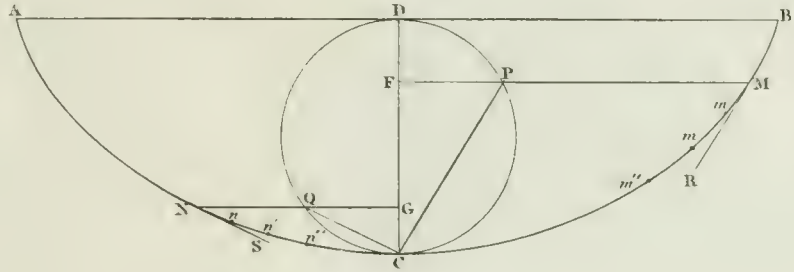


Fig. 5.

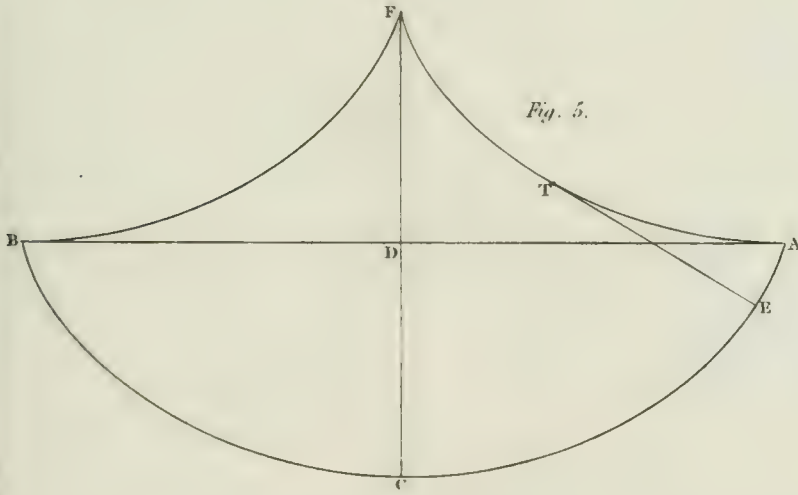


Fig. 6.

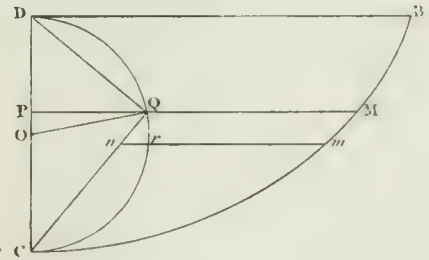


Fig. 8.

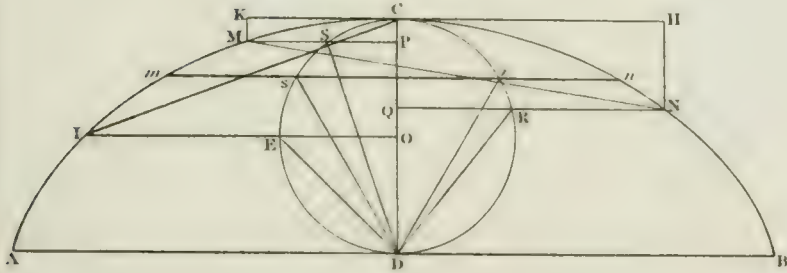
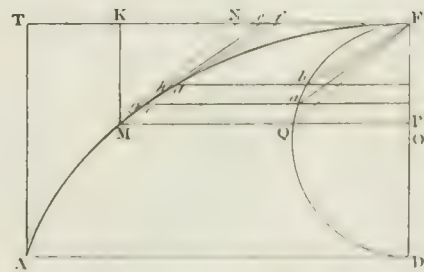
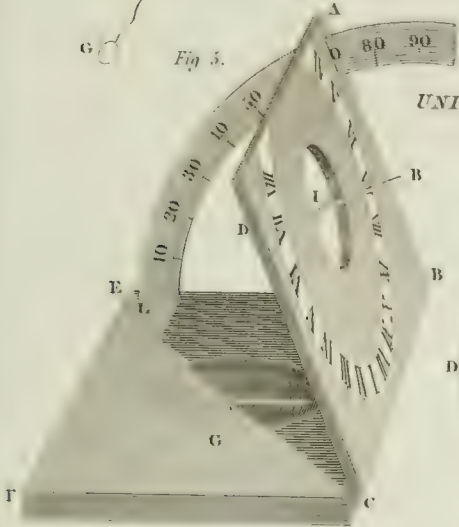
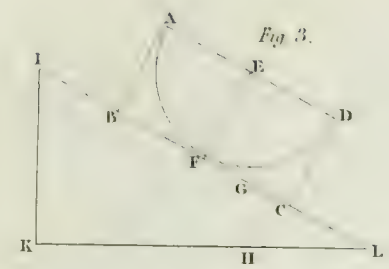
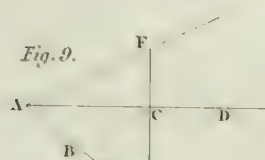
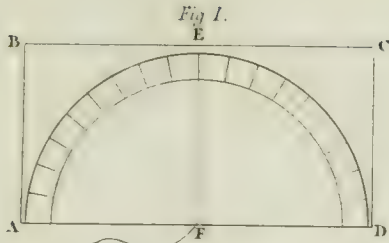
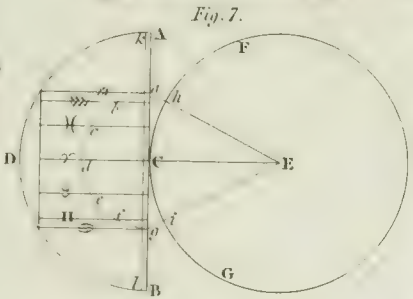
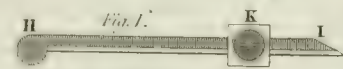


Fig. 7.

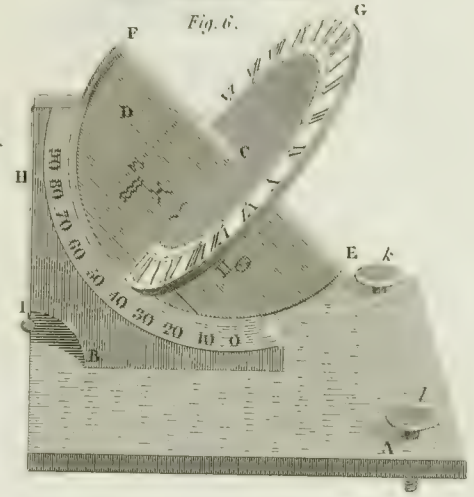




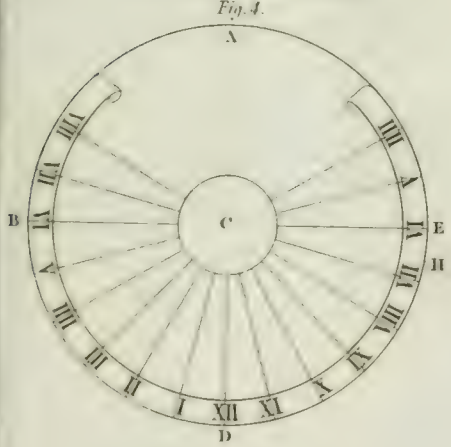
UNIVERSAL EQUINOCTIAL DIAL.



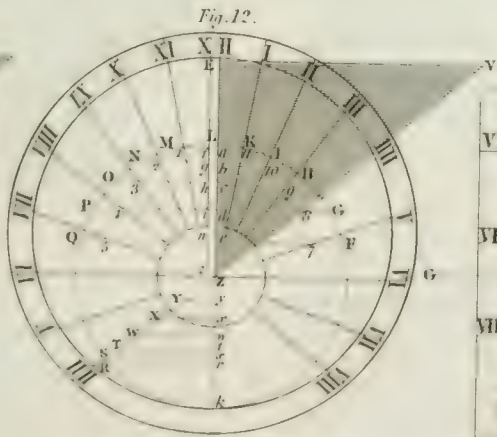
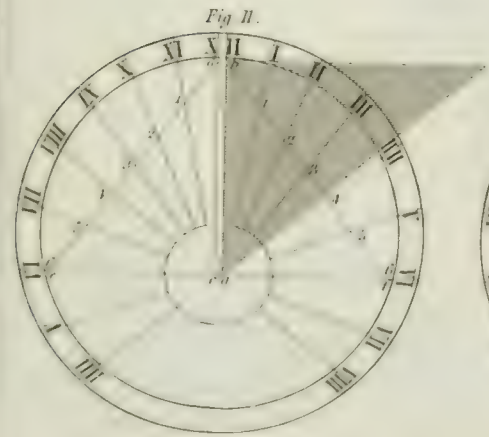
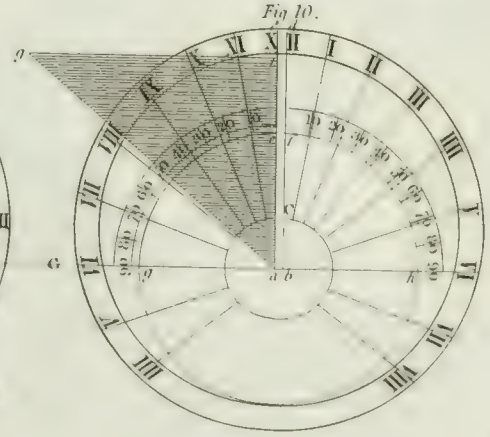
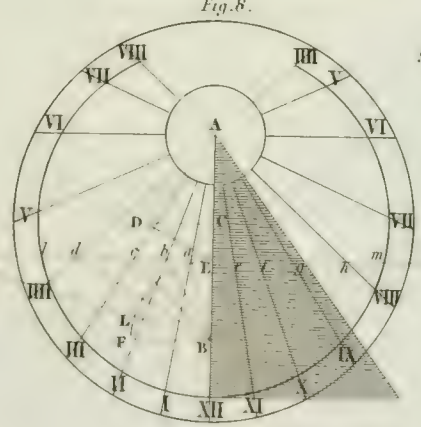
UNIVERSAL DIAL.



EQUINOCTIAL DIAL.



HORIZONTAL DIAL.



VERTICAL SOUTH DIAL.

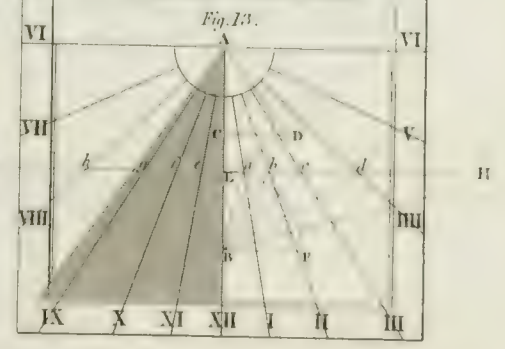
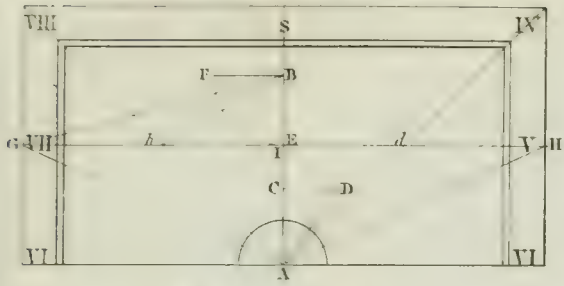


Fig. 14.
VERTICAL NORTH DIAL



POLAR DIAL

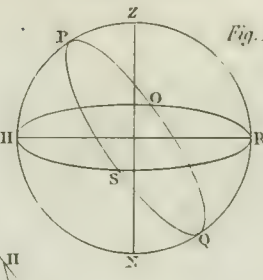


Fig. 17.

Fig. 15.
SOUTH DIAL

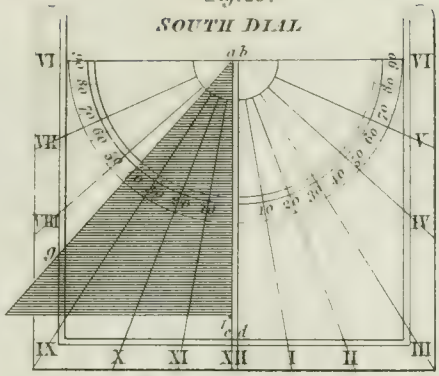


Fig. 16.
EAST DIAL



Fig. 23.
INCLINED DIAL

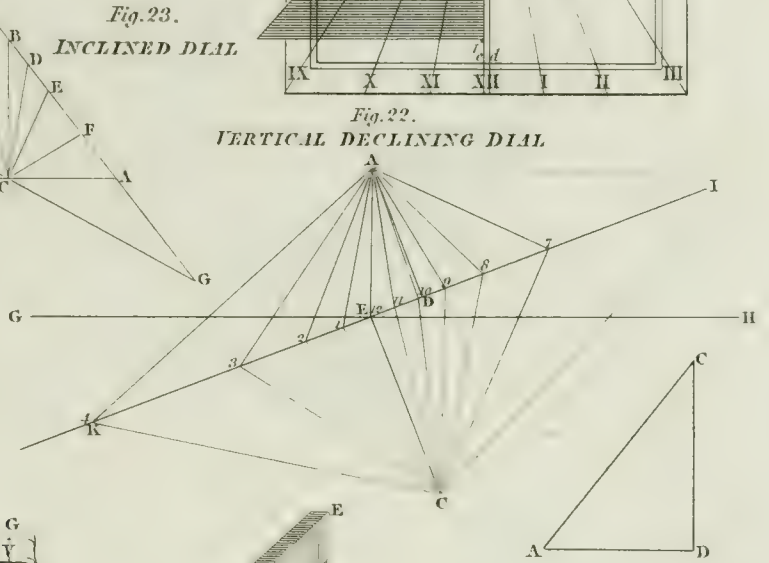


Fig. 22.
VERTICAL DECLINING DIAL

Fig. 18.

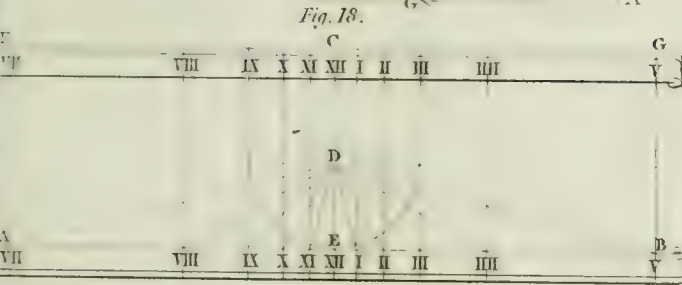
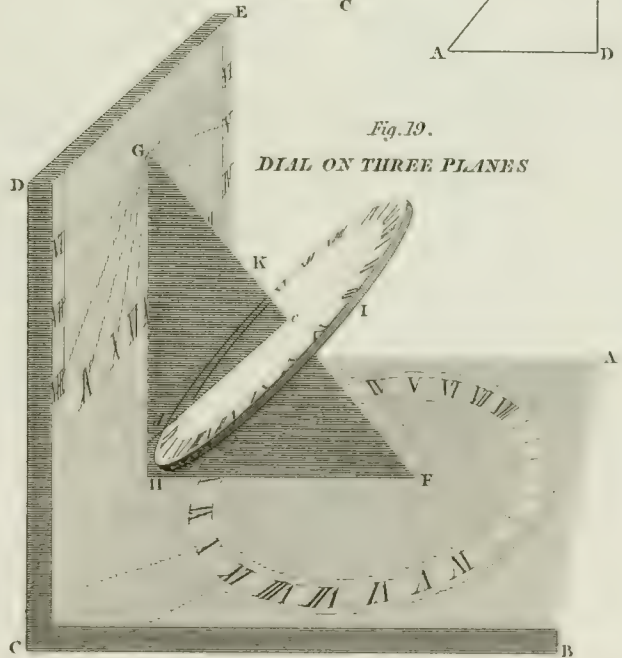


Fig. 19.

DIAL ON THREE PLANES



DIALS

Fig. 20.

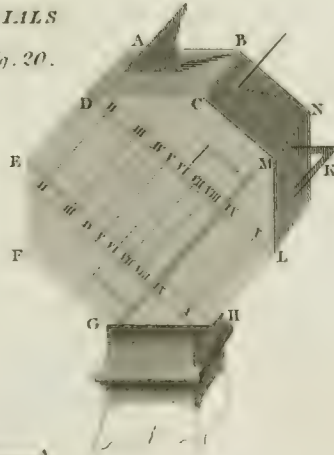


Fig. 24.

UNIVERSAL MECHANICAL DIAL

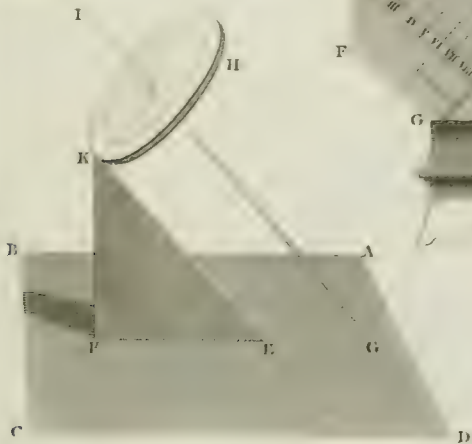
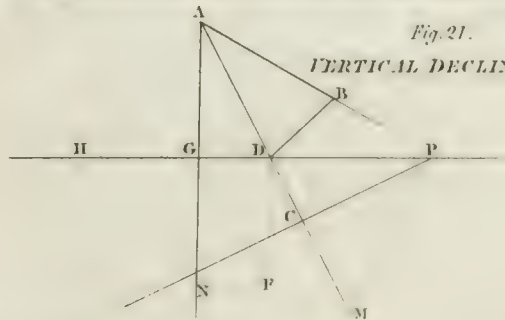


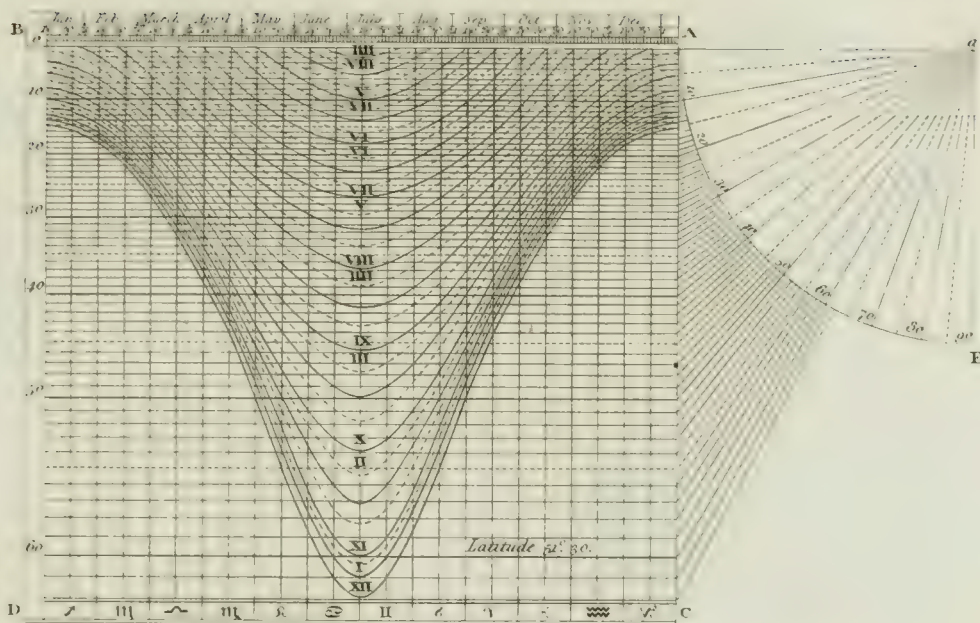
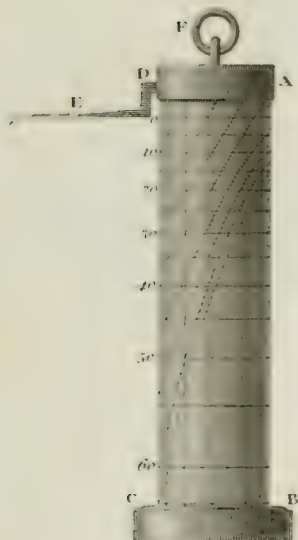
Fig. 21.

VERTICAL DECLINING DIAL



Cylindrical DLAL, Fig. 28.

Fig. 27.



Portable DLAL.

Fig. 29.

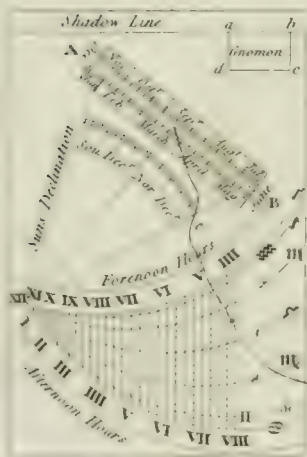


Fig. 30.

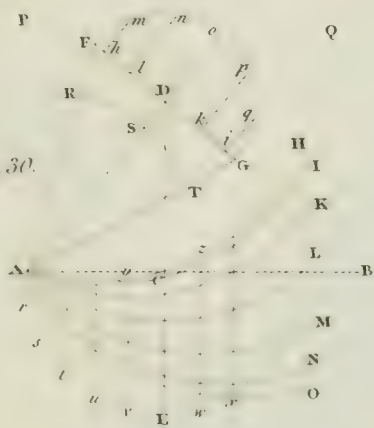


Fig. 32.

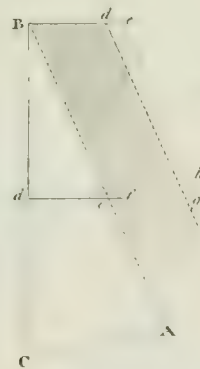


Fig. 33.

Universal DLAL on a Cross.

Fig. 31.

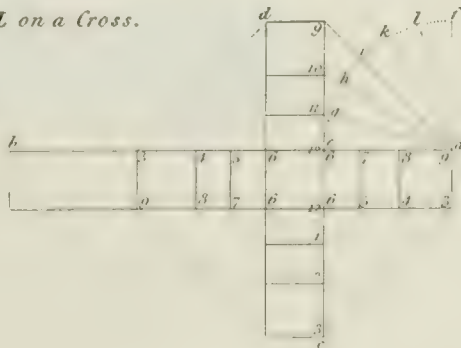
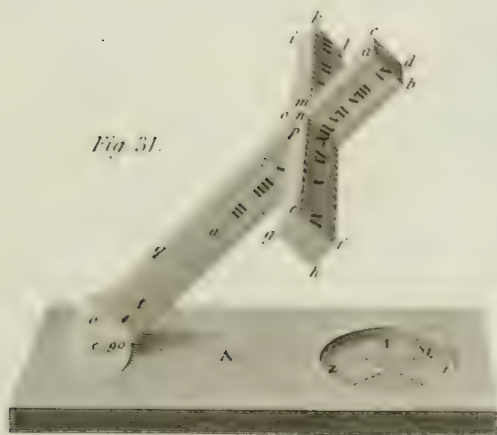


Fig. 35

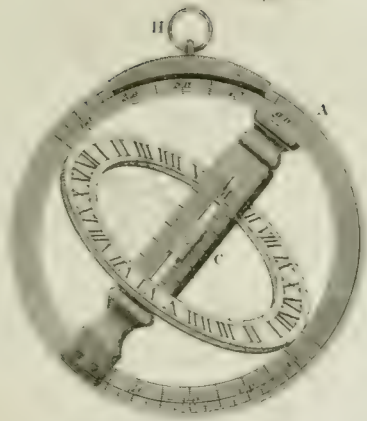


Fig. 25. PLII.

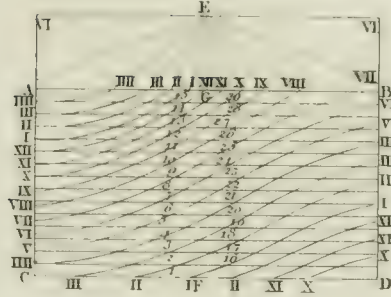


Fig. 26. PLII

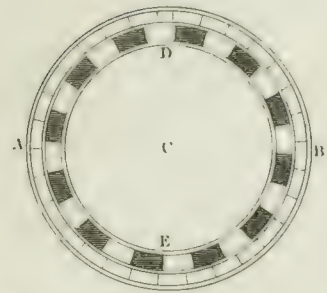


Fig. 37

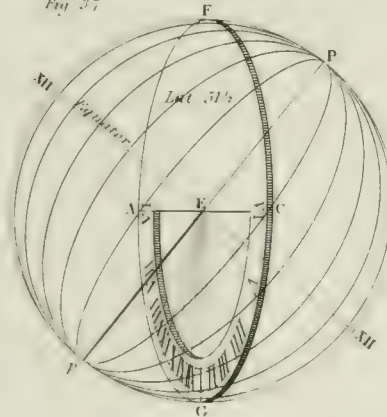


Fig. 36

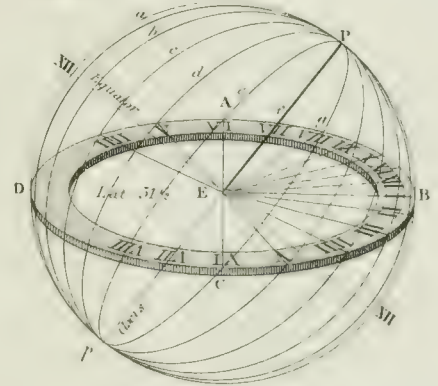


Fig. 34

Ring Dial

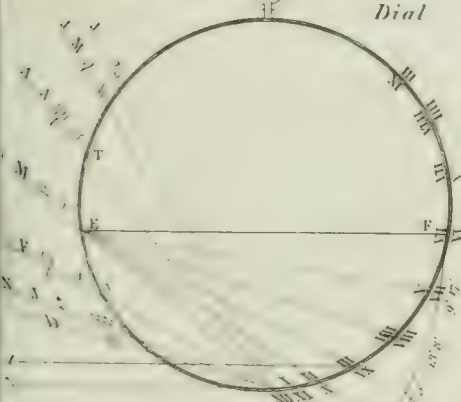
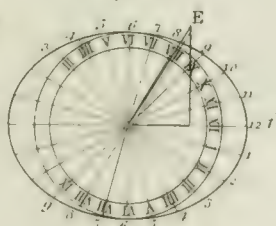


Fig. 40



Dialling Cylinder

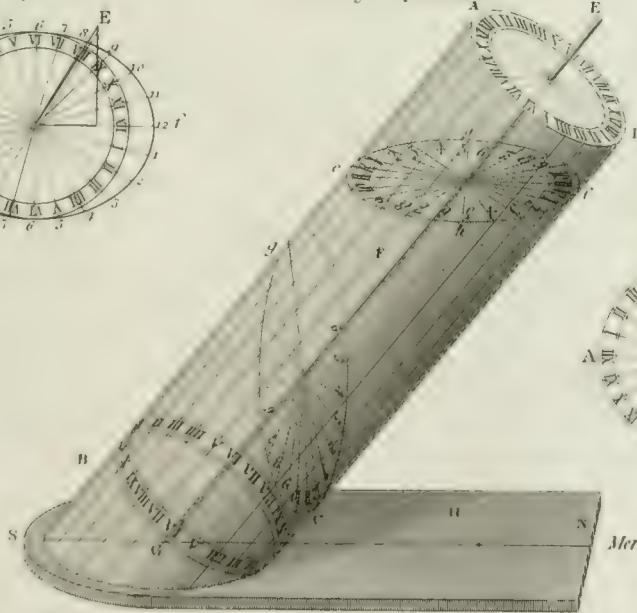


Fig. 38

Fig. 39

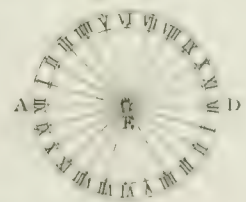
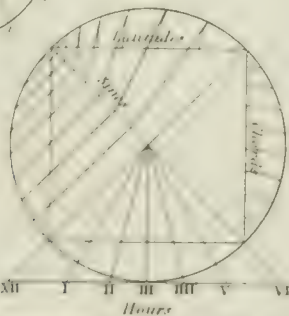
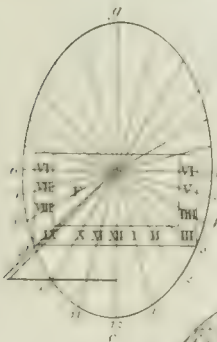
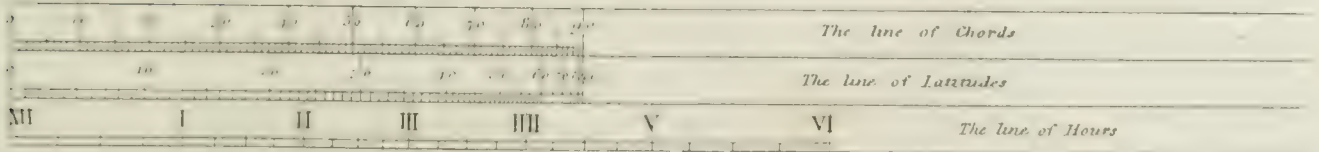


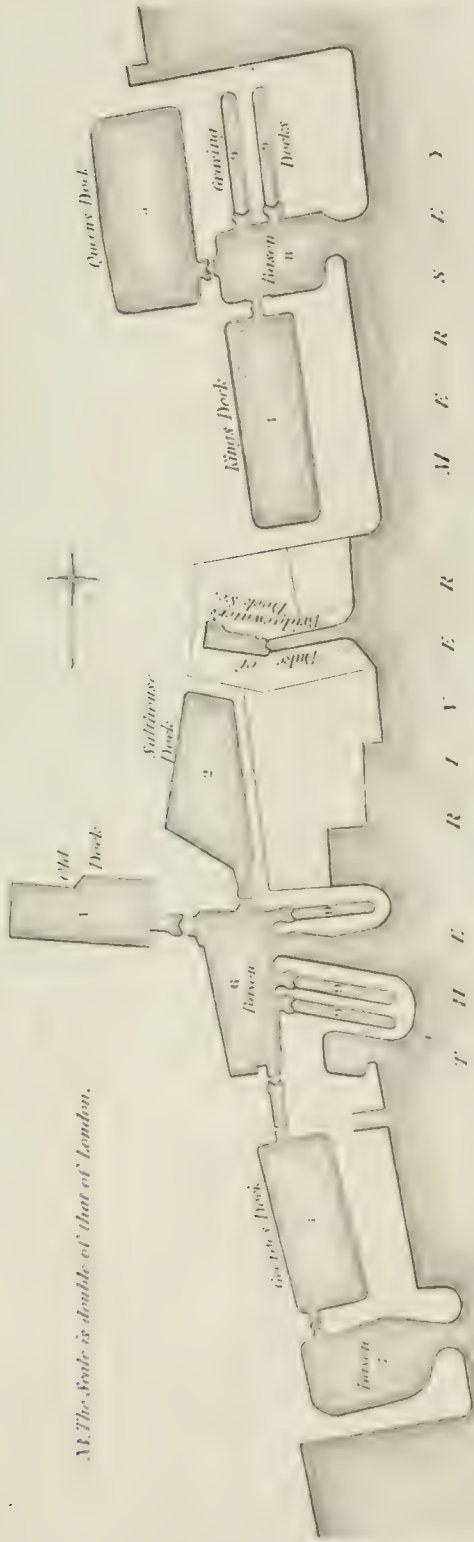
Fig. 41



Dialling Scales

Fig. 42

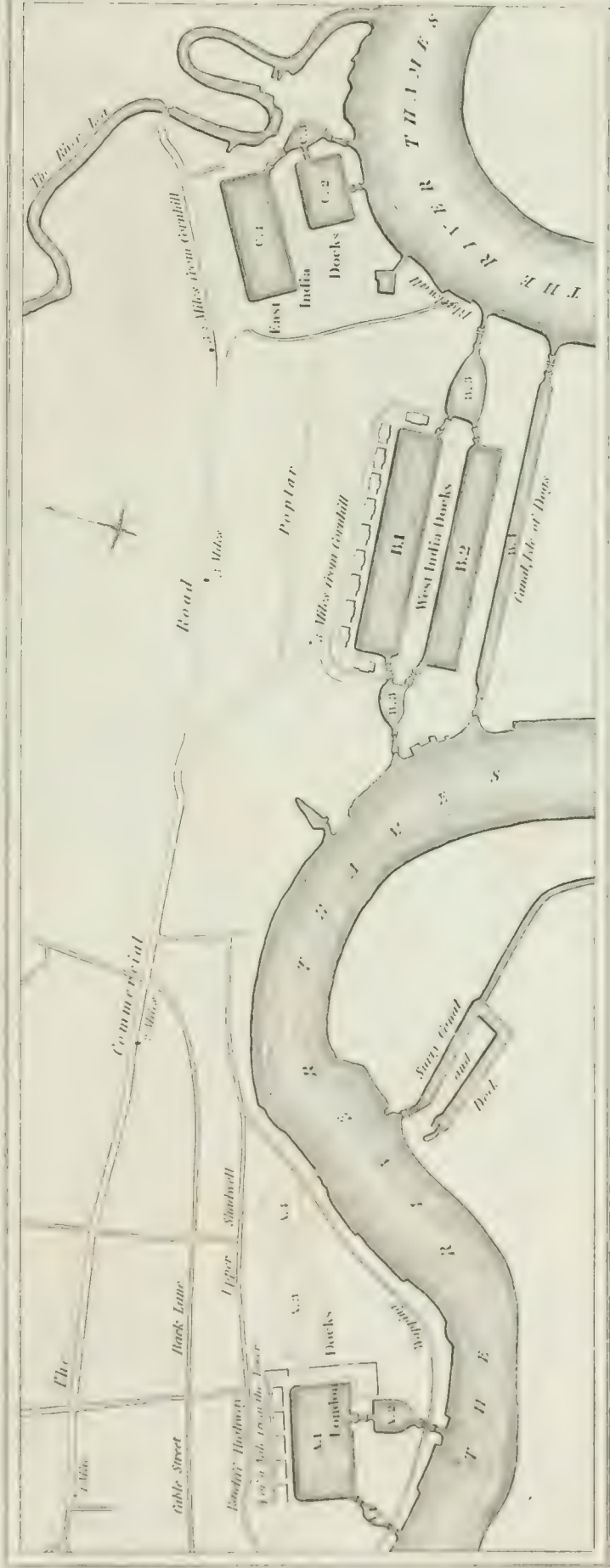




A. The scale is double of that of London.

T H E R I V E R M E R S I D E

PLAN OF THE DOCKS AT LONDON, IN 1808.





H. Howard, Esq. P.A. del.

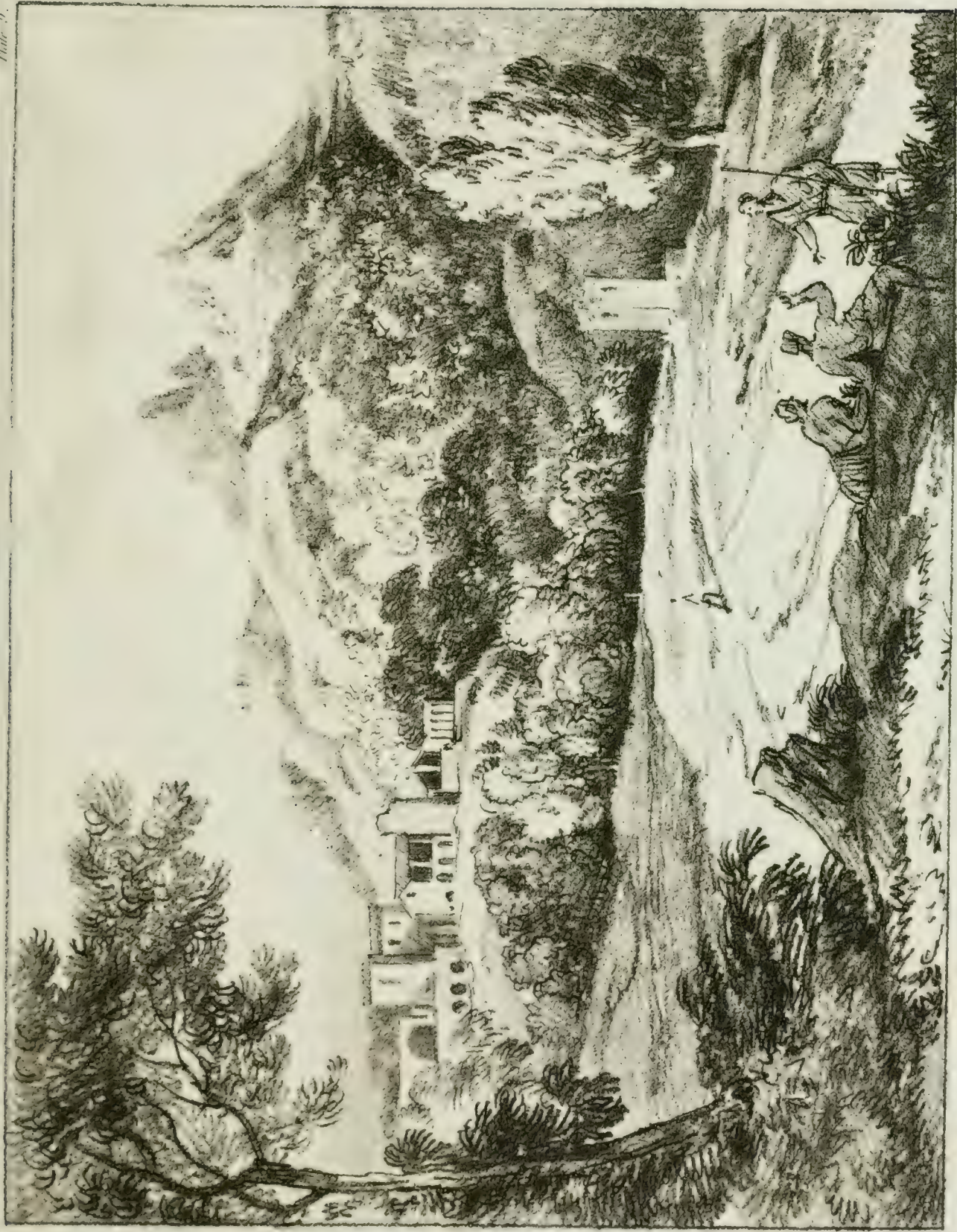




From a Bust in the Collection of Charles Townley Esq.



From an original Drawing by Gaspar Poussin in the collection of Benjamin West Esq^r P. R. A.



Landscape view

From an original Drawing by Gaspar Poussin in the Collection of Benjamin West Esq. P. R. A.

of the American Islands, from a Crime, Determination, from May 18th 1800



From an Original Drawing in the Collection of the Duke of Devonshire

Engraved by J. G. Smith, from a drawing by J. G. Smith, in the Collection of the Duke of Devonshire

COMPASSES.



Fig. 6.

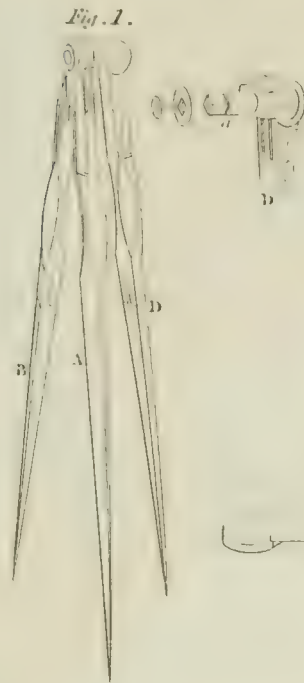


Fig. 1.

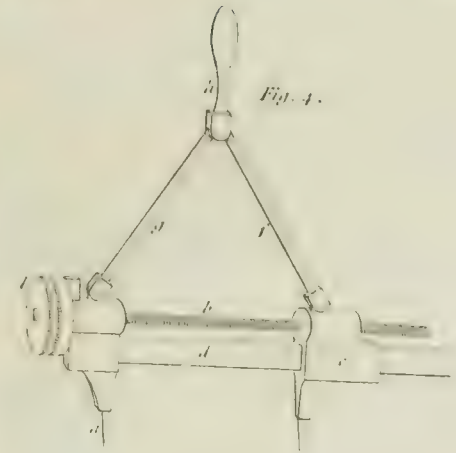


Fig. 4.

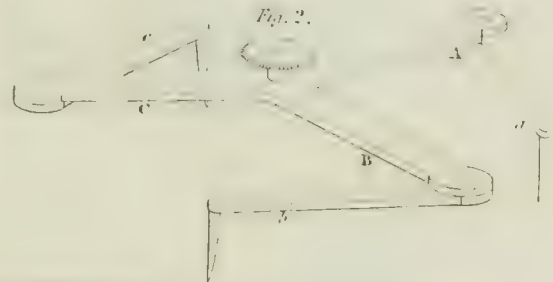


Fig. 2.

For Fig. 5. of this Plate see Plate TURNING, Fig. 20.

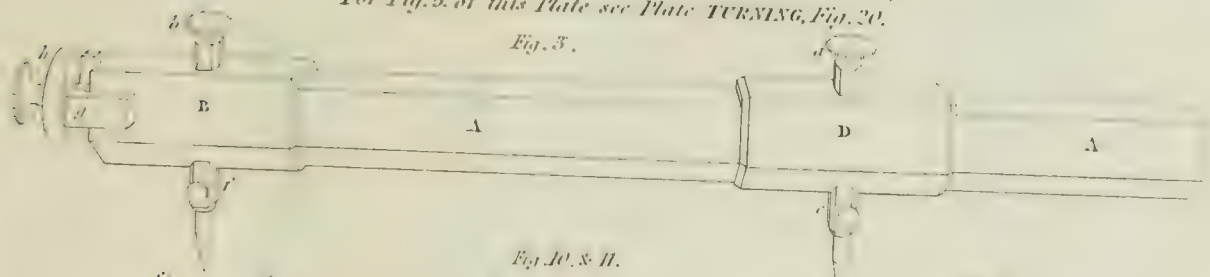


Fig. 3.

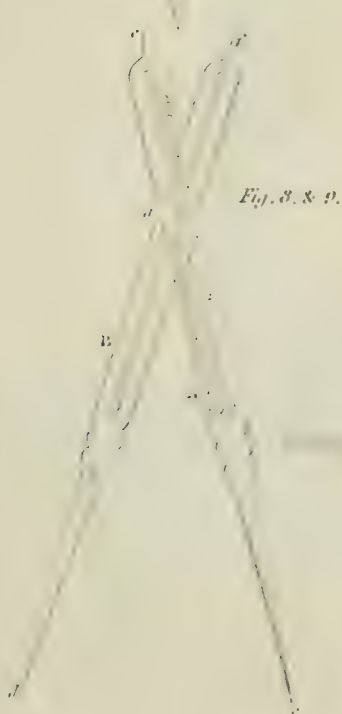


Fig. 8. & 9.

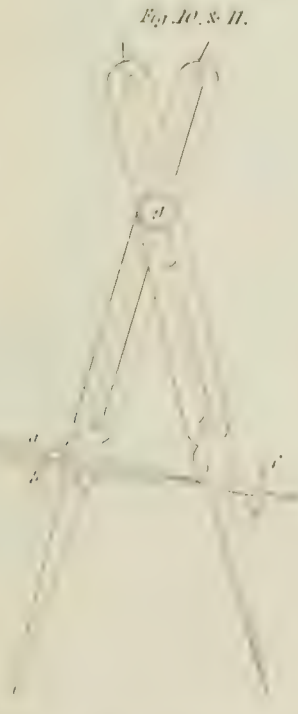


Fig. 10. & 11.

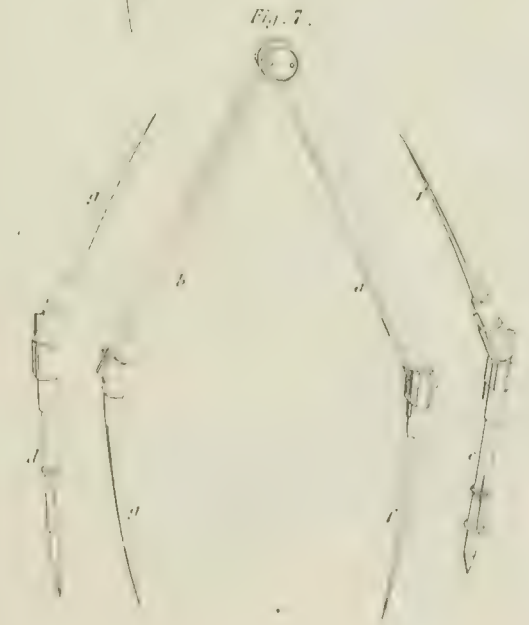
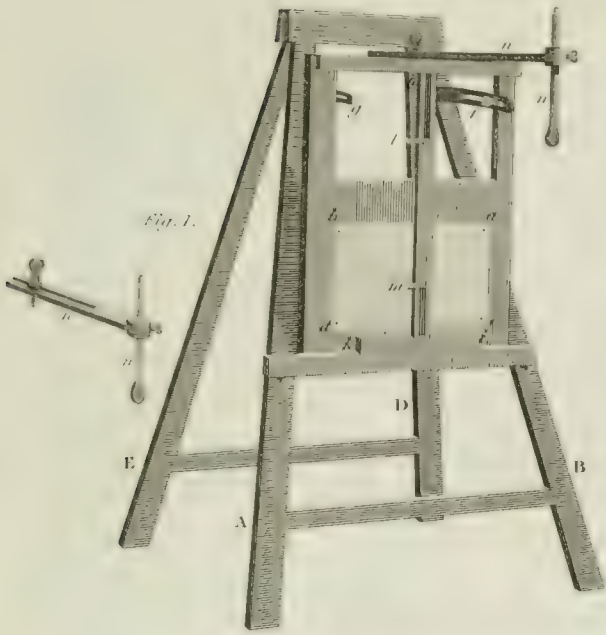


Fig. 7.

DELINEATORS.

M^r Peacock's delineator.



Miss Edgeworth's delineator.

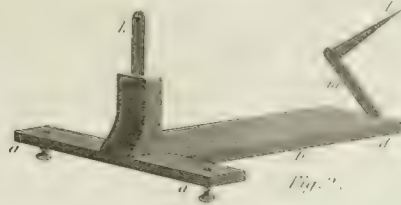
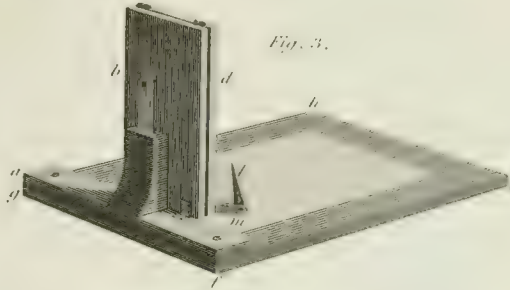
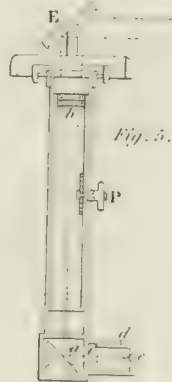
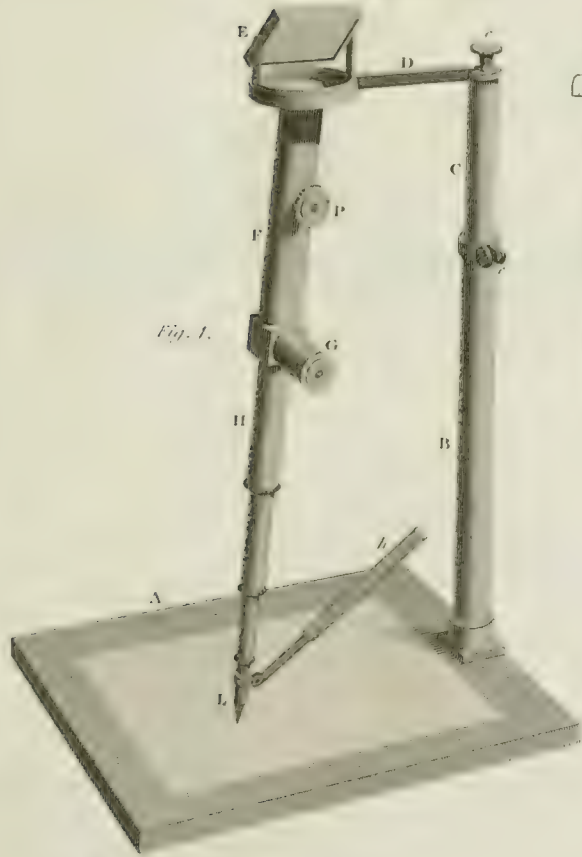


Fig. 3.



Ramsden's Optigraph improved by Tho^s Jones.



M^r Wollaston's Camera Lucida.

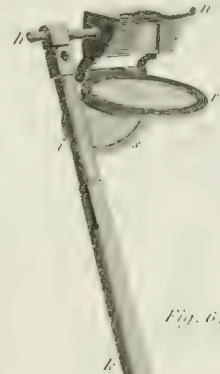
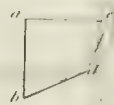


Fig. 7.



M. Farey's, Elliptograph for drawing Ellipses.

Oval - Fig. 1.

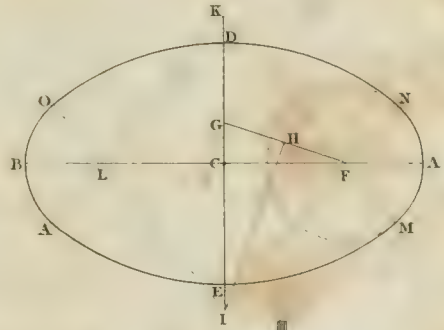
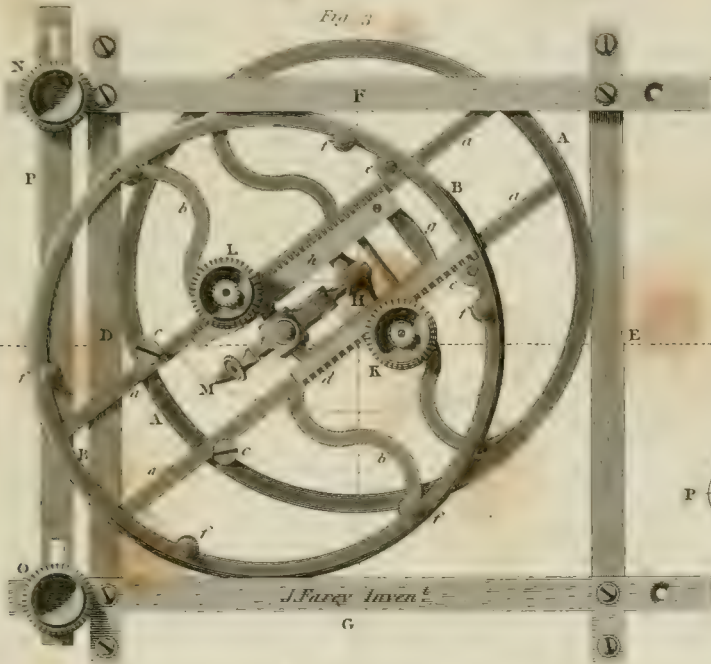


Fig. 6.

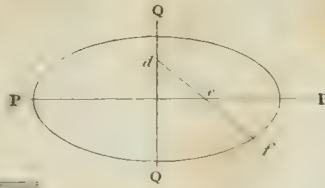


Fig. 2.



Fig. 4.

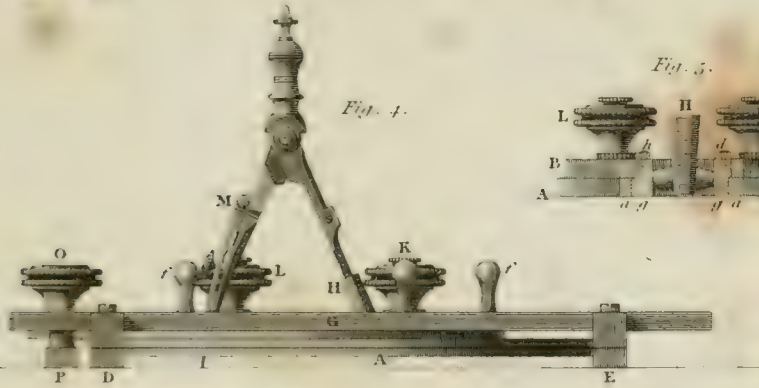
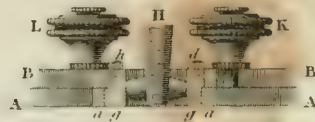


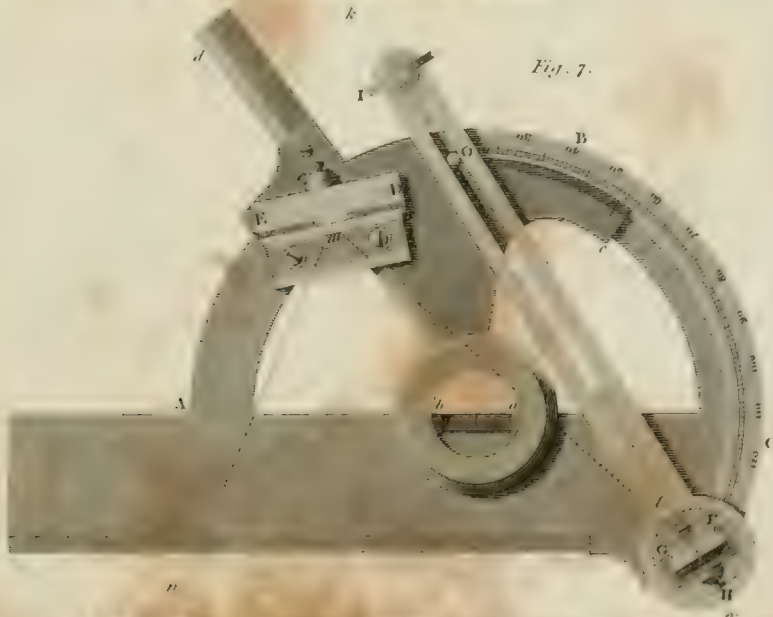
Fig. 5.



Sir Howard Douglas's, Reflecting Protractor.

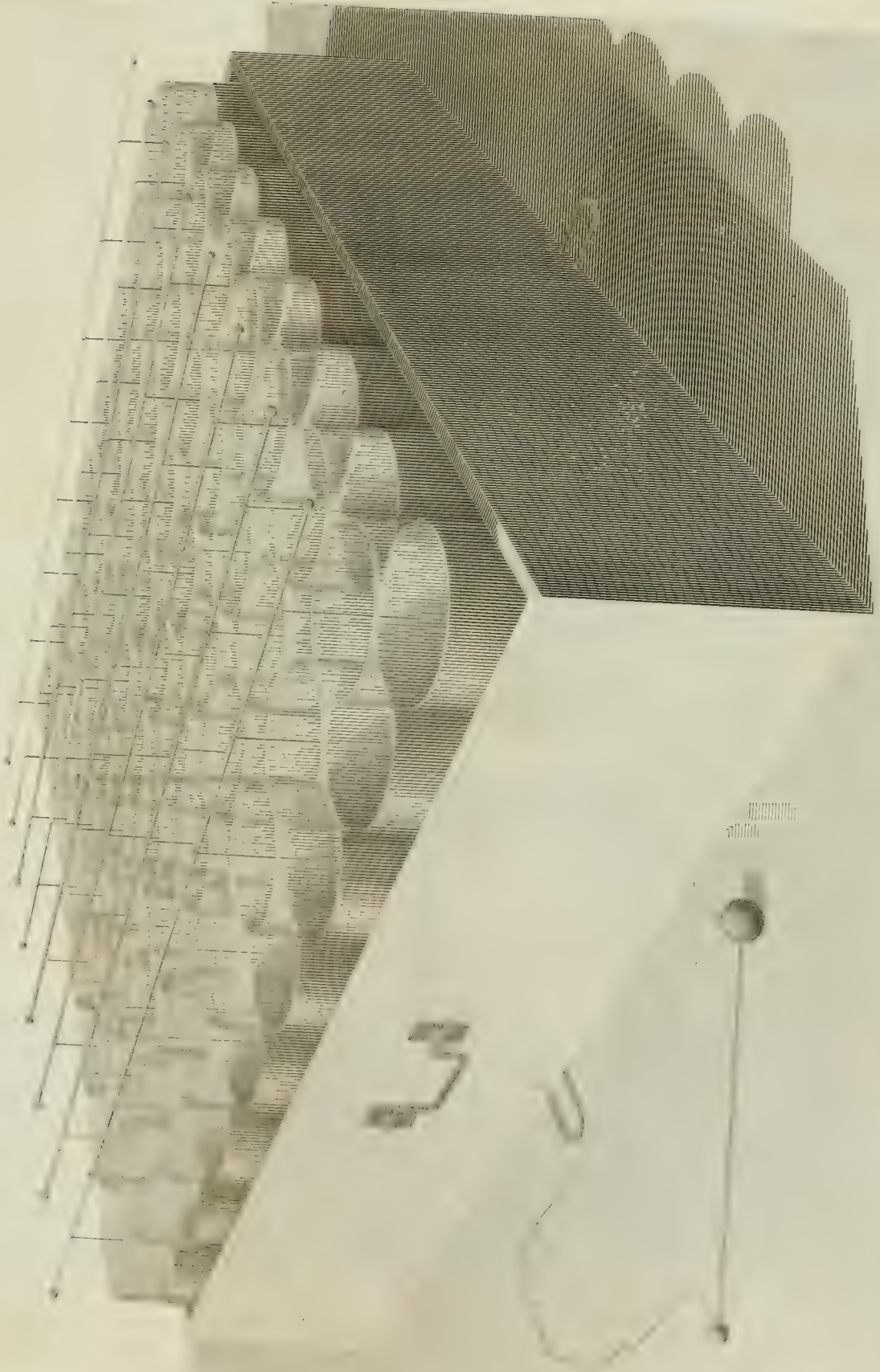
k

Fig. 7.





PRIESTLEY'S BATTERY.

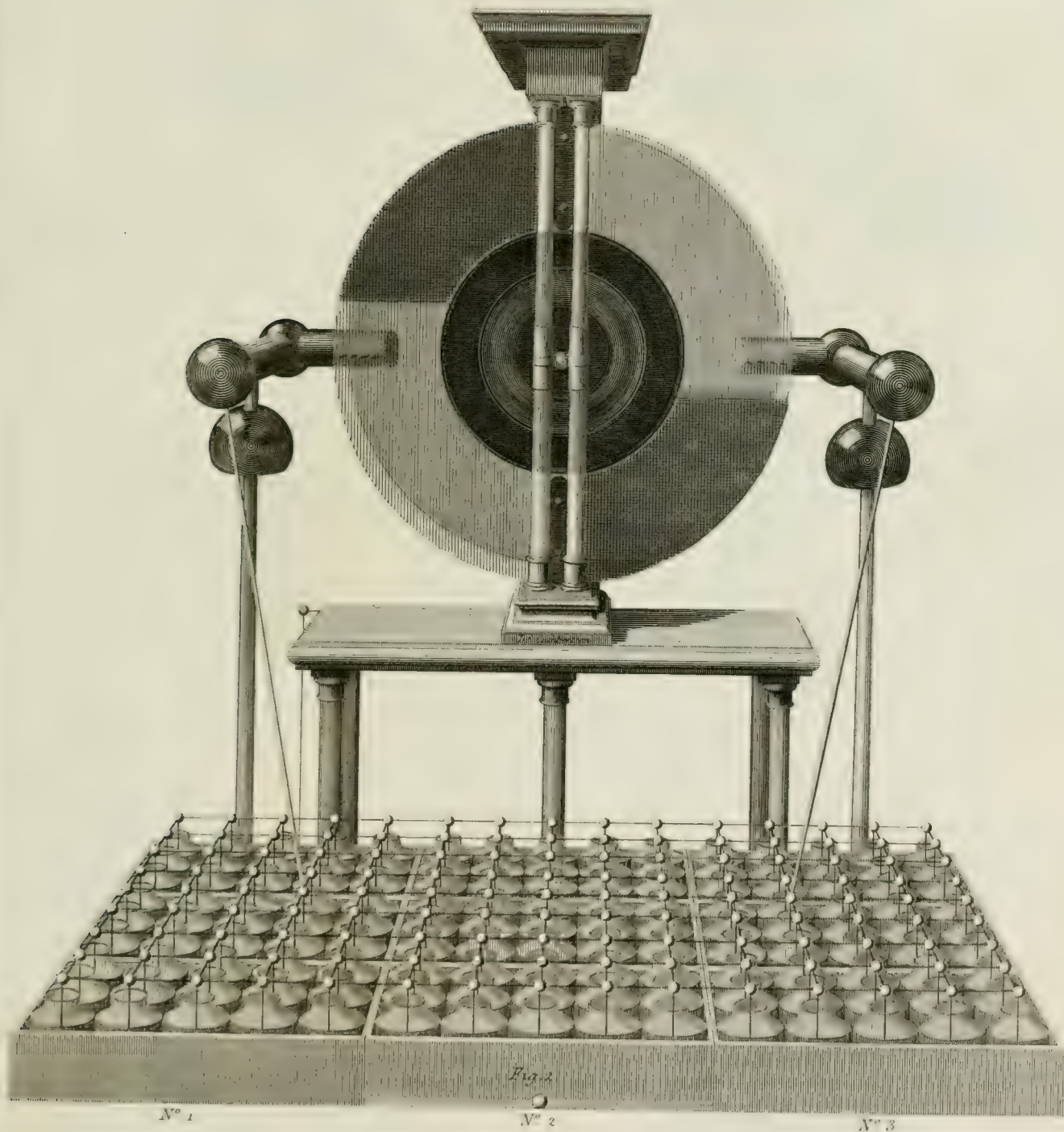


As published in the Act Directs, etc., by Longman, Hurst, Ross & Orms, Paternoster Row

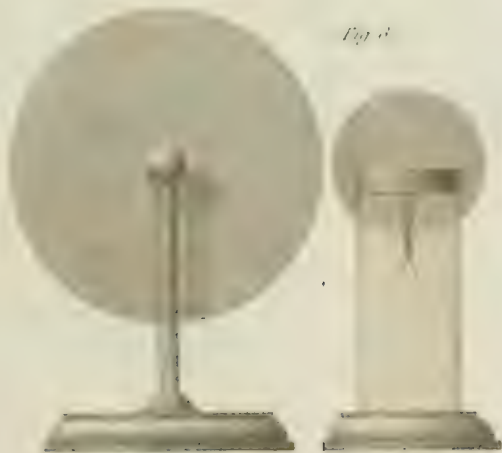
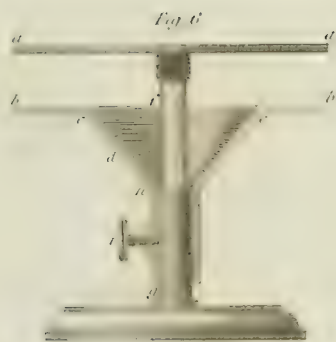
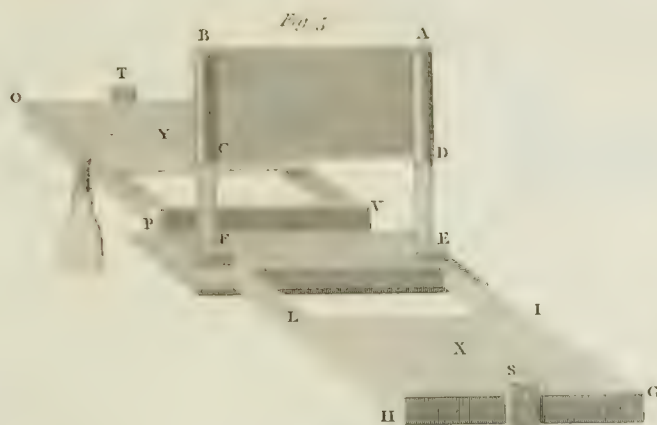
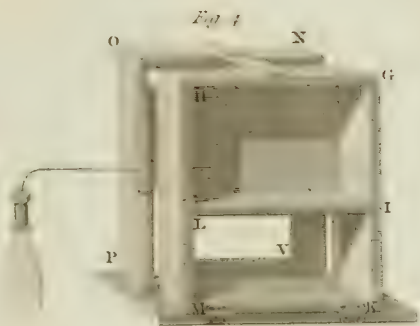
Engraved by W. Wood

ELECTRICITY.
ELECTRICAL MACHINE & BATTERY.

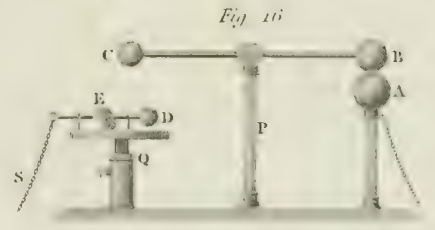
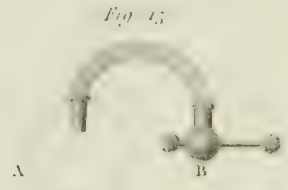
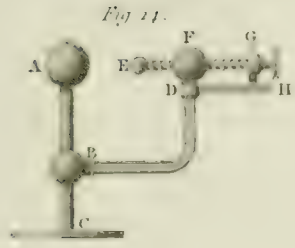
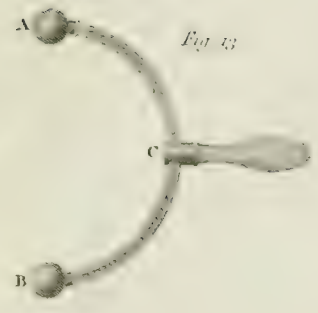
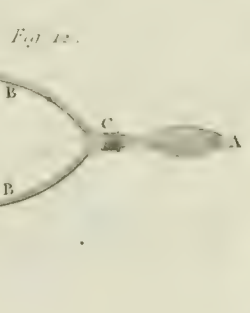
PLATE I



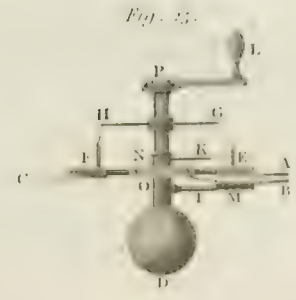
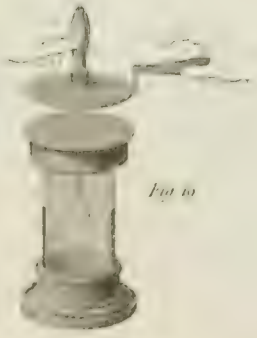
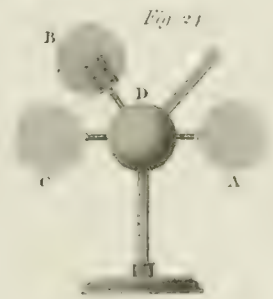
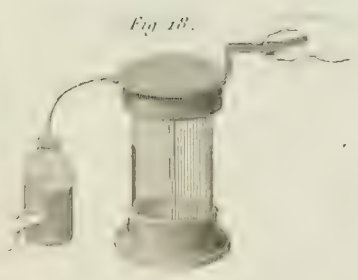
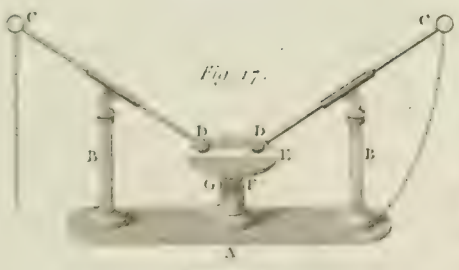
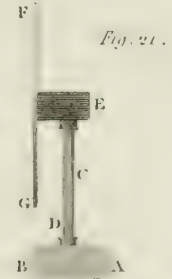
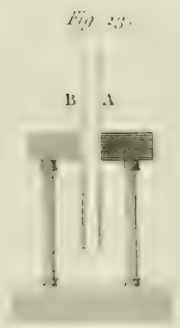
CONDENSERS.



ELECTRICITY.
DISCHARGER AND DOUBLER.



MR. CAVALLO'S DOUBLER.



ELECTRICITY.
ELECTRICAL EXPERIMENTS.

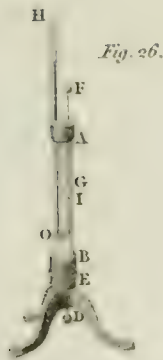


Fig. 26.

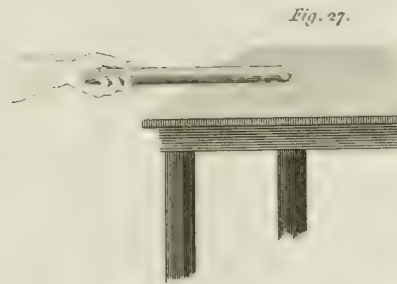


Fig. 27.

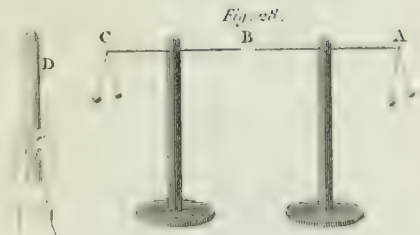


Fig. 28.



Fig. 29.

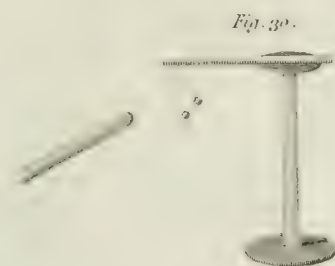


Fig. 30.

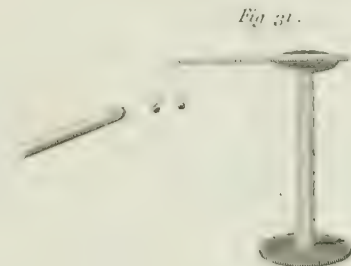


Fig. 31.



Fig. 32.

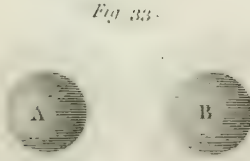


Fig. 33.

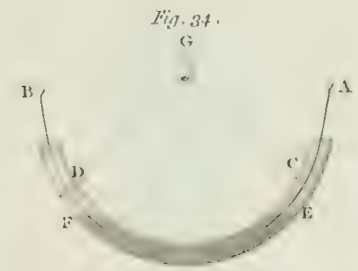


Fig. 34.

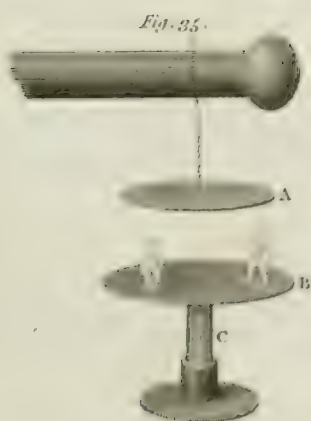


Fig. 35.

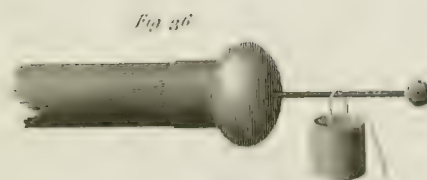


Fig. 36.

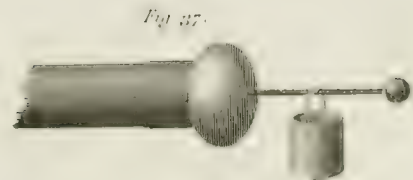


Fig. 37.

Fig. 38.



Fig. 39.



Fig. 40.



Fig. 41.



Fig. 42.

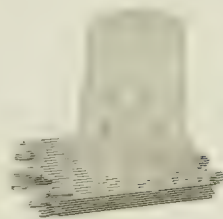


Fig. 43.

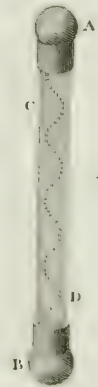
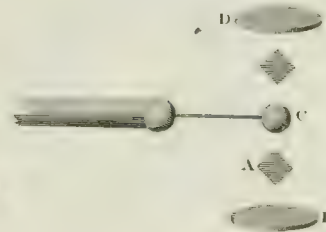


Fig. 44.

Fig. 45.

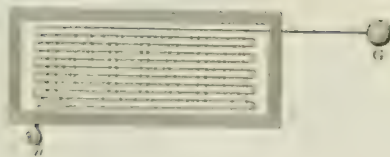


Fig. 46.



Fig. 47.

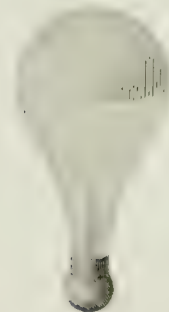


Fig. 48.

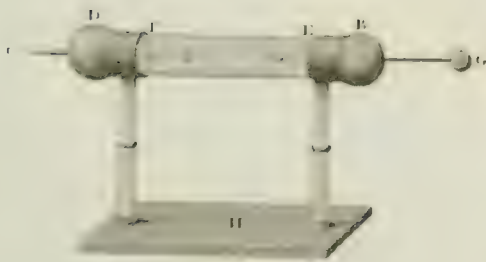


Fig. 49.

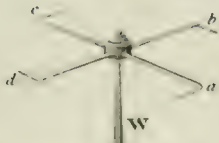


Fig. 50.





Fig. 51.



ELECTRICAL Flyers.

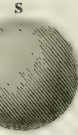
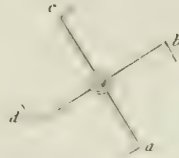


Fig. 52.

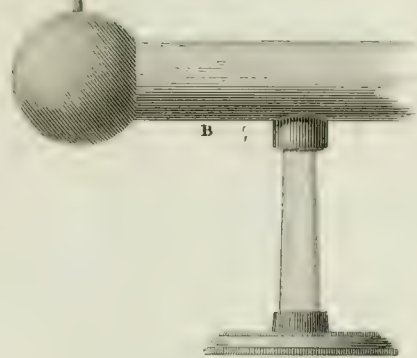


Fig. 53.

INFLAMMABLE AIR Pistol.

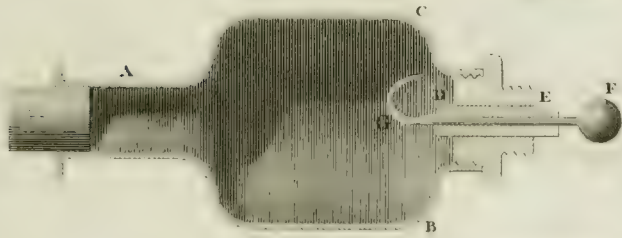


Fig. 51.

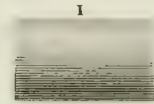
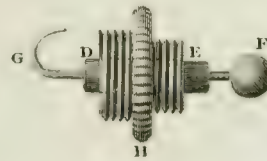
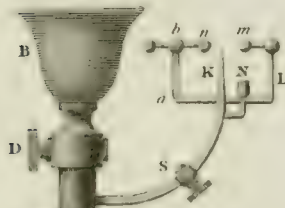


Fig. 55.

ELECTROPHORUS.

PLATE AIV.



Mr. Volta's
INFLAMMABLE AIR
Lamp.

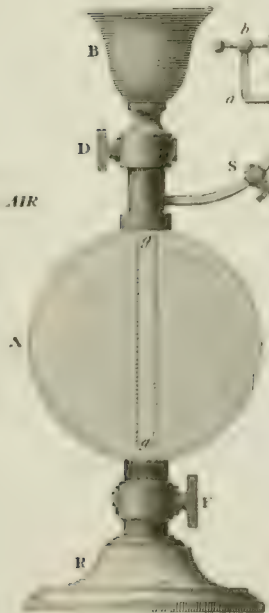


Fig. 2.

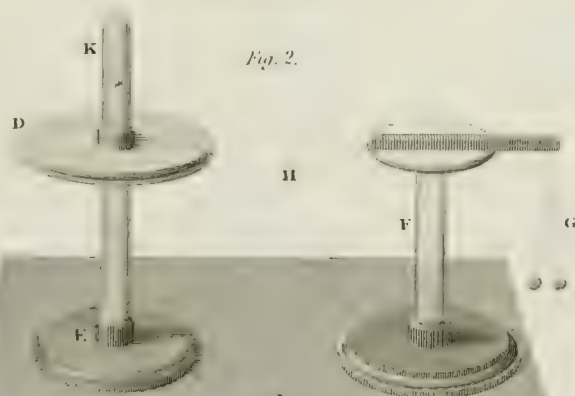
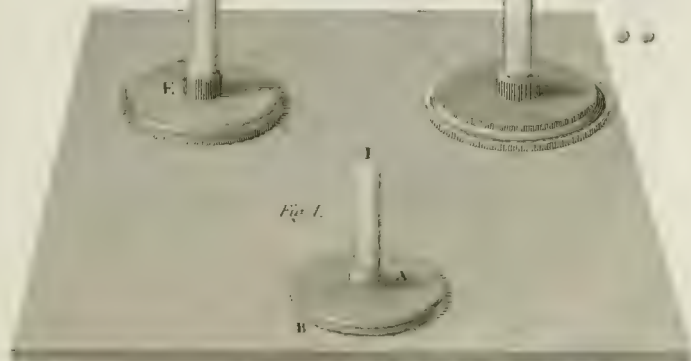


Fig. 1.



ELECTRIC MACHINES.

ABBE VOLLET'S.

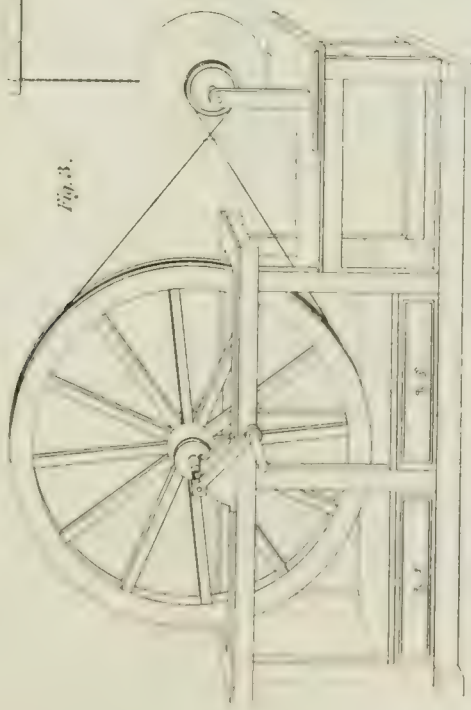


Fig. 3.

DR HAITSON'S.

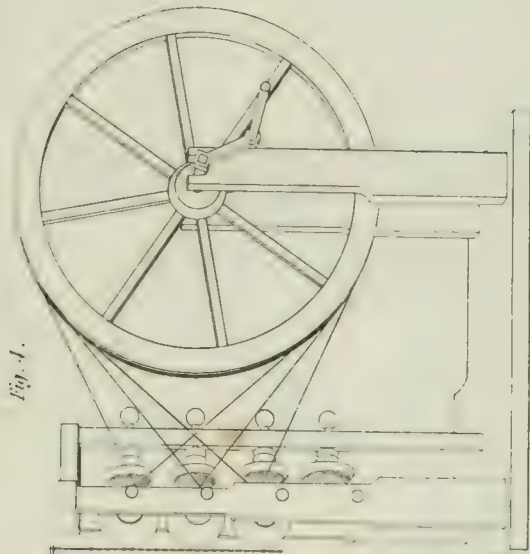


Fig. 4.

MR HUKSBER'S.

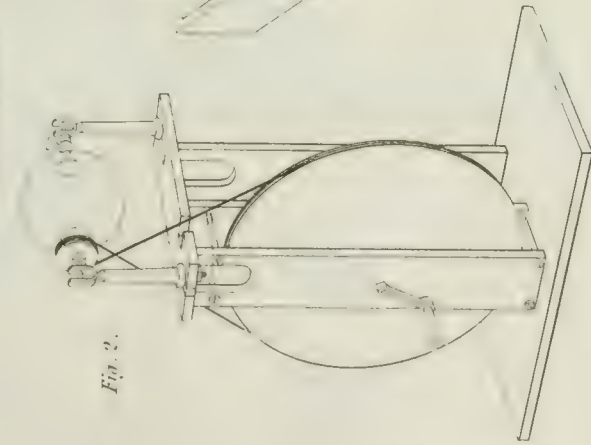


Fig. 2.

Fig. 1.



MR WILSON'S.

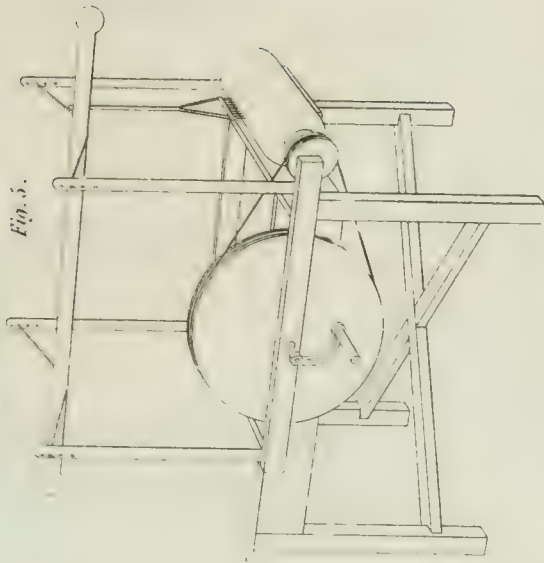


Fig. 5.



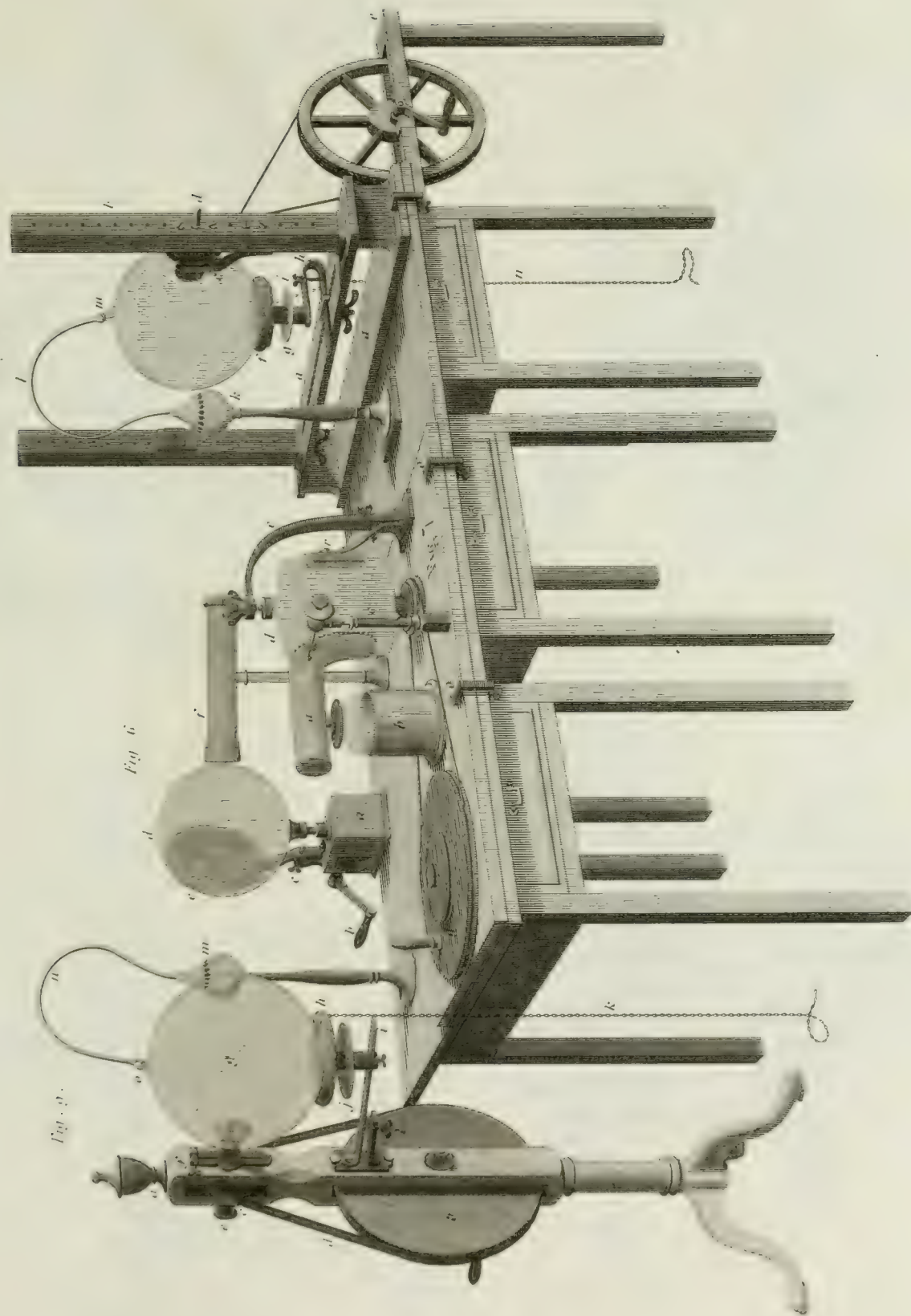


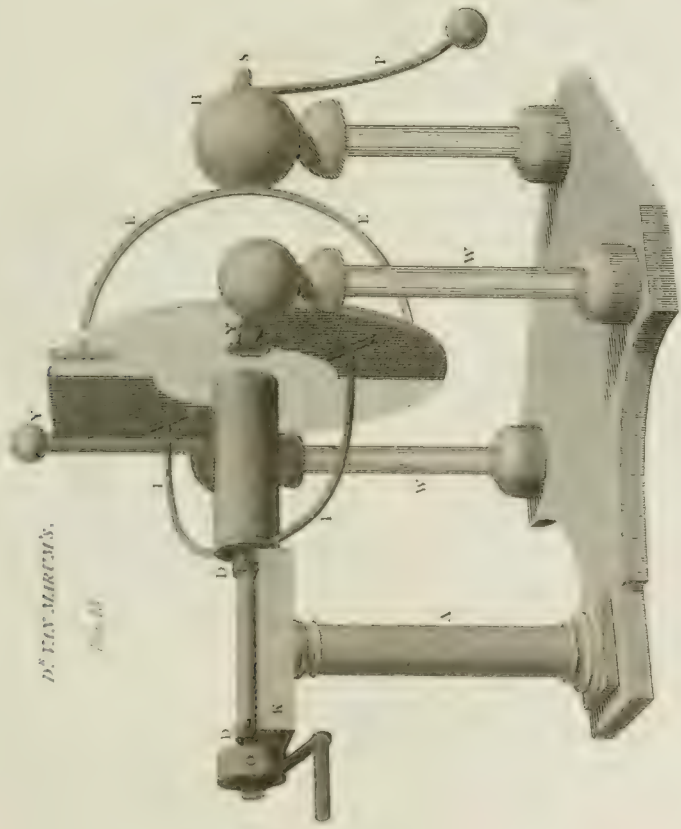
Fig. 5.

Fig. 6.

Fig. 8.

DE TAN MIREN'S.

Fig. 11.



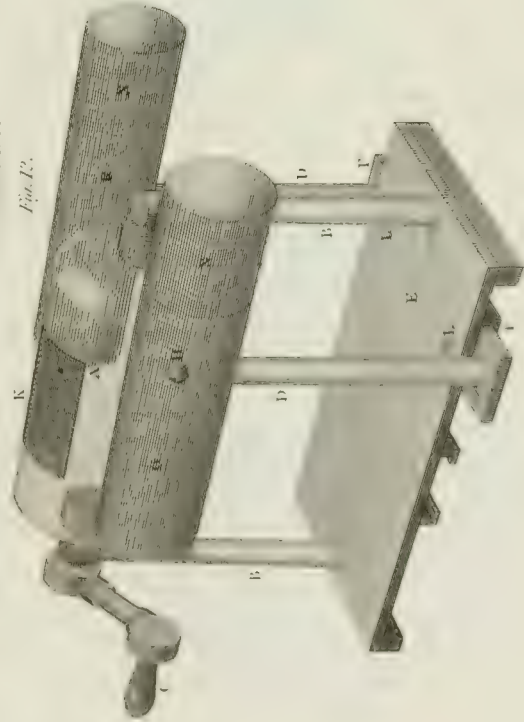
M. BECCARIA'S.

Fig. 13.



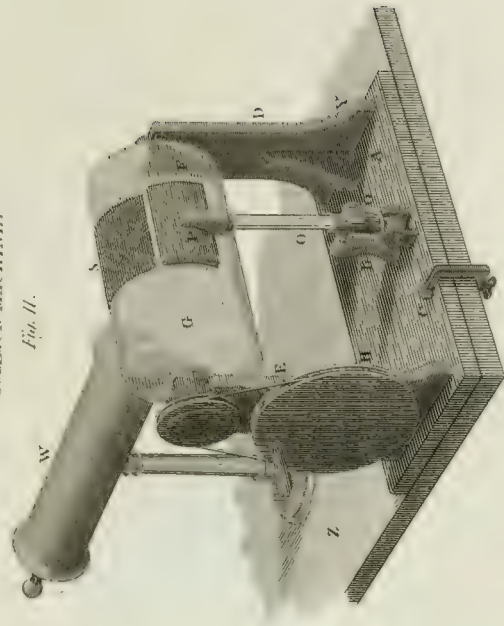
M^r VAIRE'S.

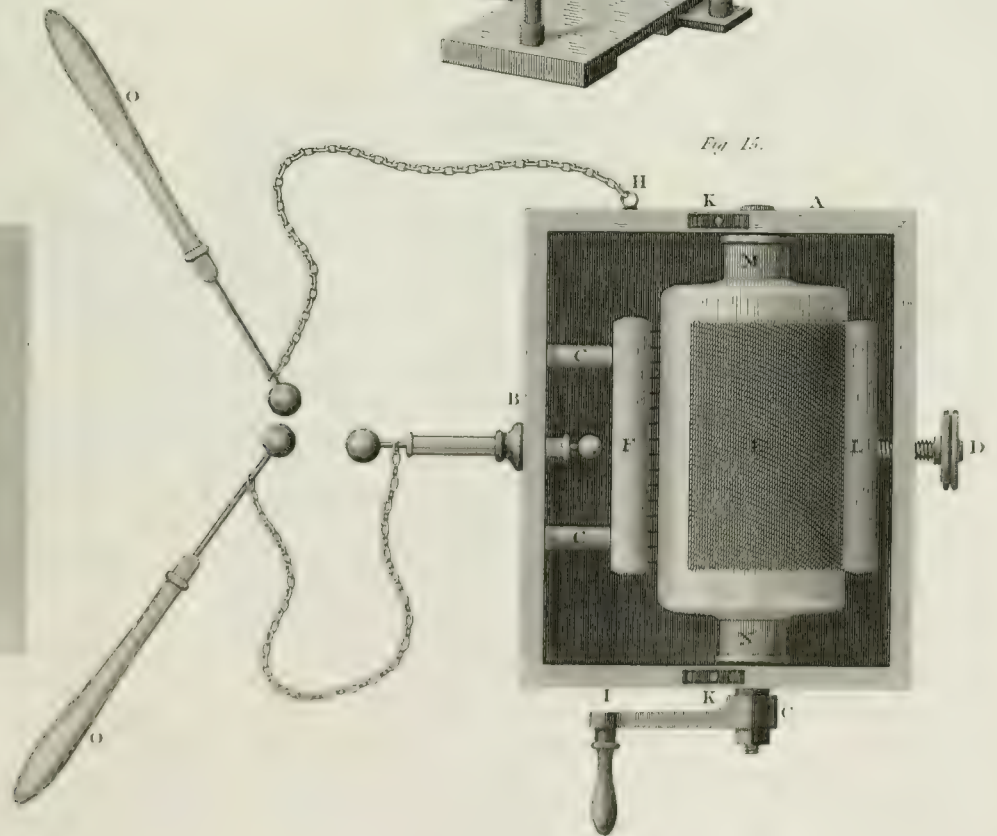
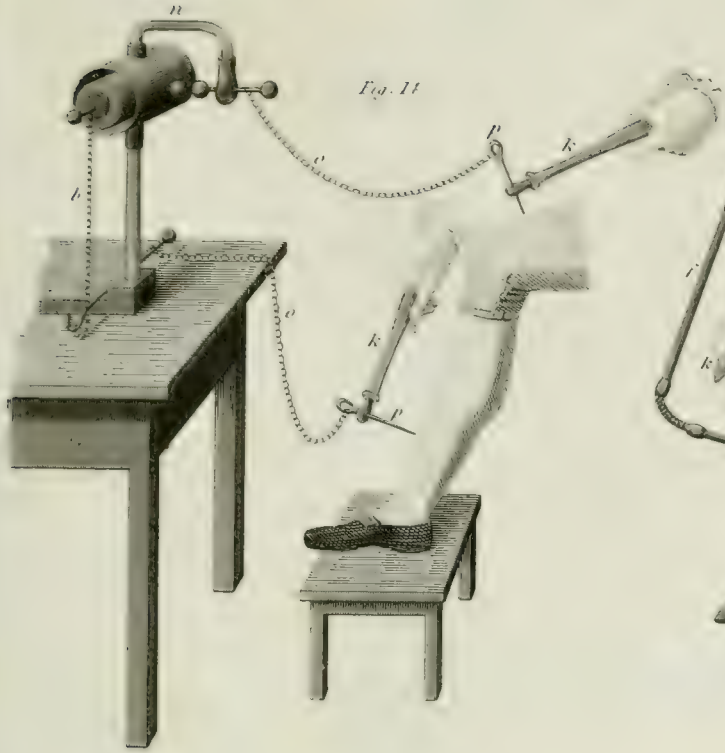
Fig. 12.



COMMON MACHINE.

Fig. 14.





ELECTRICITY.
MR. CUTHBERTSON'S ELECTRICAL MACHINE.

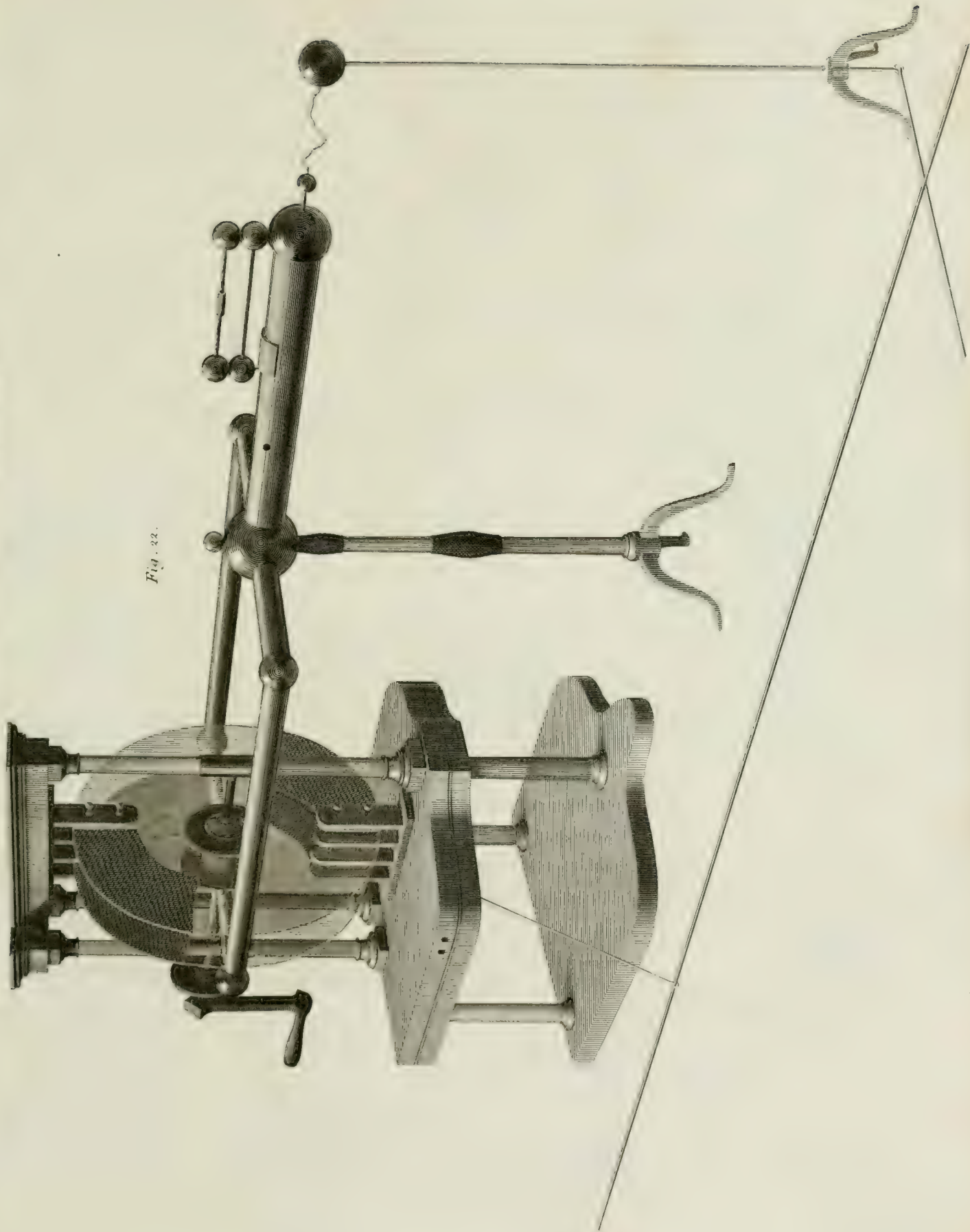
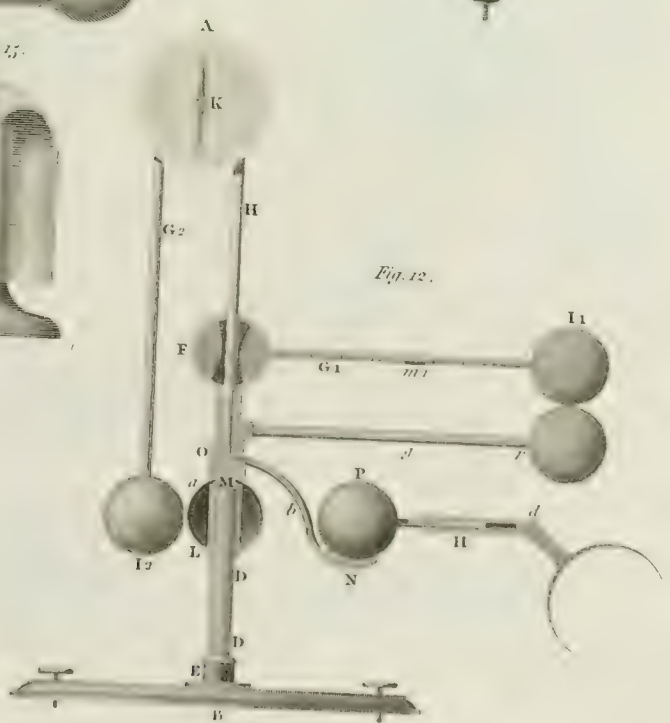
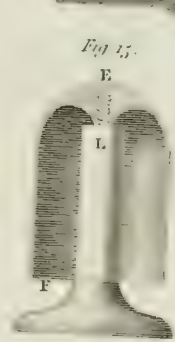
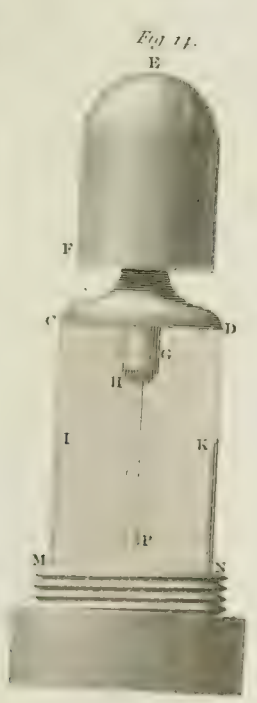
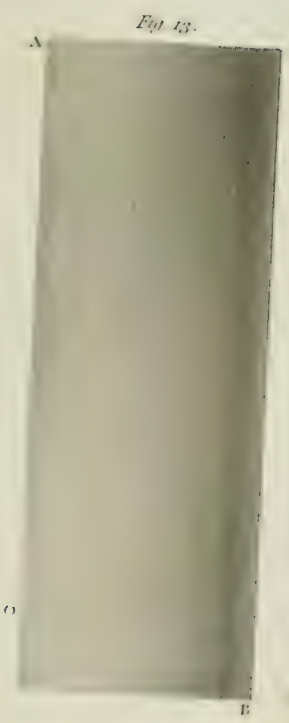
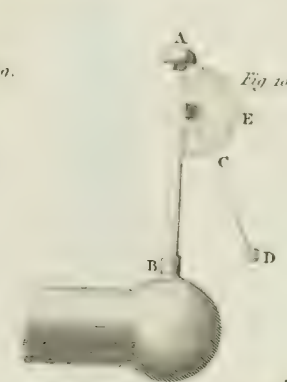
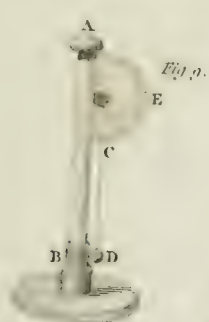
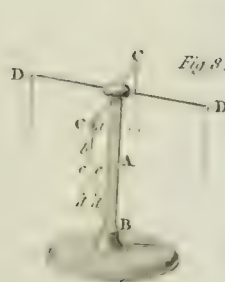
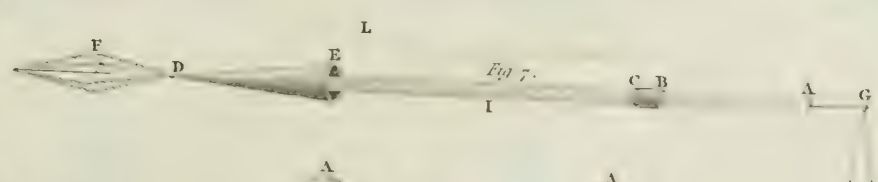
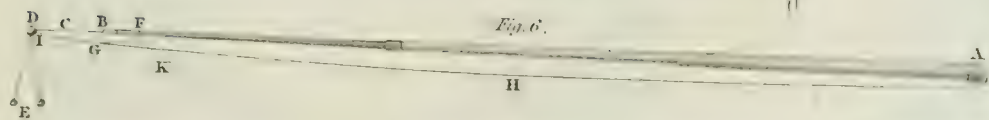
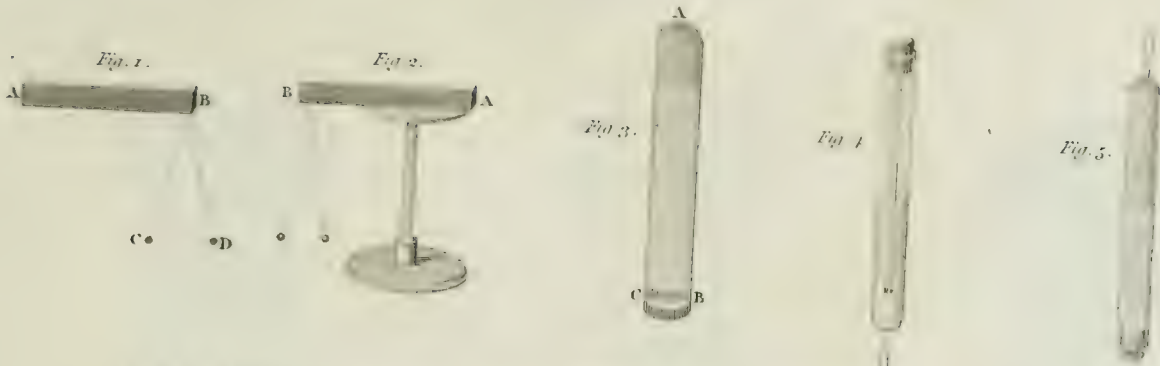


Fig. 22.

Published as the Act directs, Aug^o, 1804, by Longman & Rees, Paternoster Row.

Engraved by Wilson Lowry.

ELECTRICITY.
ELECTROMETER.



ELECTROMETER.

For Figs. 13, 14, & 15, see PL. XII.

Fig. 16.

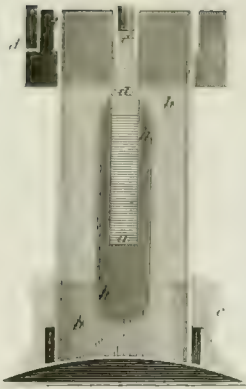


Fig. 17.

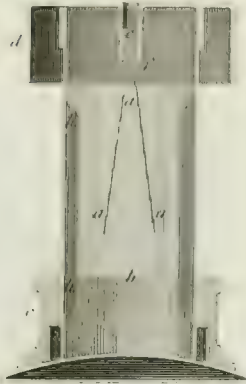


Fig. 18.

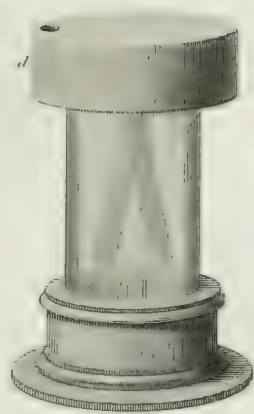


Fig. 19.

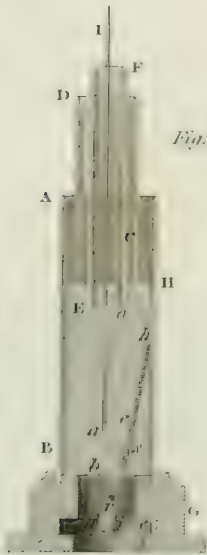


Fig. 20.

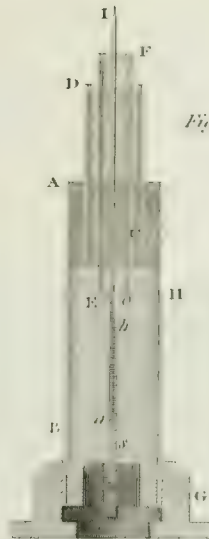


Fig. 21.

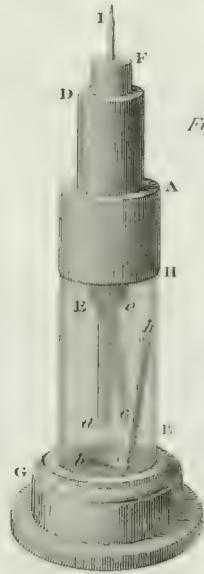
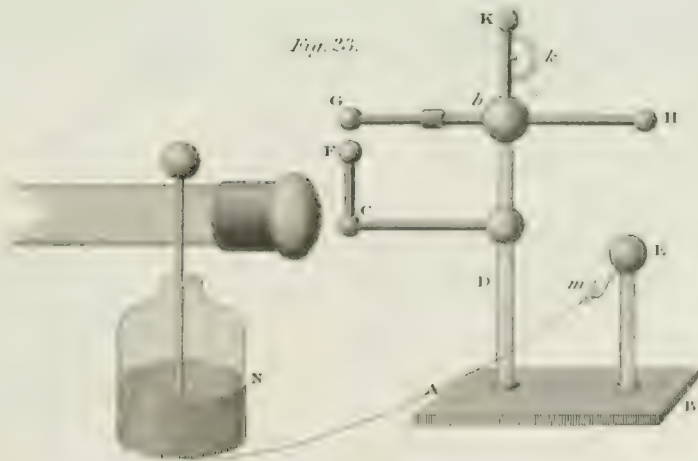


Fig. 22.



Fig. 23.



MEDICAL ELECTRICITY.

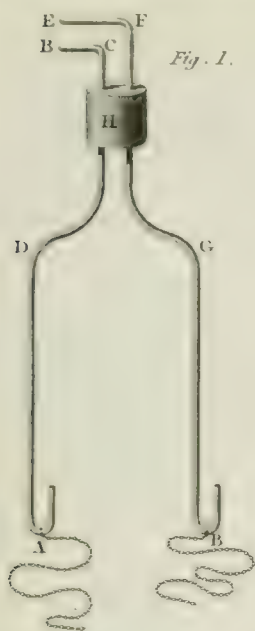
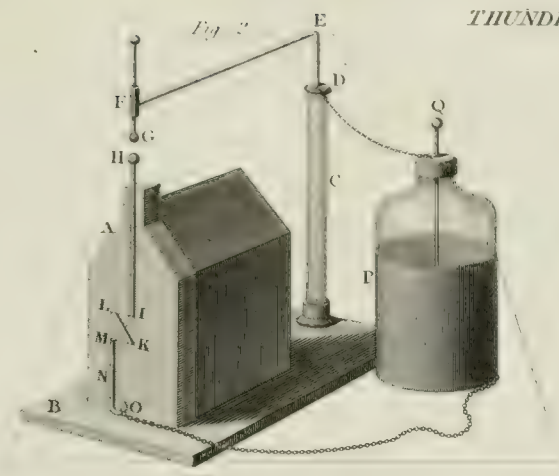


Fig. 1.



THUNDER House.

Fig. 2.

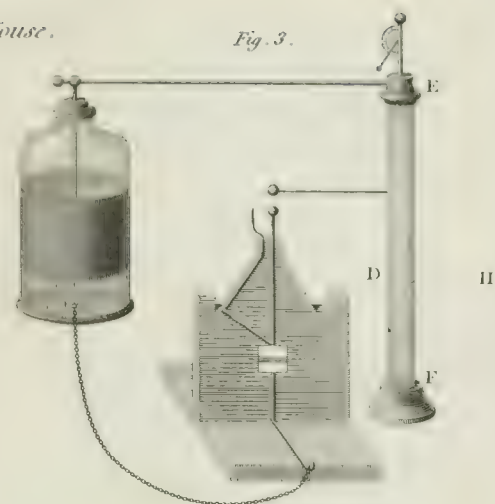


Fig. 3.

TORPEDO.

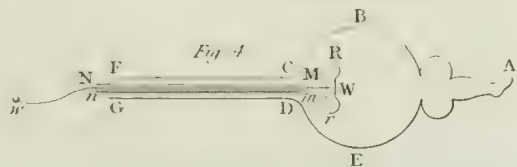


Fig. 4.

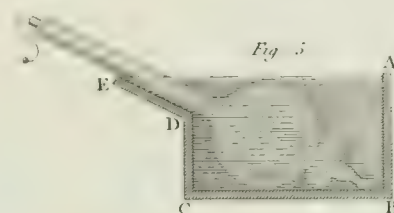
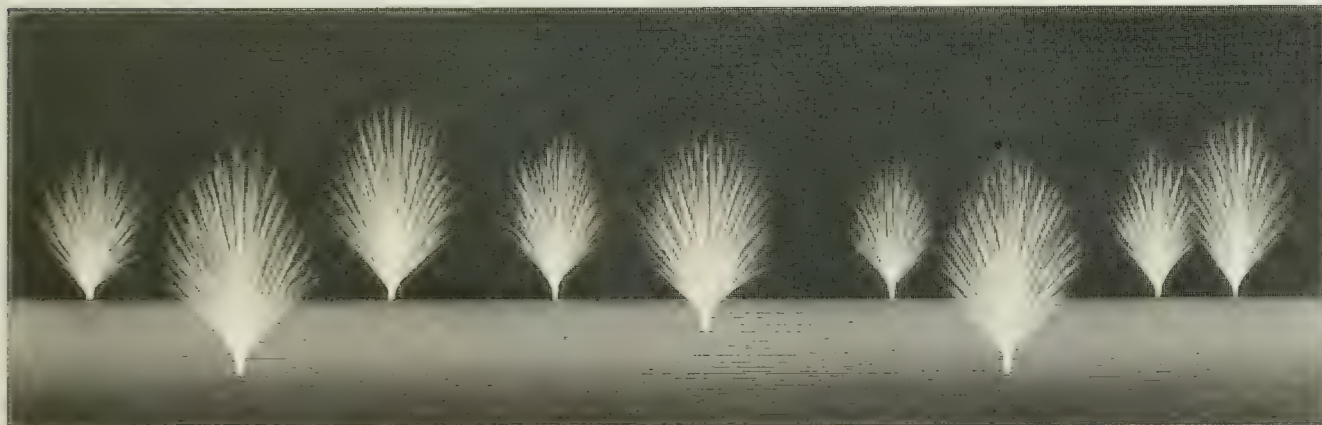


Fig. 5.

BRUSH.

Fig. 6.



Inside connecting Frame of Tyler's BATTERY.

Fig 7 N°1

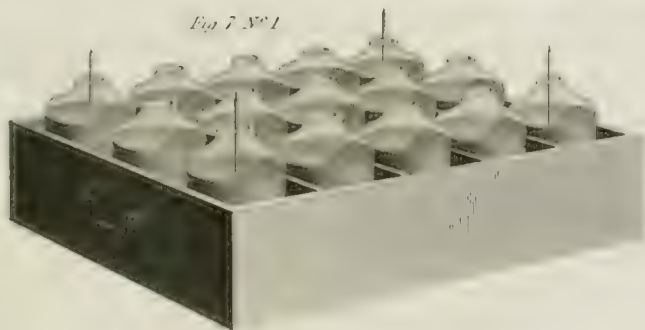
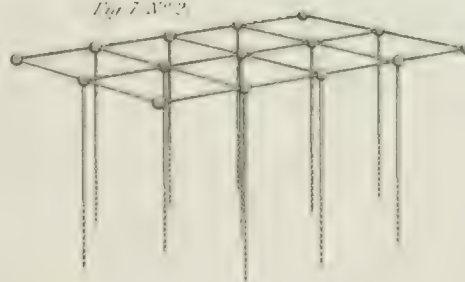


Fig 7 N°2



M^r R. SALMON'S WEIGHING MACHINE.

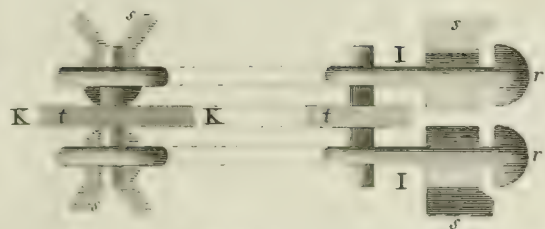


Fig. 5.

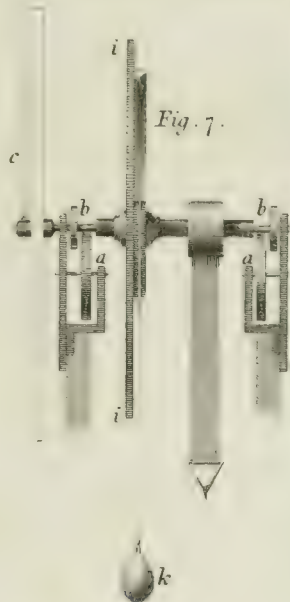
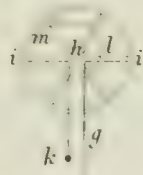
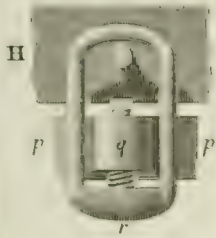


Fig. 7.

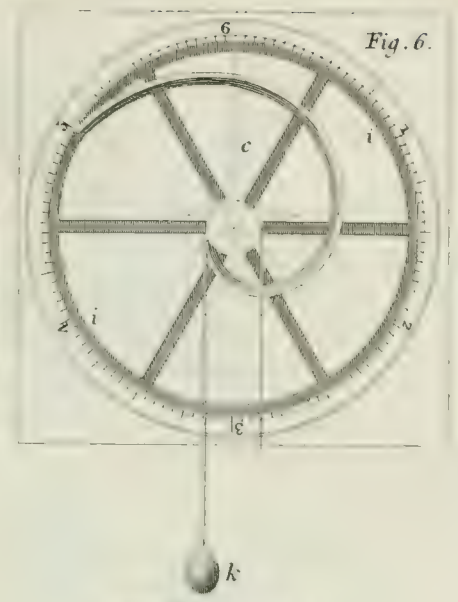


Fig. 6.

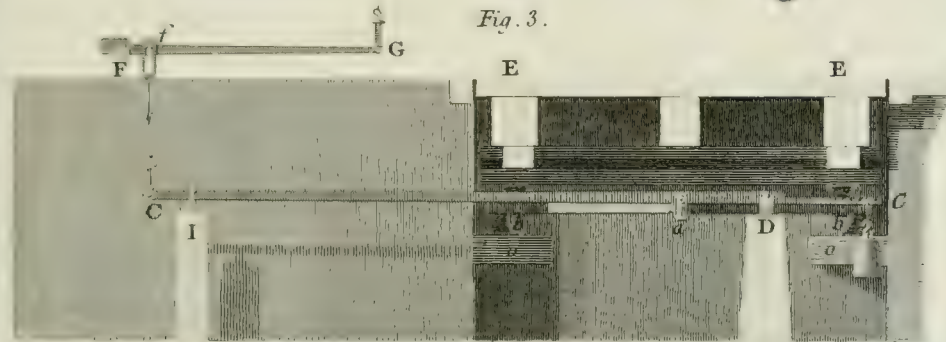


Fig. 3.

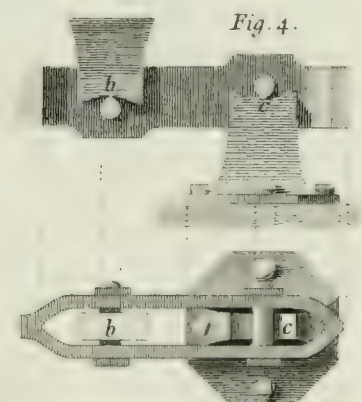


Fig. 4.

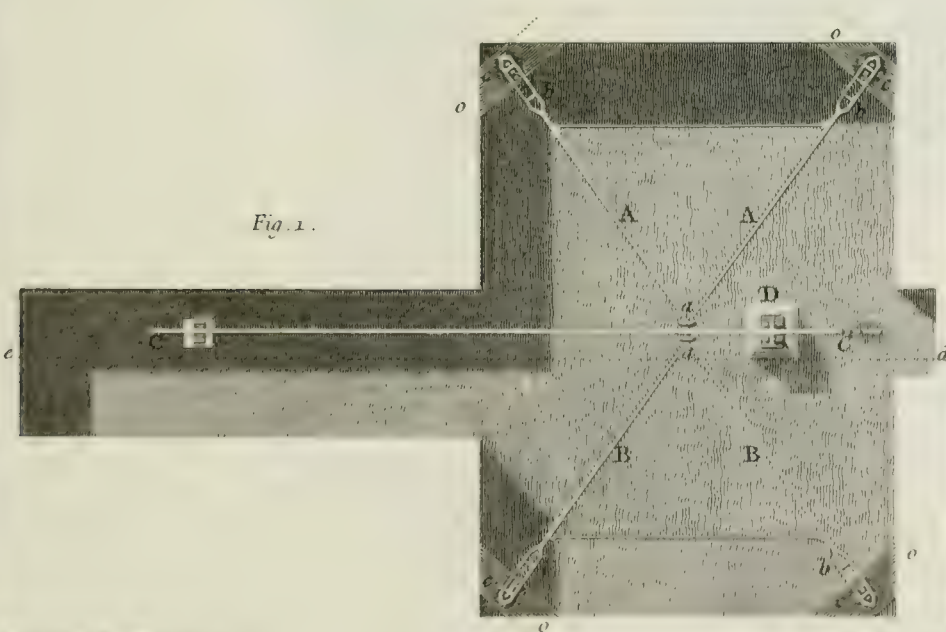


Fig. 1.

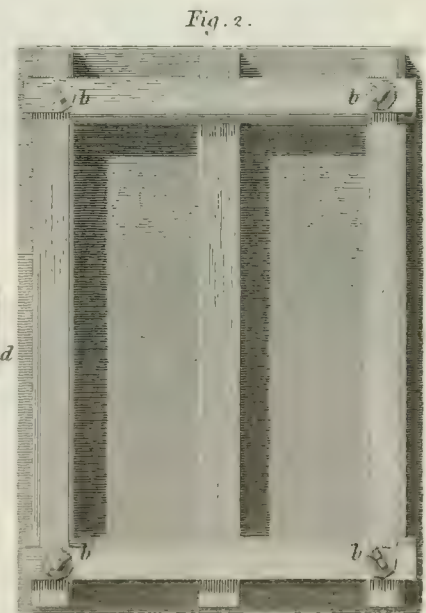
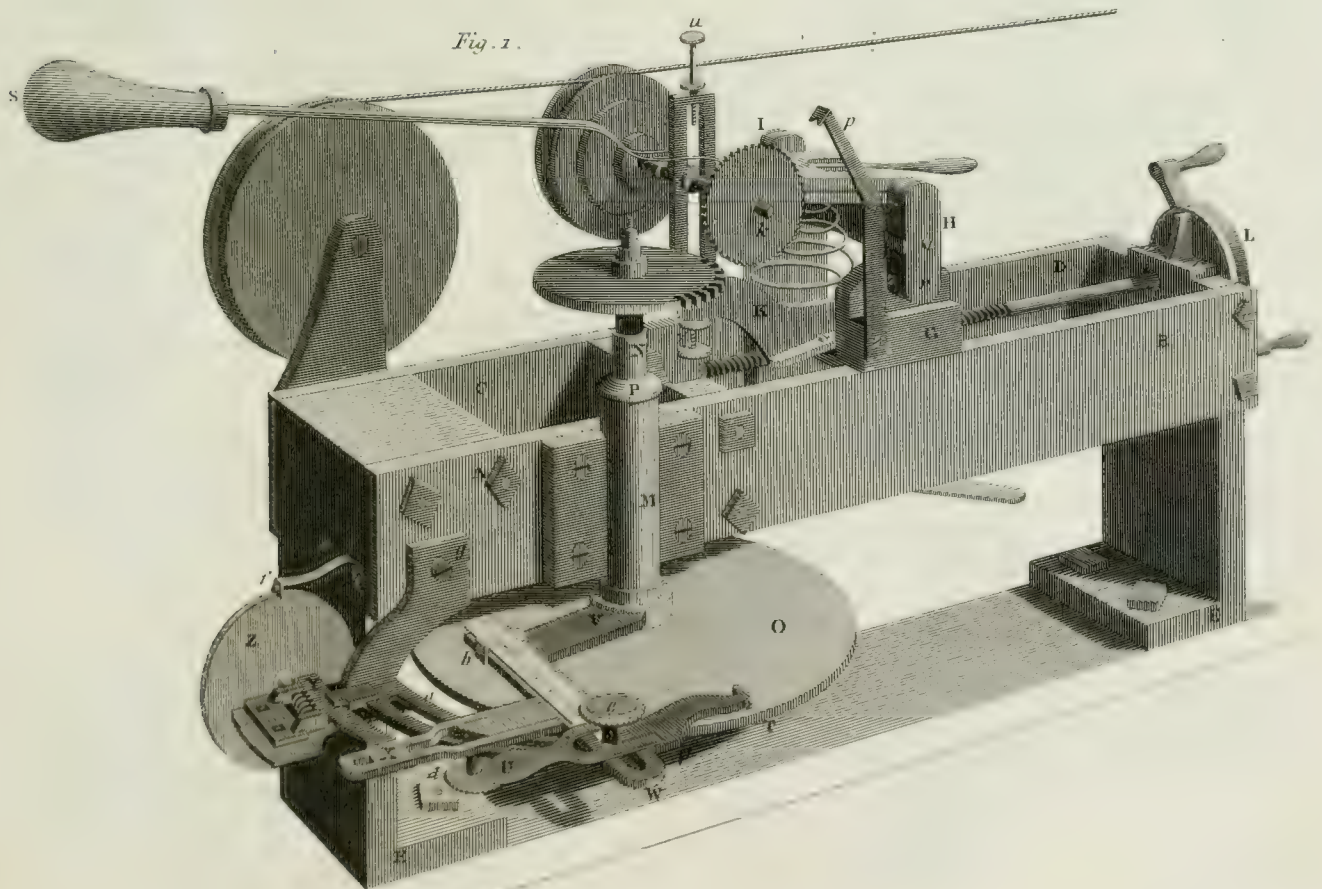
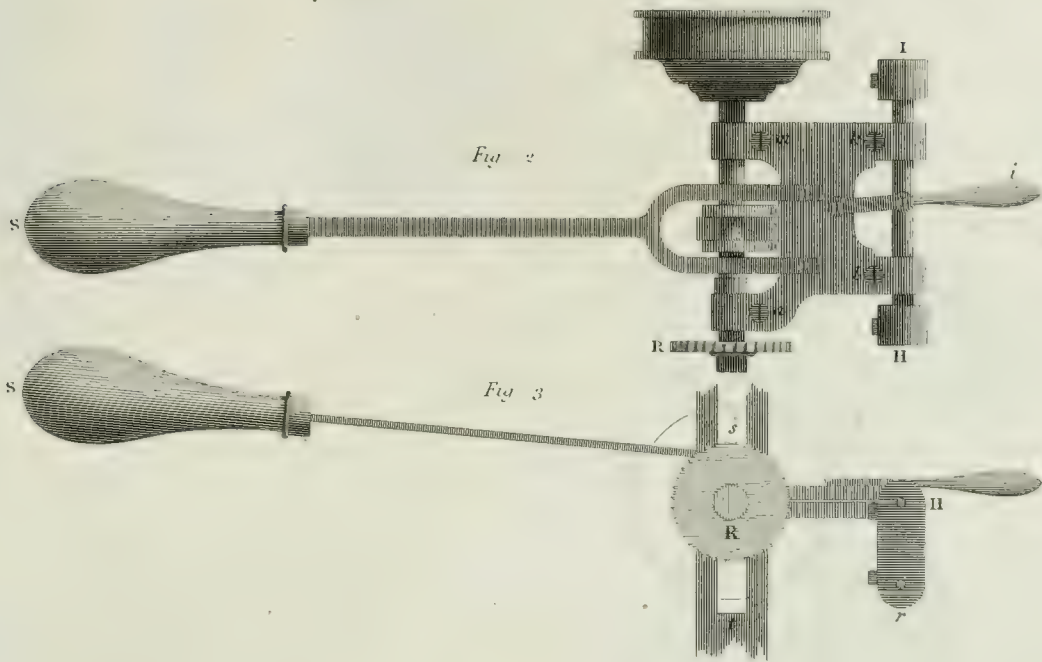


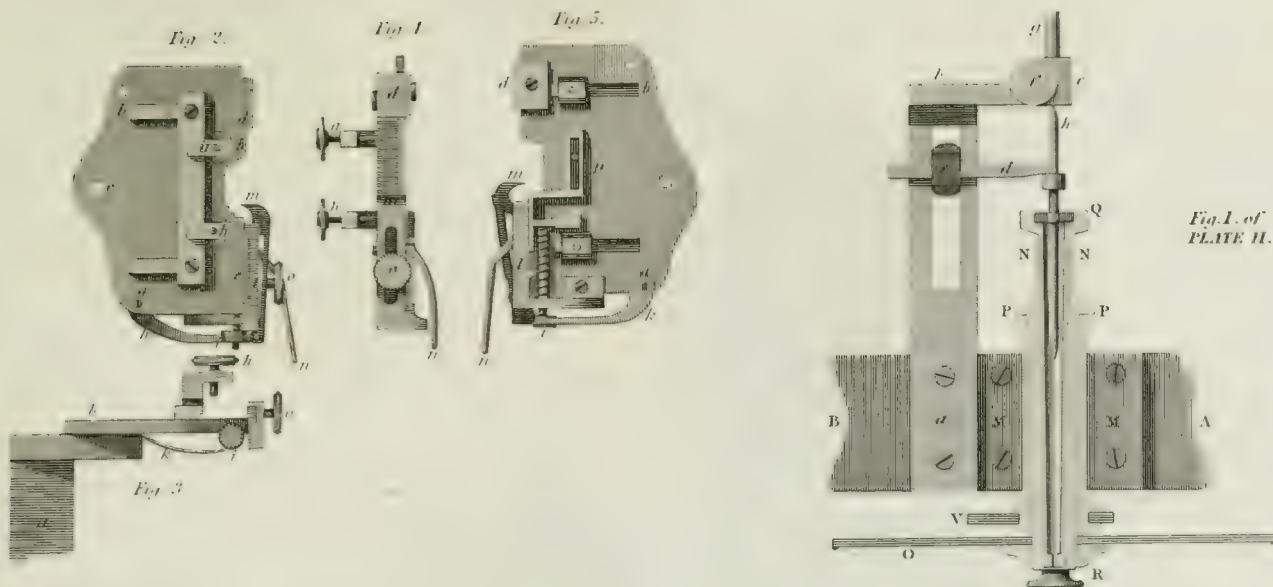
Fig. 2.

Designed & Engraved by Wilson Lowry.

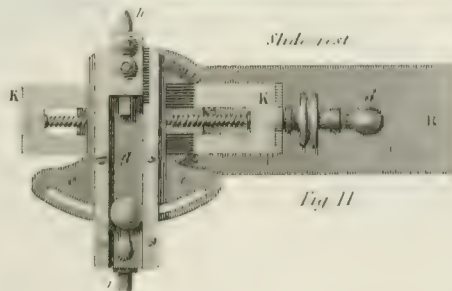
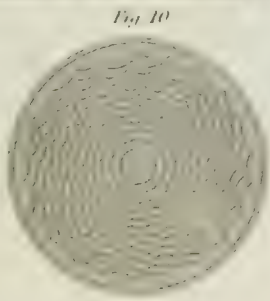
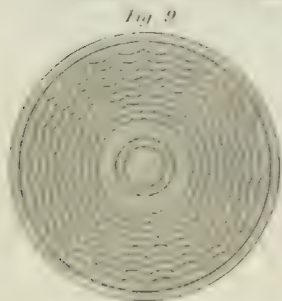
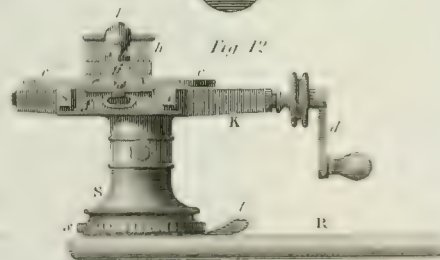
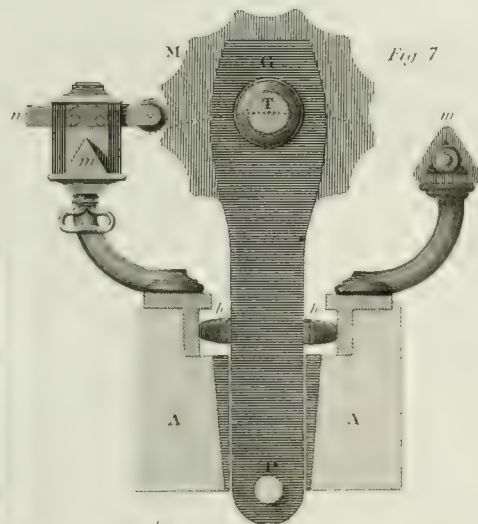
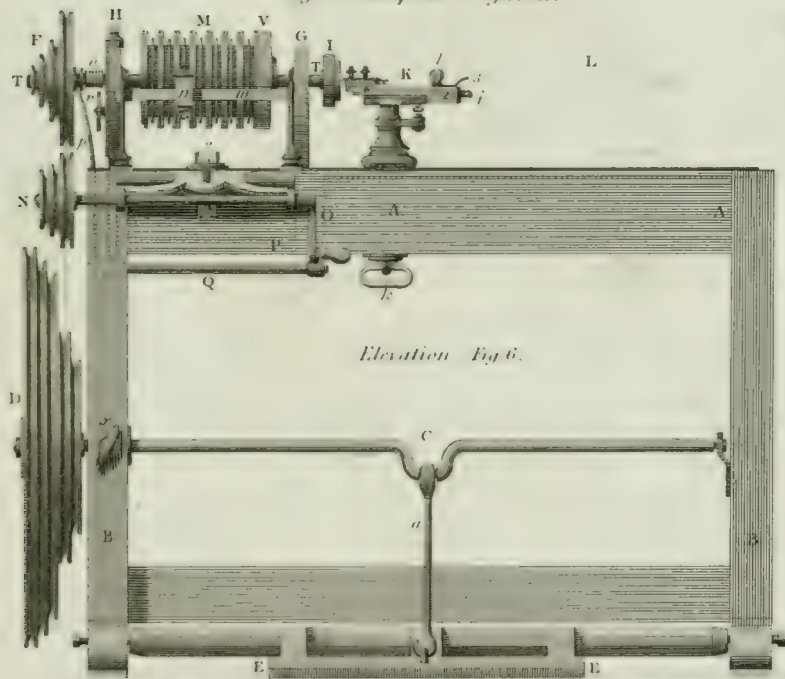
Cutting Engine by Hindley.



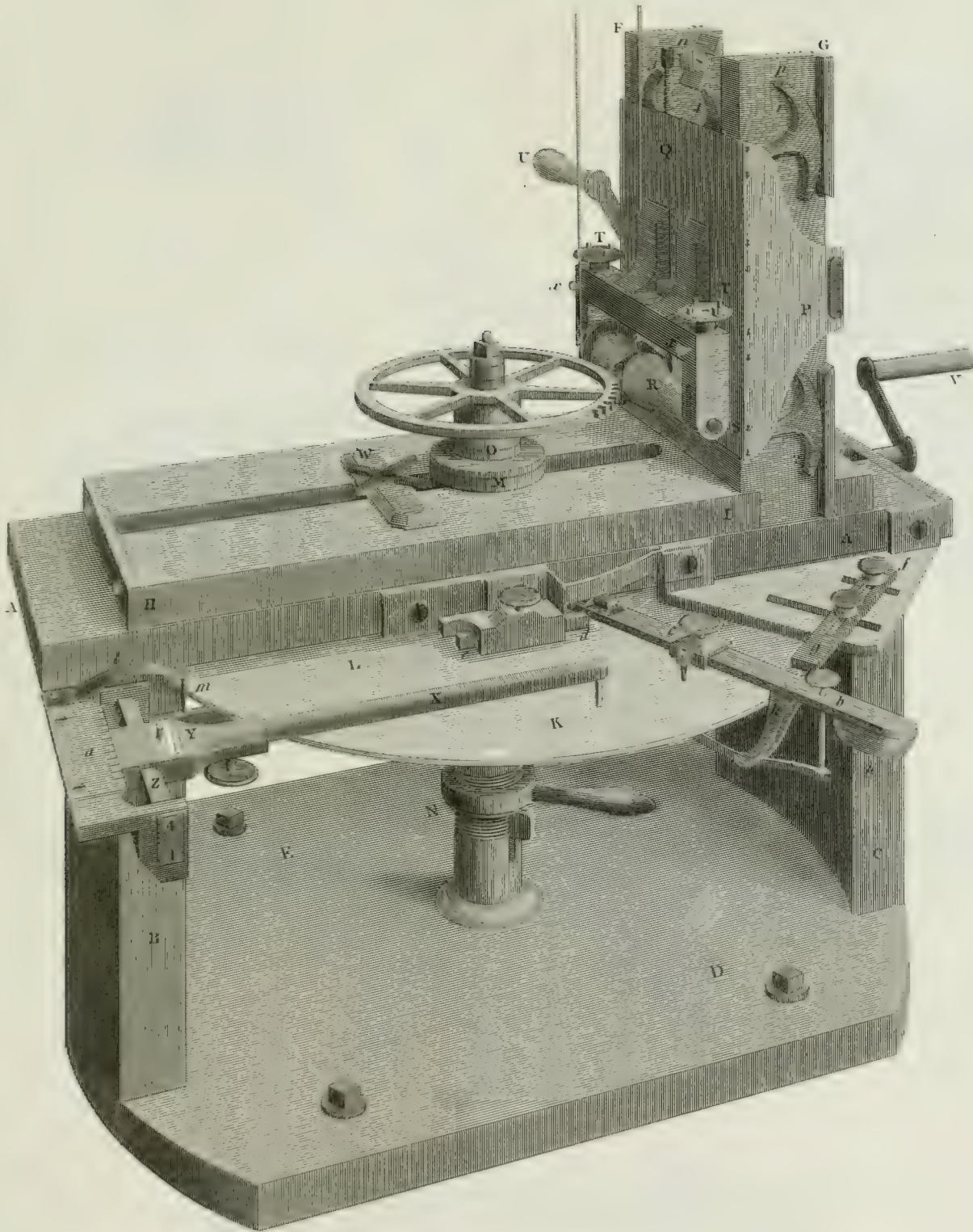
CUTTING ENGINE.



Rose Engine or figure Lathe made by
Mefs^{rs} Holtzapföll & Deylerien.



Cutting ENGINE by Rehe.



CUTTING ENGINE *by* REHE.

For worm wheels

Fig. 1.

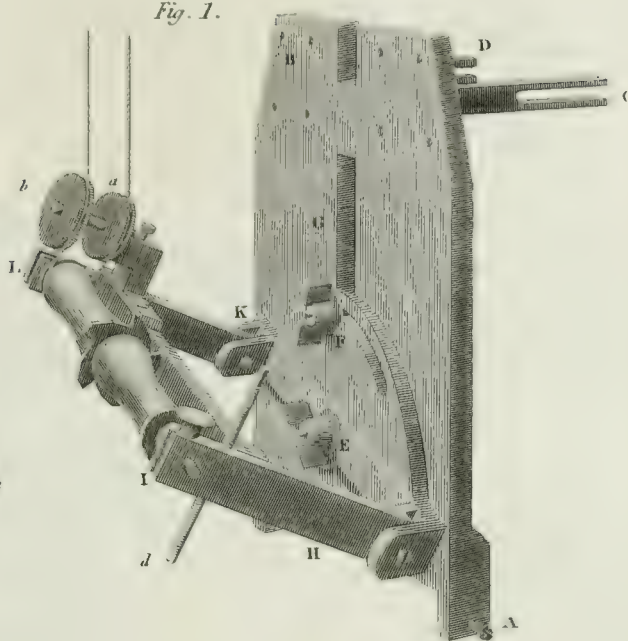


Fig. 3.

Short arbor

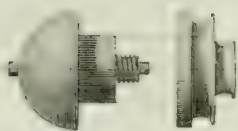
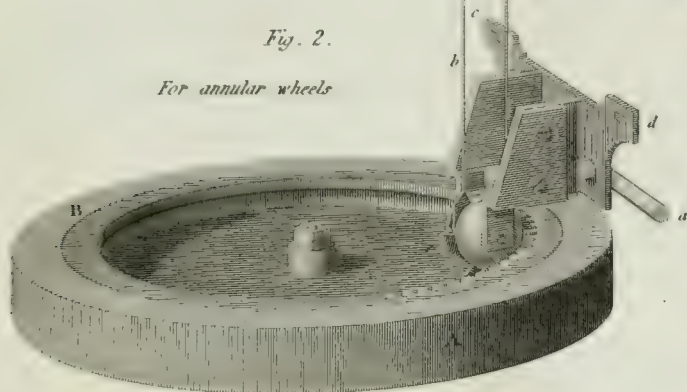


Fig. 2.

For annular wheels



For Racks

Fig. 4.

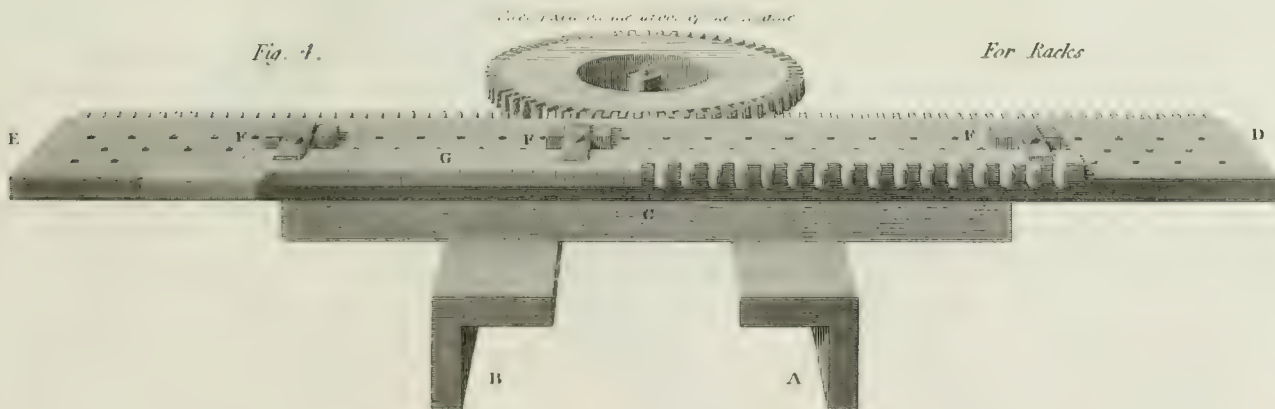
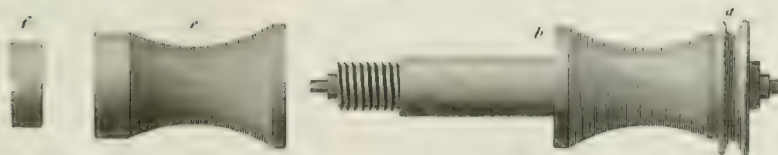


Fig. 5.

Cutter arbor



ENGINES.
For sharpening Cutters
 BY REHE

Fig 1

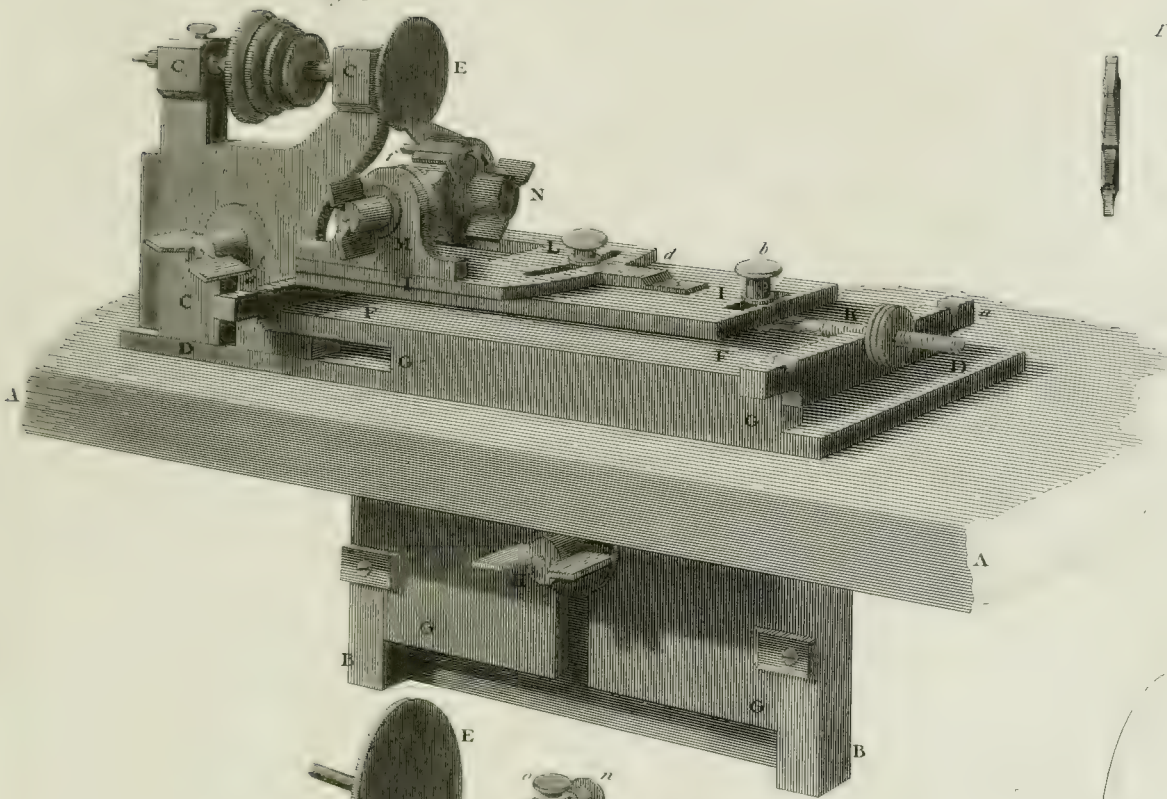


Fig 2

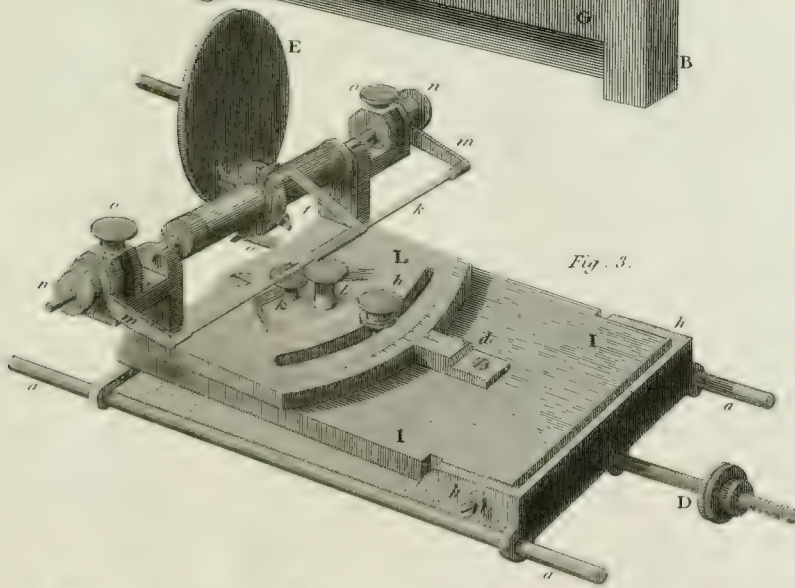
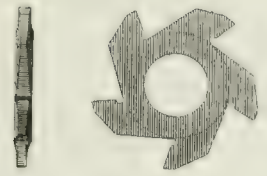


Fig 3

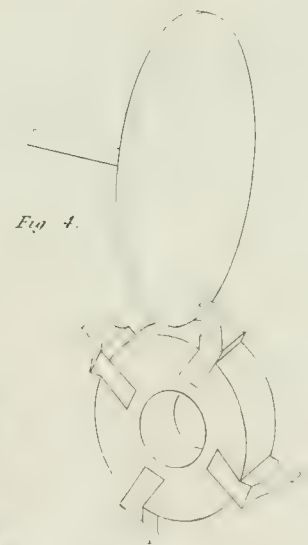


Fig 4

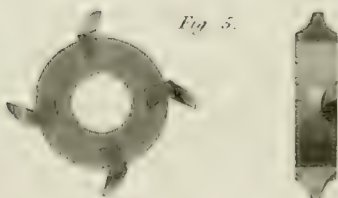


Fig 5

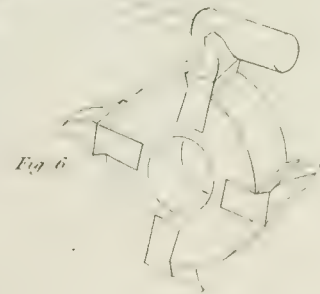
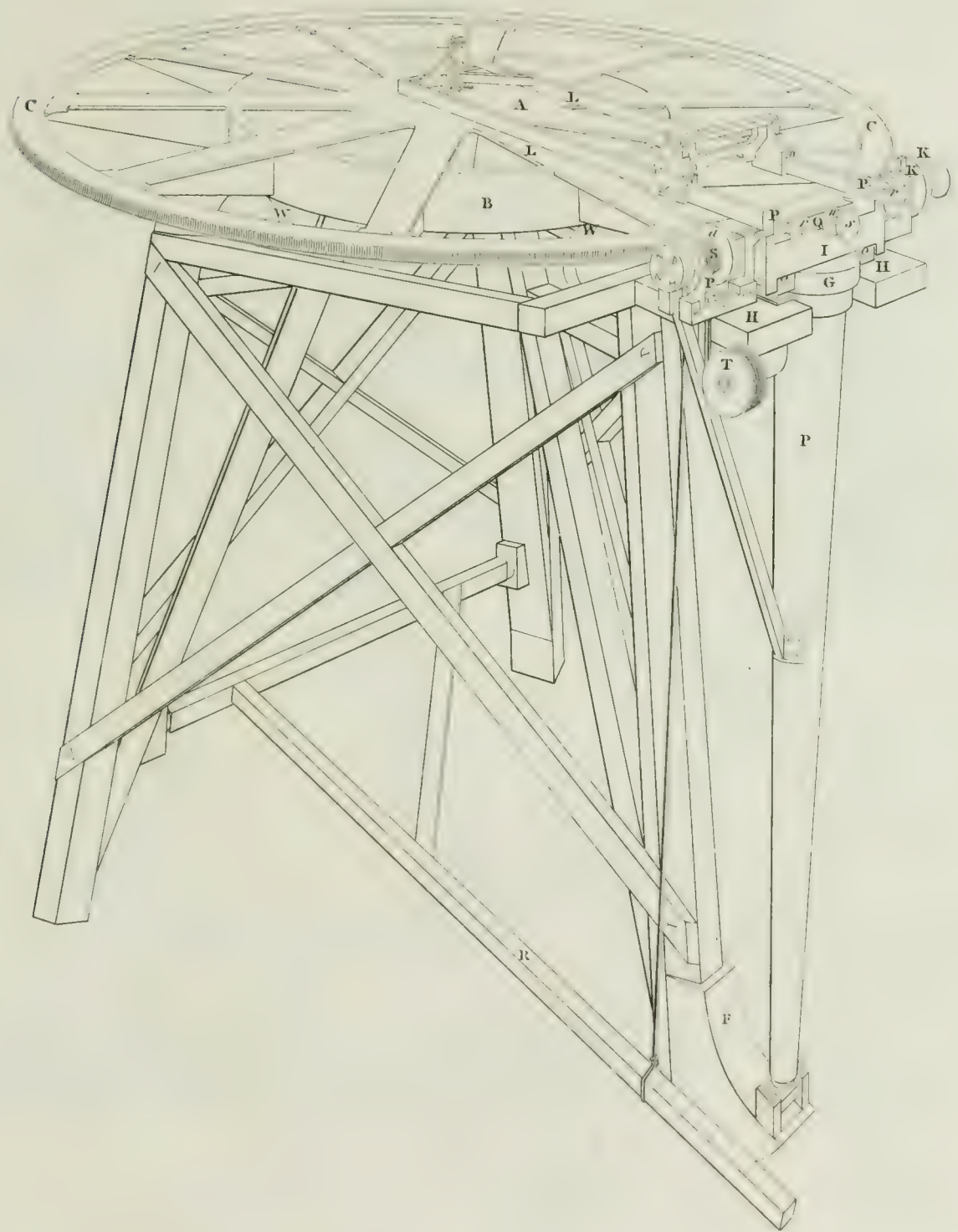


Fig 6

A perspective View of M^r RAMSDEN'S dividing Engine.



MR. RIMSDEEN'S DIVIDING ENGINE.

Fig. 2.
PLAN
of the Great Wheel.

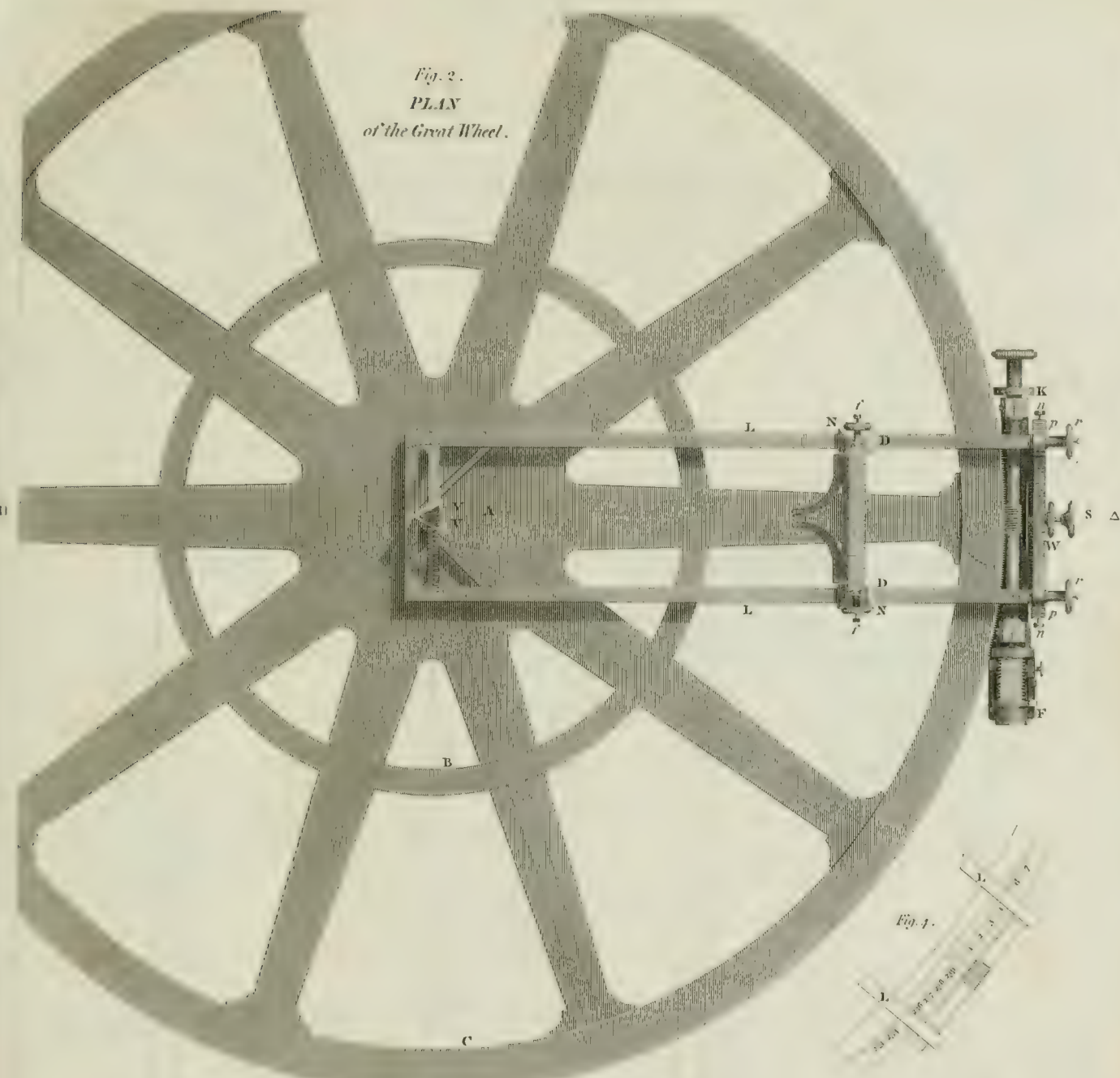


Fig. 1.

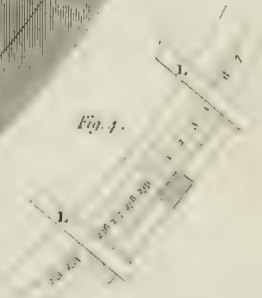
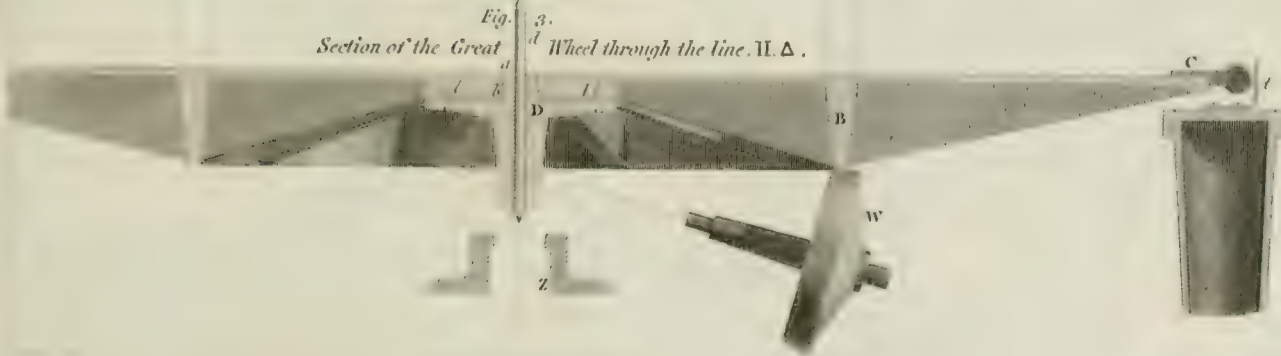


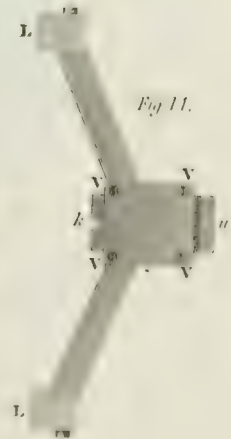
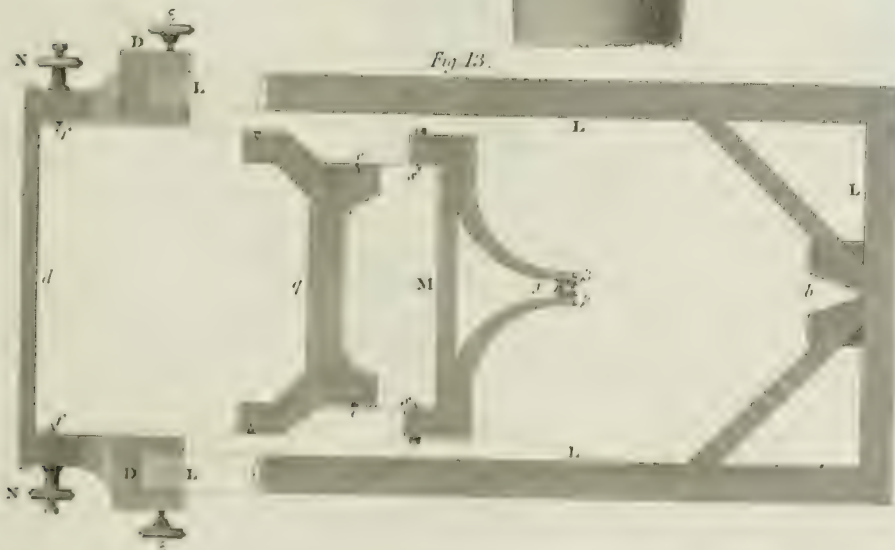
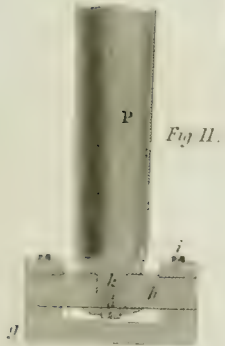
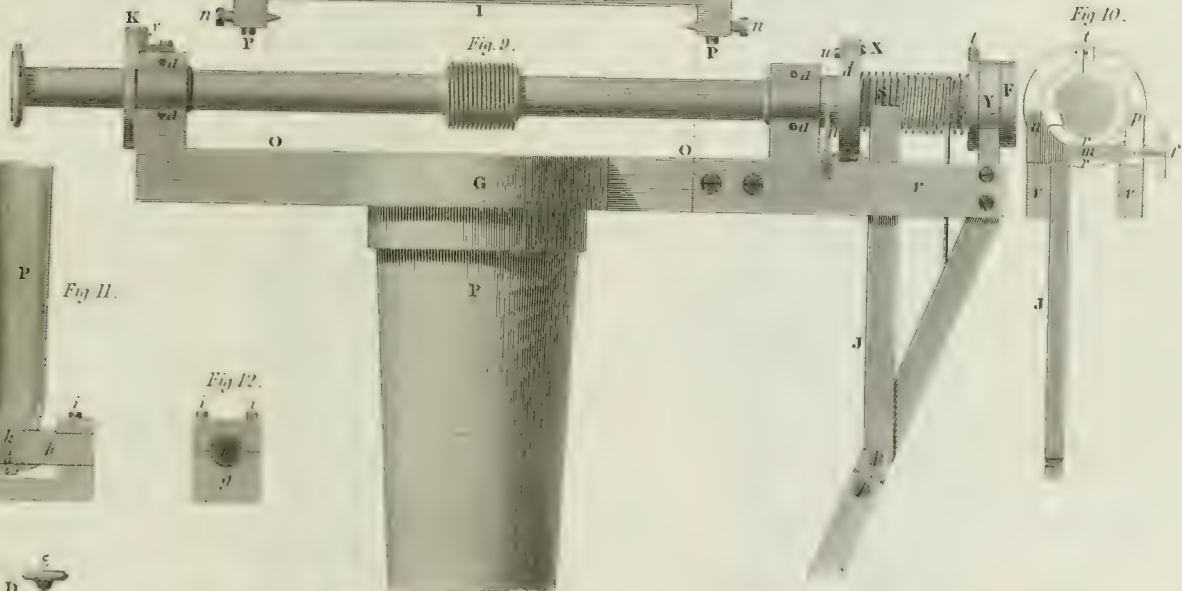
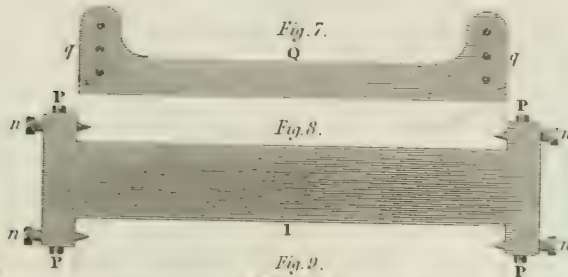
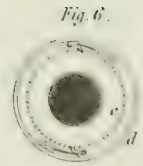
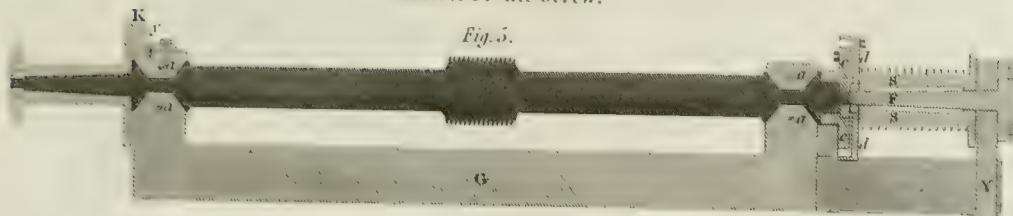
Fig. 3.
Section of the Great
Wheel through the line. II. Δ.



ENGINES.

MR. RAMSDENS'S DIVIDING ENGINE.

Section of the screw.



ENGINES.

Engine for cutting the Screw of Ramsden's Circular Dividing Engine.

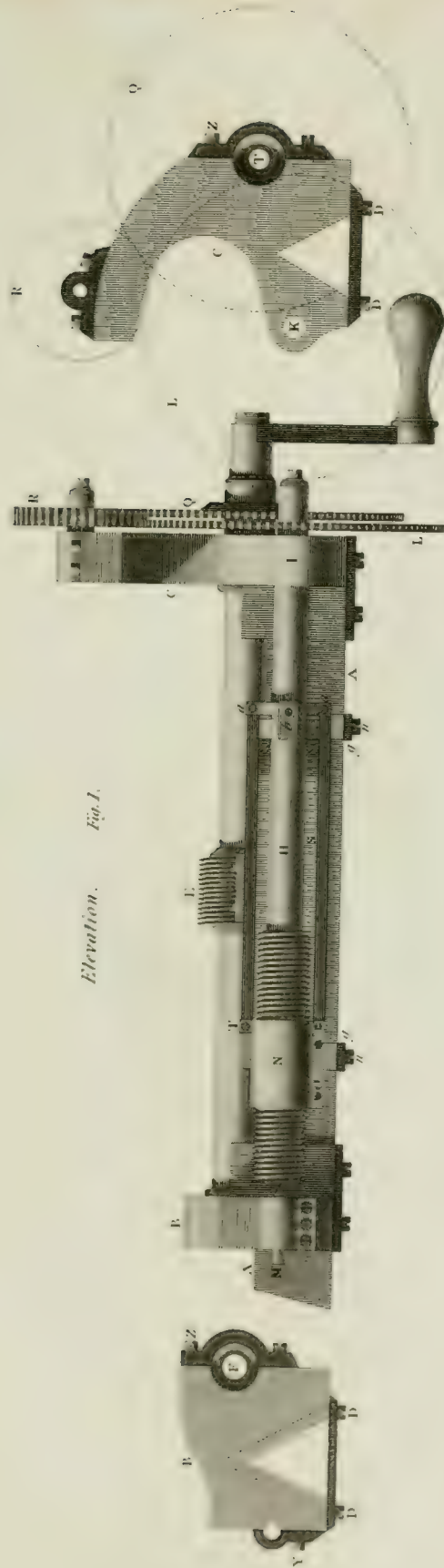


Fig. 1. Elevation.

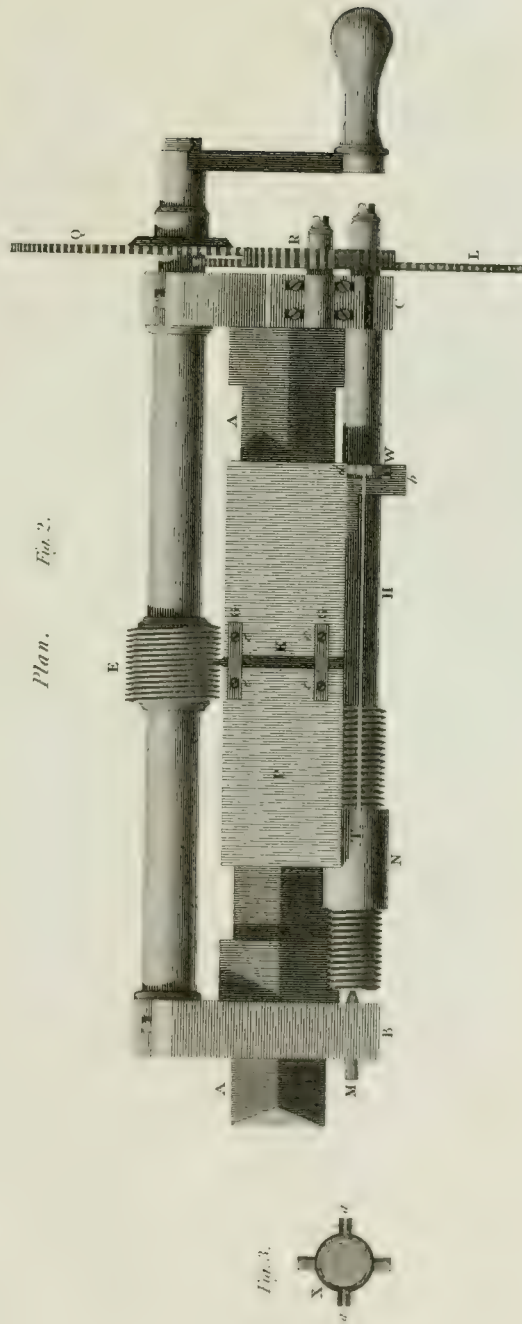
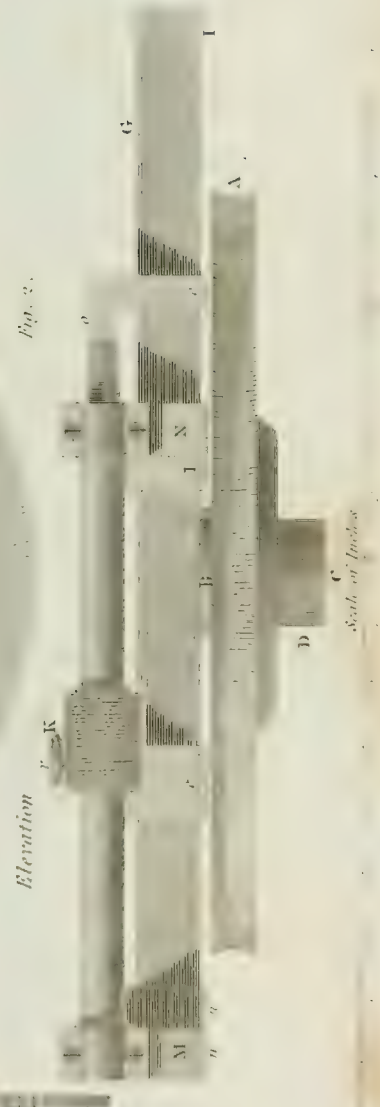
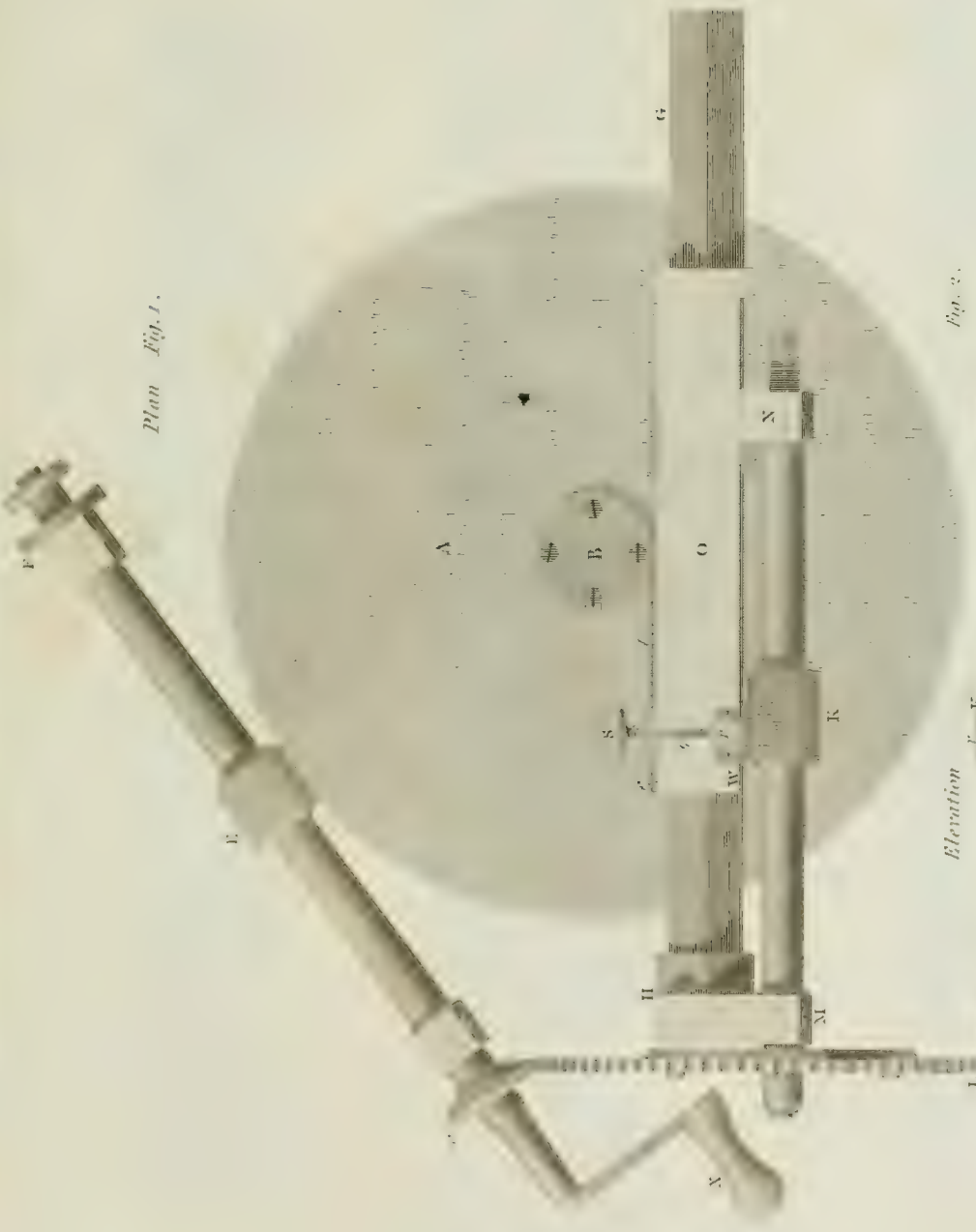


Fig. 2. Plan.



Fig. 3.

ENGINE for cutting the screw of RAMSDENS'S Straight Line dividing Engine.



Ramsden's Engine for dividing straight Lines.

Fig. 3.

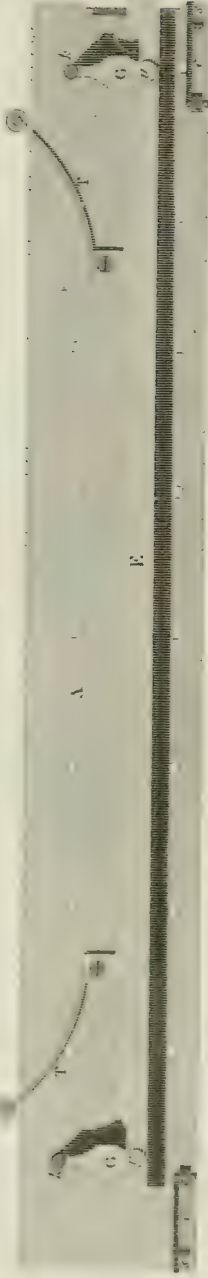


Fig. 1.

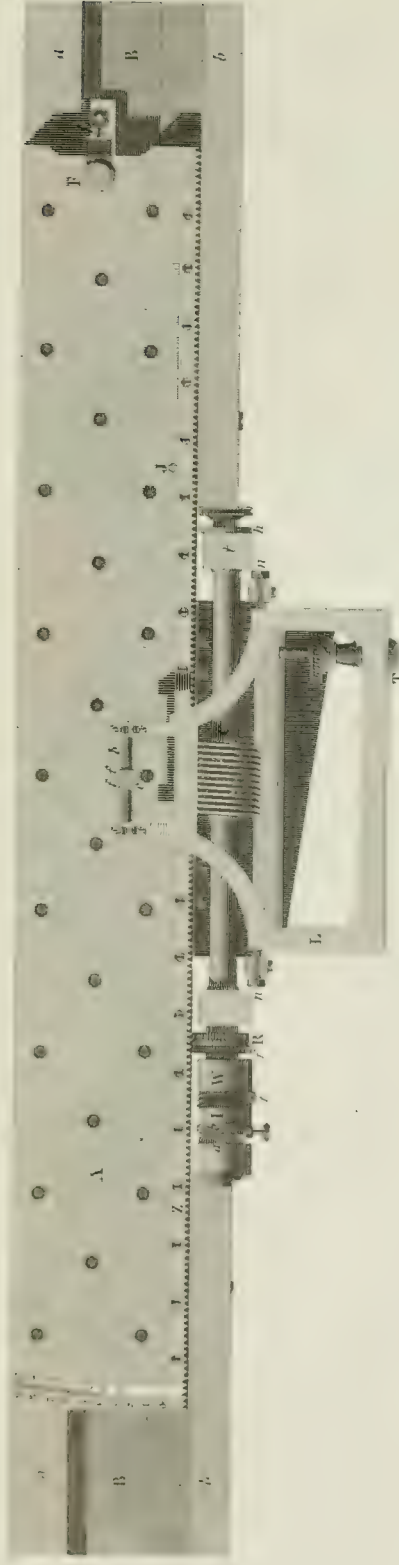


Fig. 2.

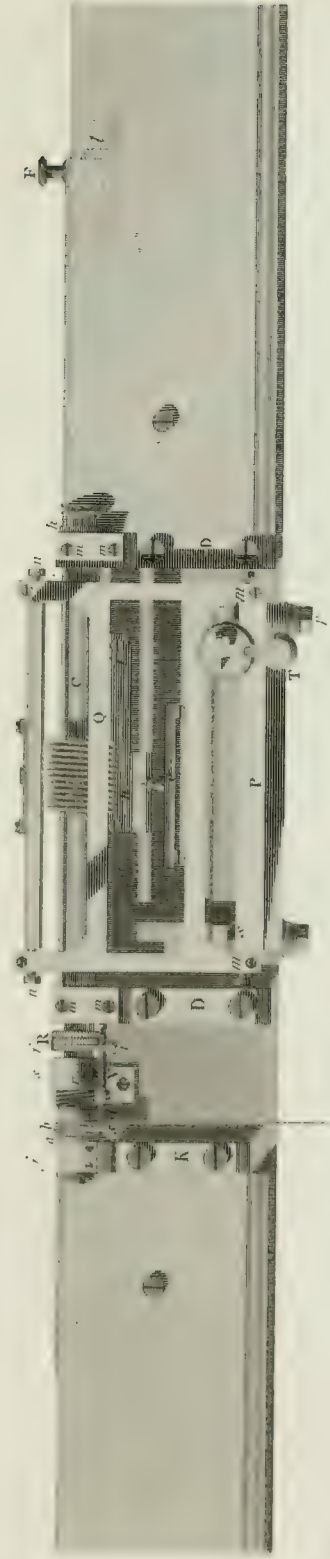
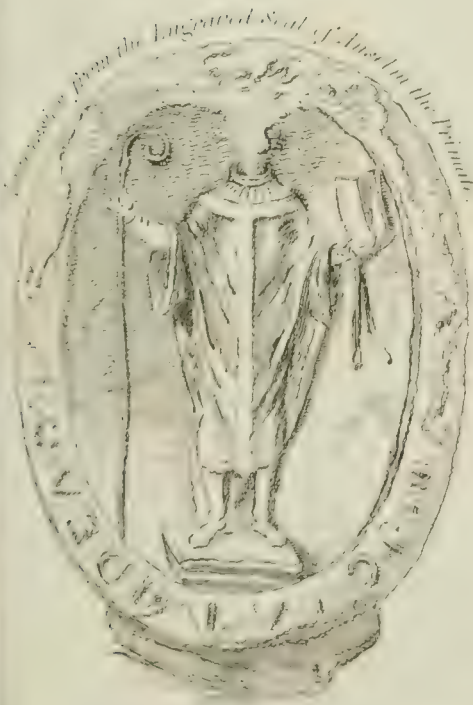




Fig. 1.



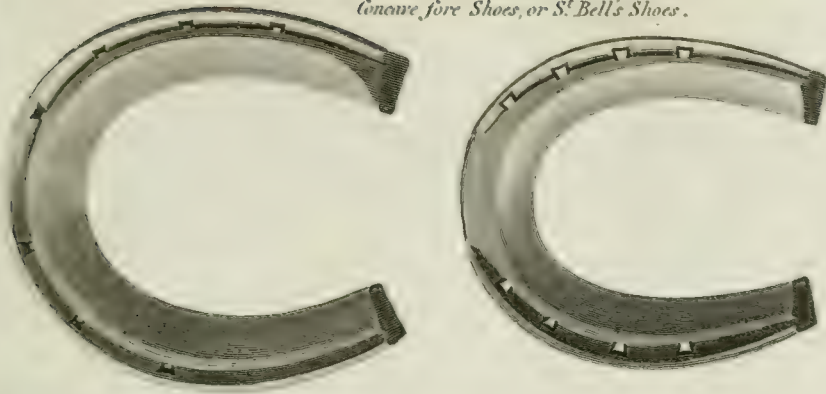
Fig. 3.



Engraved Brass on the Tomb of W^m de Fulbourn in Fulbourn Church, Cambridgeshire.

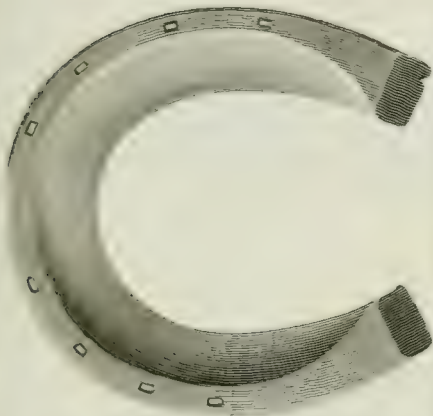
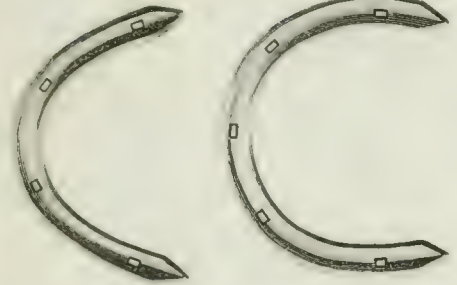
FARRIERY.
HORSE SHOERING.

Common fore Shoes, or S^t Bell's Shoes.



Racing hind Shoe.

Racing fore Shoe.



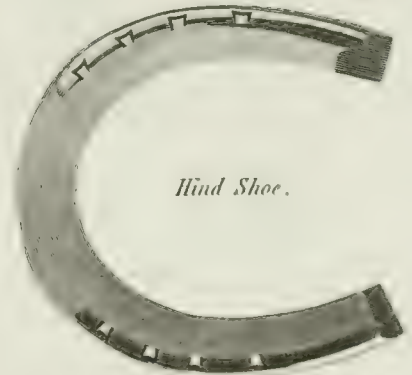
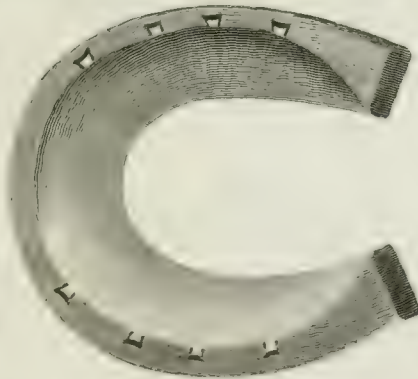
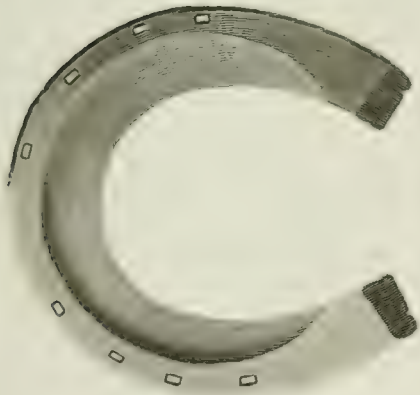
Frost Shoe.



Shoe to prevent cutting.



Hind Shoe.



Fore Shoe with a joint in the toe.

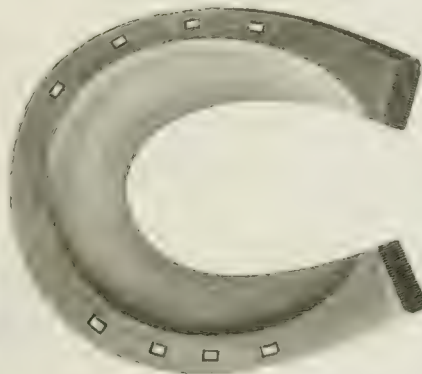
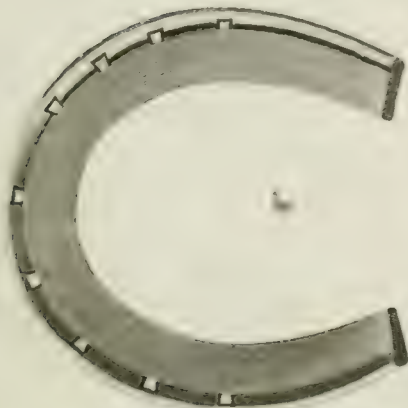


PLATE I.

BASTION.



CAVALIER.

Fig. 2.

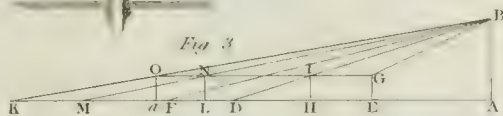
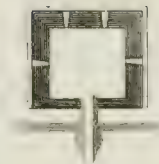
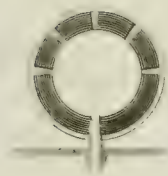


PLATE II.

Fig. 1.

BATTERY.

Battery en Barbe or Barbets.

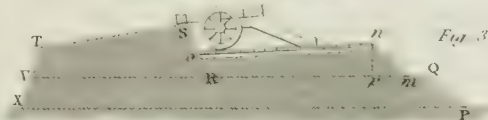
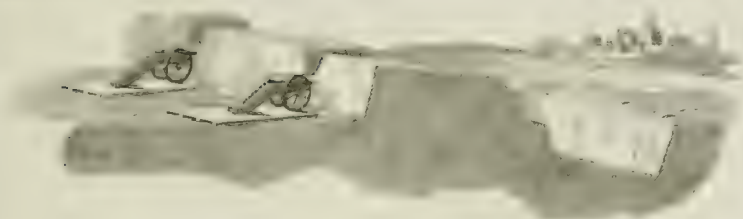


Fig. 2.

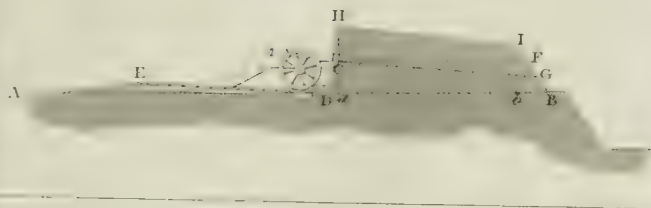


Fig. 8.

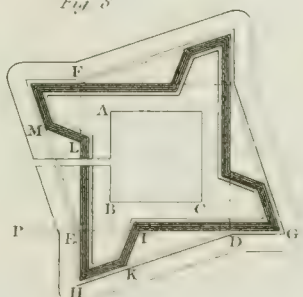


PLATE IV.

FORT

Fig. 1.

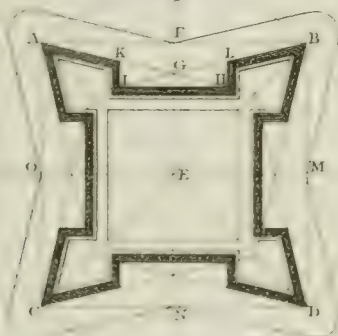


Fig. 6.

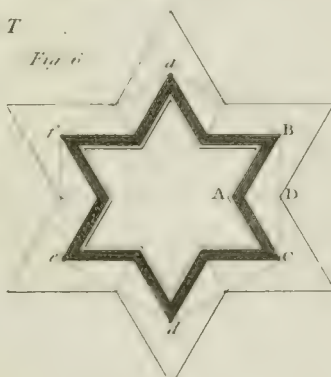


Fig. 9.

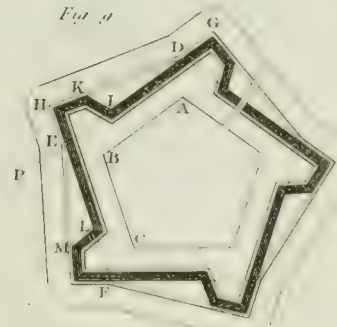


Fig. 3.

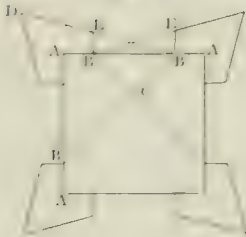


Fig. 7.

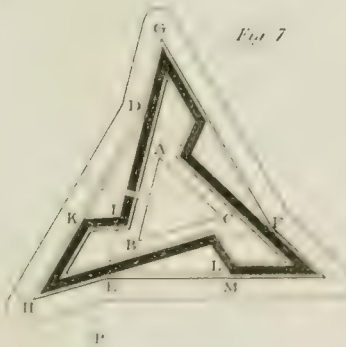


Fig. 10.

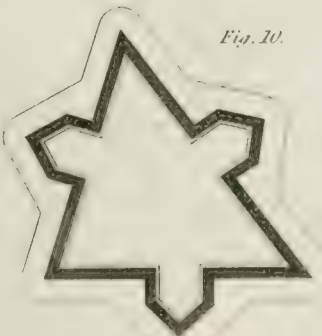


Fig. 1.
Echelon.

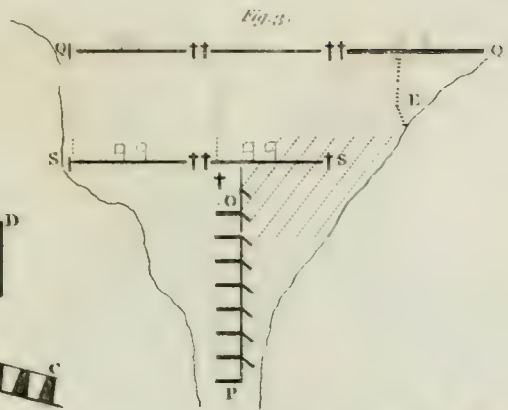


Fig. 2.

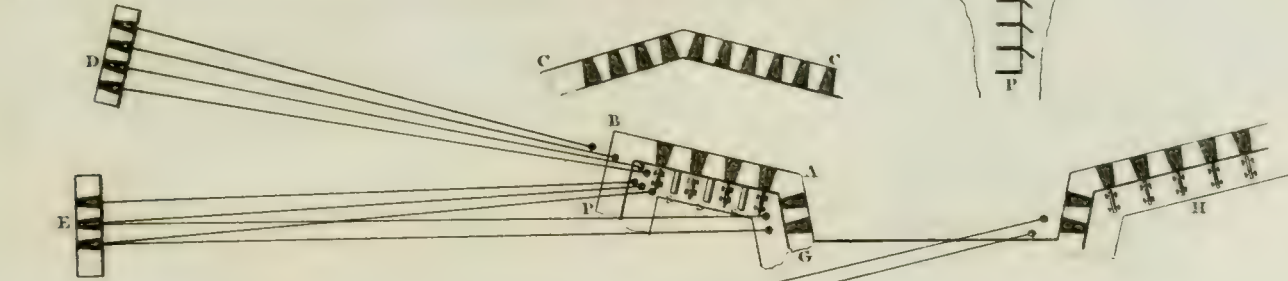
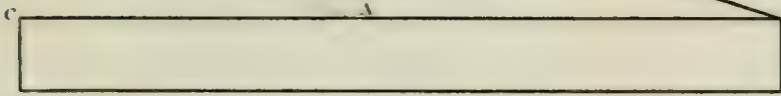


Fig. 4.

ENFILADE.

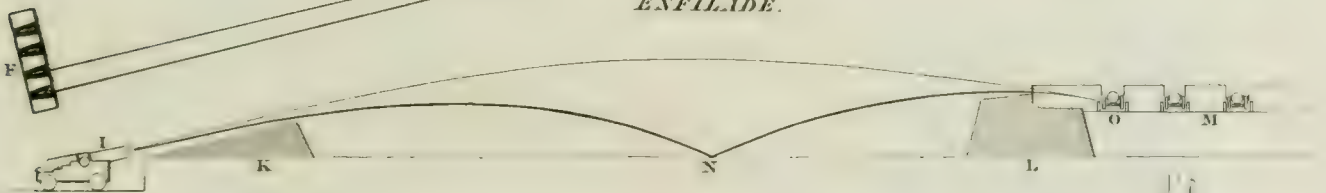
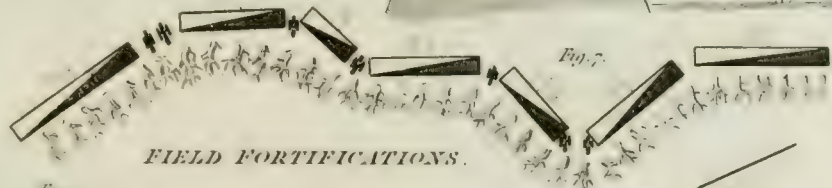


Fig. 5.



Fig. 6.



FIELD FORTIFICATIONS.

Fig. 9.



Fig. 10.

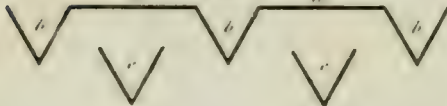


Fig. 11.

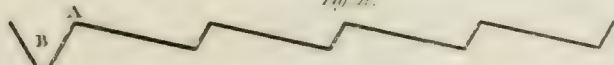


Fig. 13.



Fig. 12.



Fig. 14.



CONSTRUCTION.

Fig. 1.

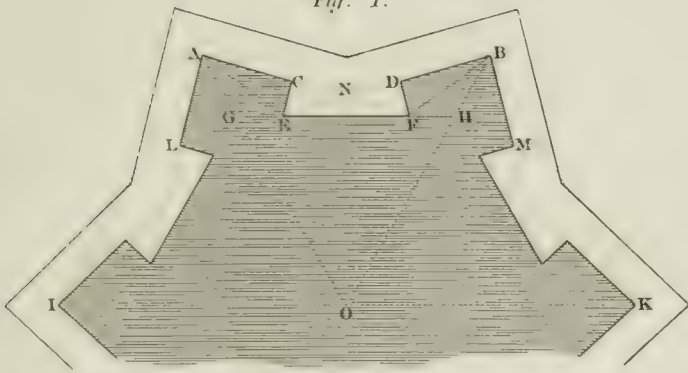


Fig. 2.

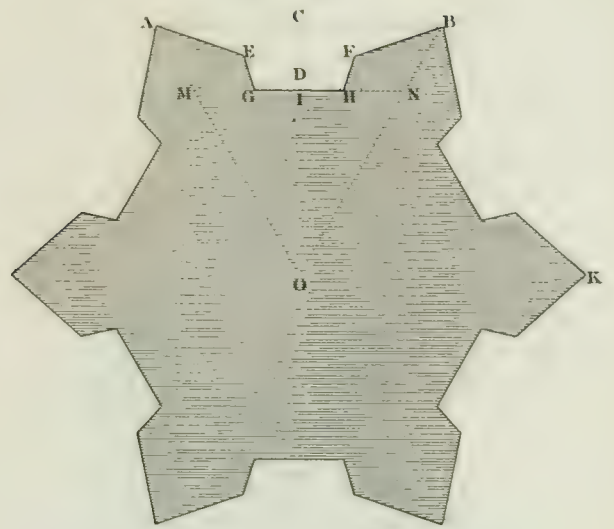


Fig. 3.

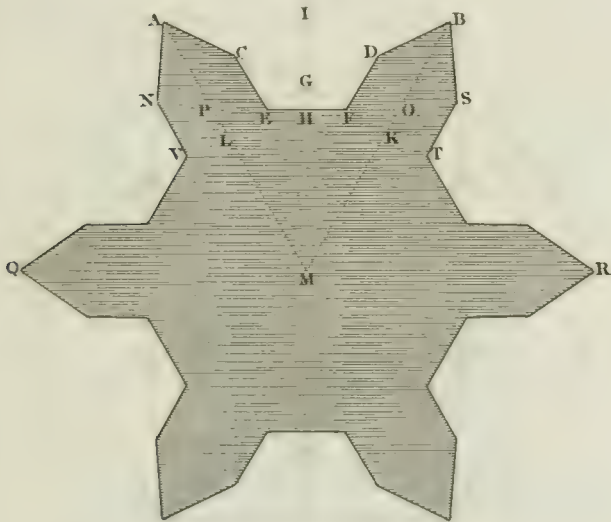


Fig. 4.

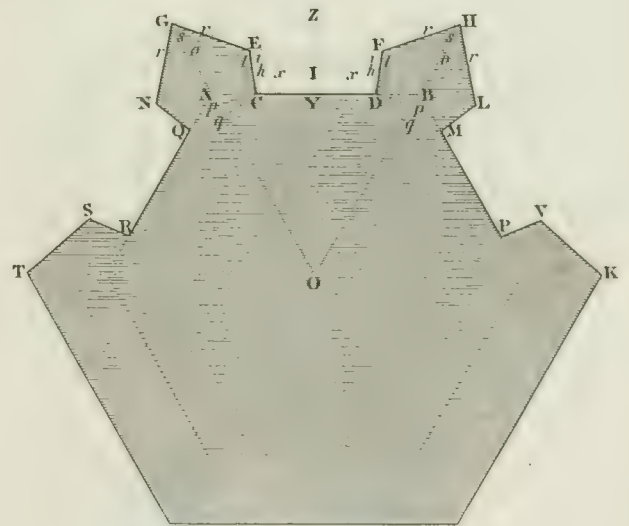


Fig. 5.

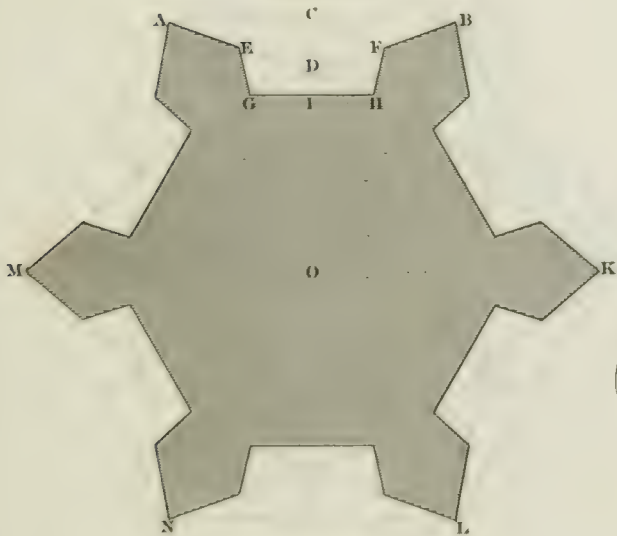


Fig. 6.

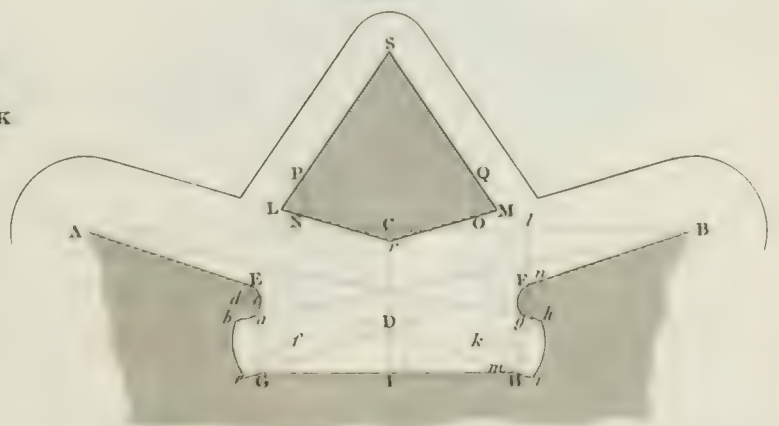


Fig. 7.

CONSTRUCTION.

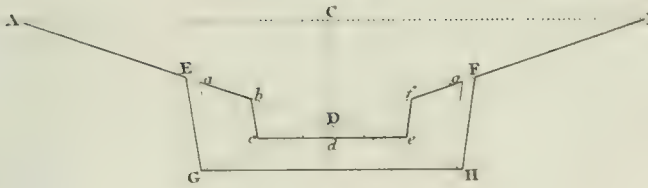


Fig. 8.

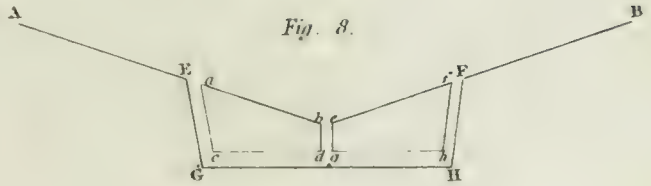


Fig. 9.

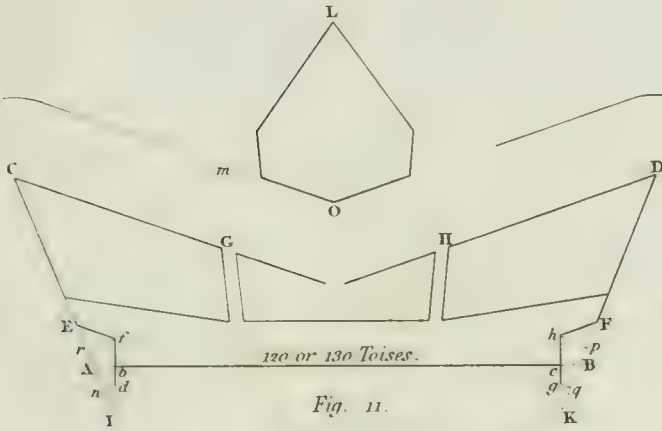


Fig. 10.

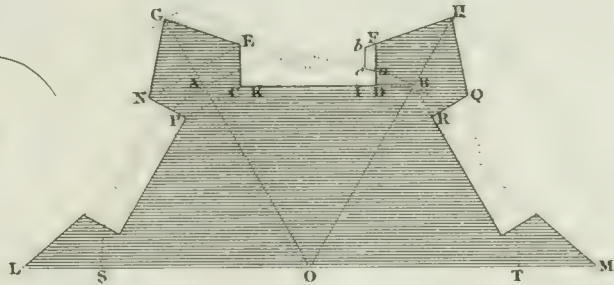


Fig. 11.

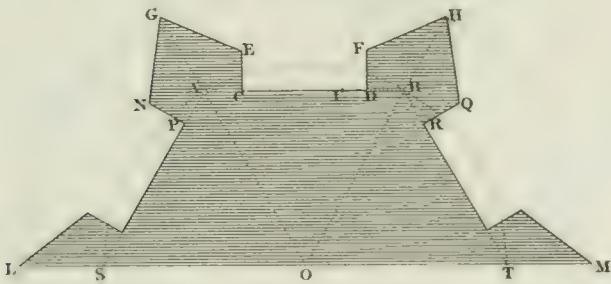


Fig. 12.

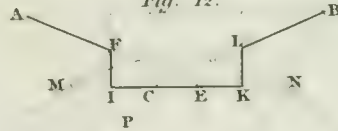


Fig. 13.

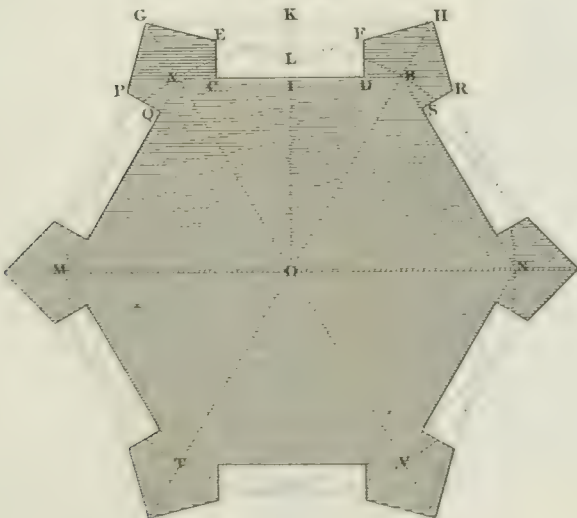
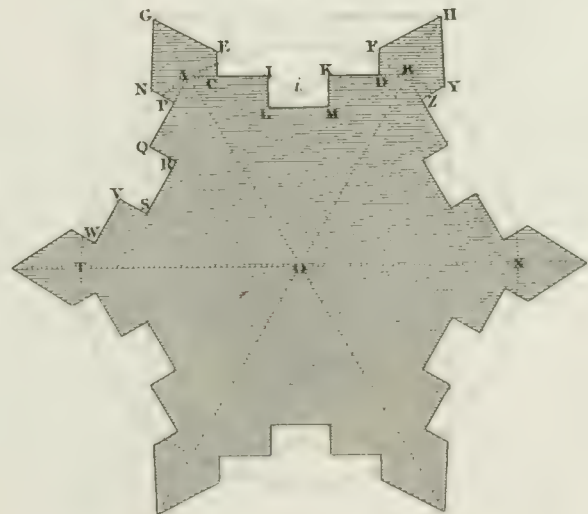


Fig. 14.



MANTELET

Fig. 9



Fig. 10.

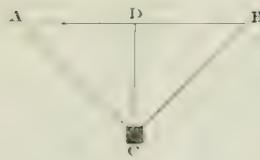
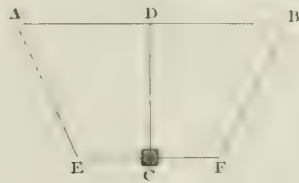


Fig. 11.



M I N E

Fig. 12

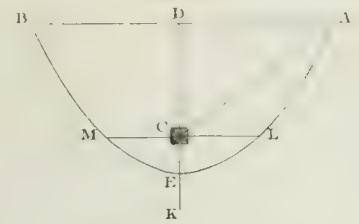


Fig. 13

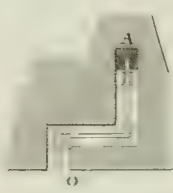


Fig. 14

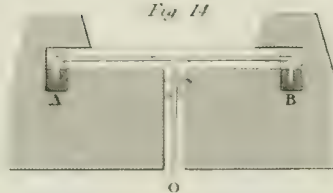
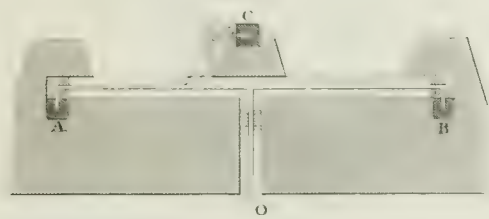


Fig. 15



RAVELIN

Fig. 4

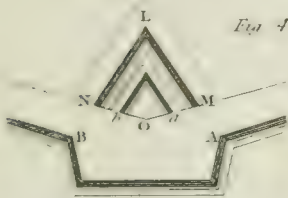


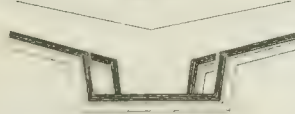
Fig. 7.

TENAILLE

Fig. 6

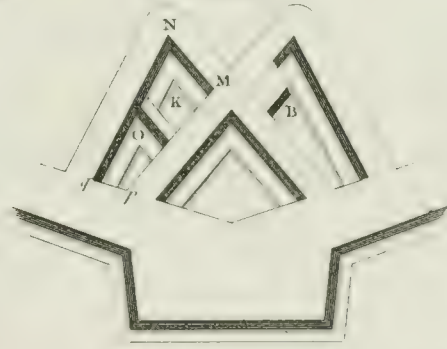


Fig. 8



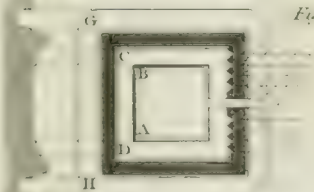
TENAILLON

Fig. 9



REDOUBT

Fig. 5



FORTIFICATION.

BELIDOR'S First Method

Fig. 15





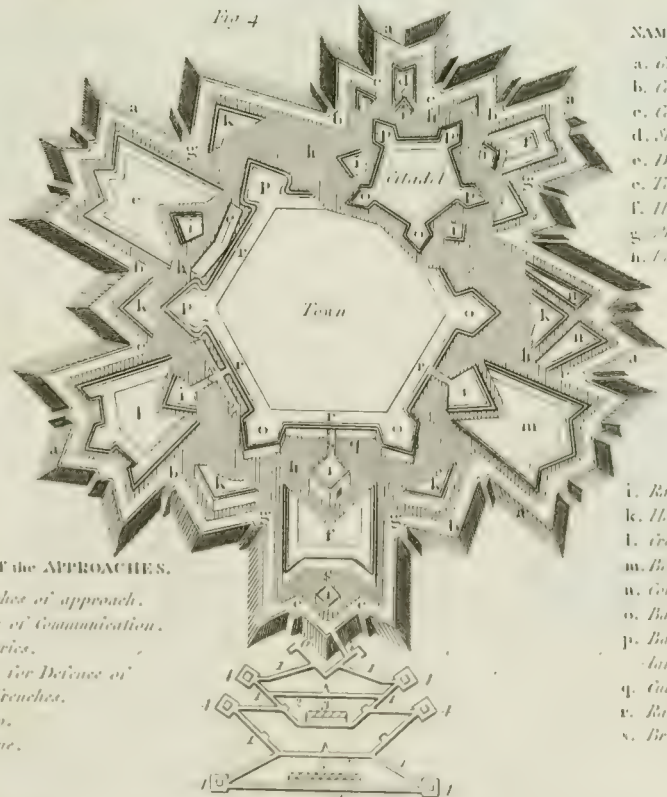
Fig. 1.
FORTIFICATION
Irregular



Fig. 2.

FORTIFIED PLACE

Fig. 4



NAMES of the WORKS.

- a. Glacis or Desfilade
- b. Covert way.
- c. Counterscarp.
- d. Single Tenaille.
- e. Double Tenaille.
- f. Horn Work.
- g. Place of arms.
- h. The Moat or Ditch.

NAMES of the APPROACHES.

1. Trenches of approach.
2. Line of Communication.
3. Batteries.
4. Forts for Defence of the Trenches.
5. a Sap.
6. a Mine.

- i. Ravelins.
- k. Half Moon.
- l. Crown Work.
- m. Bonnet or Priests cap.
- n. Counter guard
- o. Bastions.
- p. Bastions with Circular Flanks
- q. Curtain.
- r. Rampart or Wall.
- s. Bridge.

PROFILE of a FORTIFICATION

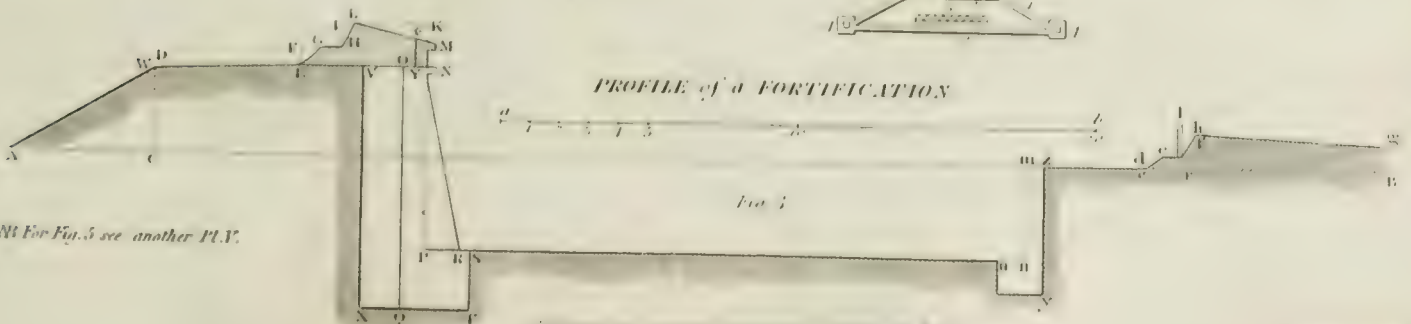
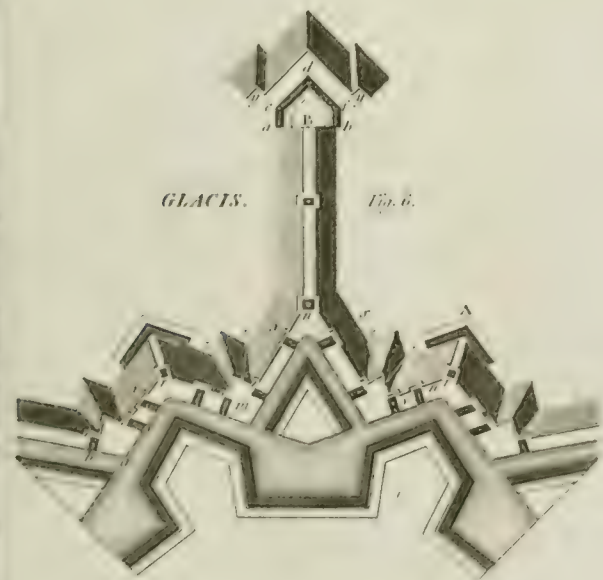


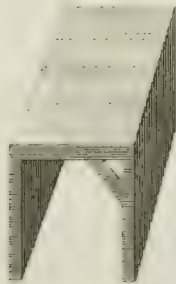
Fig. 3

NB For Fig. 3 see another P.L.V.



GALLERY.

Fig. 7.



GABION.

Fig. 8.



- A. B. Bastions.
- C. Ravelin.
- D. Line of Communication of the Attacks.
- E. First Parallel.
- F. Second D^e.
- G. Third D^e.
- H. The Approaches.
- I. Places of Arms.
- K. Square Redoubts to prevent Sallies.

- L. Traverses in the third Parallel.
- M. Batteries for Cannon & Mortars.
- N. Glacis.
- O. Places of Arms in the covert way.
- P. The Ditch.
- Q. Bridge of Communication.
- R. A River.
- S. Rising Ground.

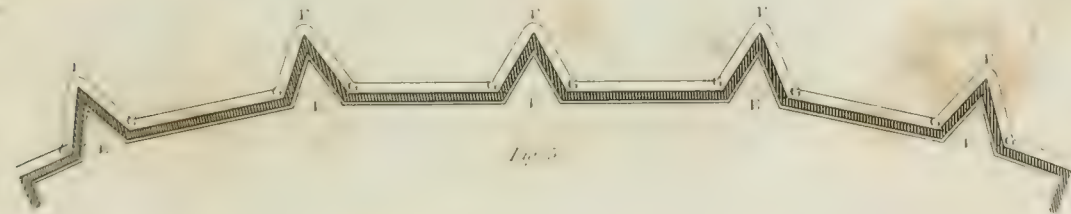
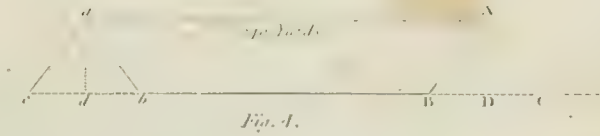
Horn-work.



Double Horn-work or Crown-work.

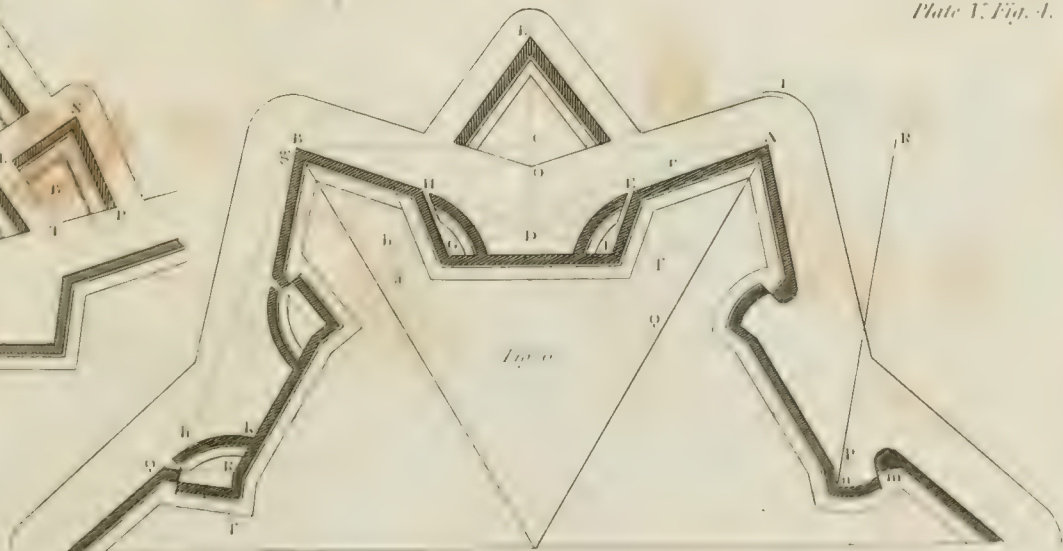


L I N E.



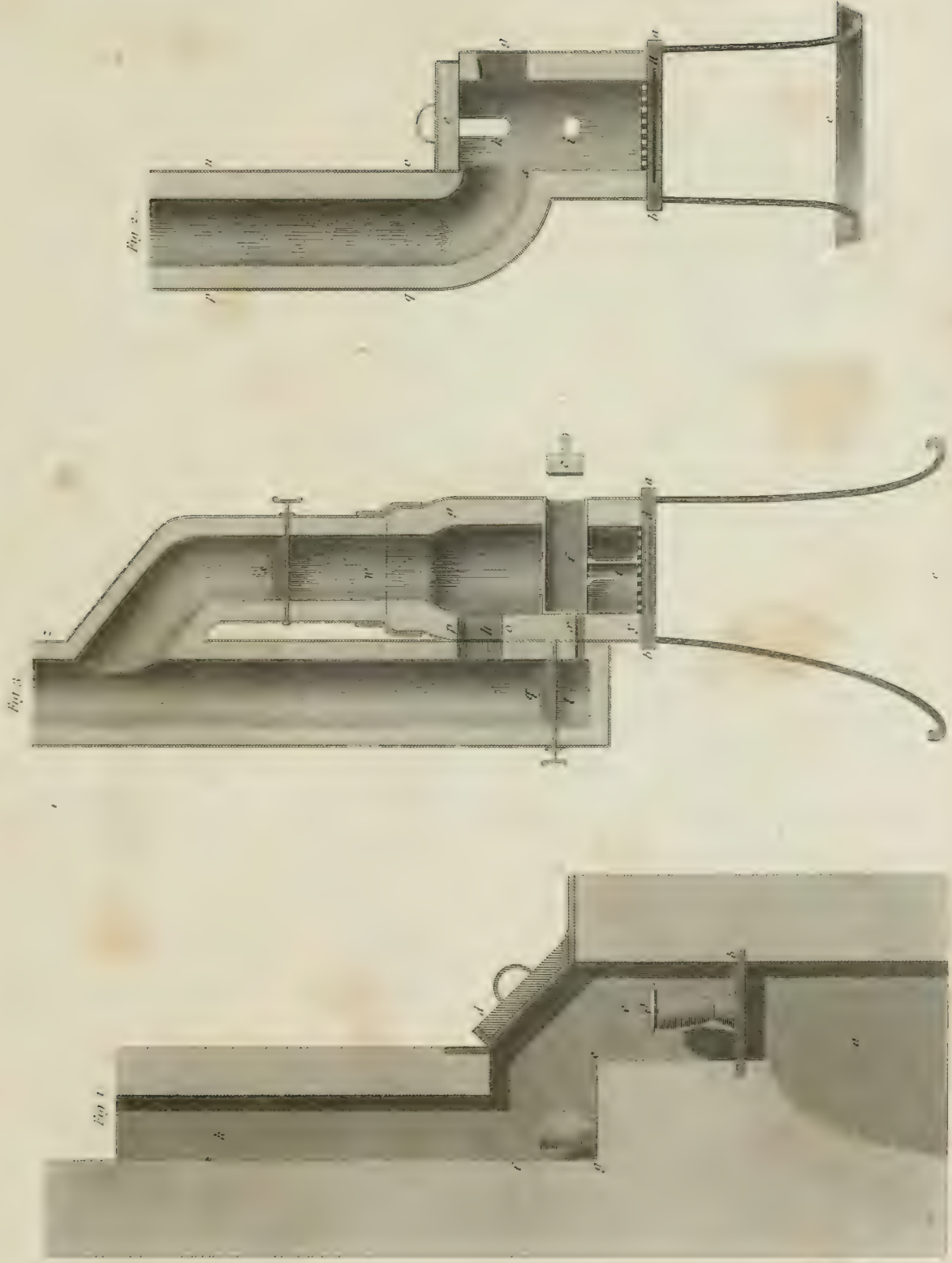
Lunette

For Fig. 7, see Plate V, Fig. 4.





FURNACE.



Common Air
Furnace.

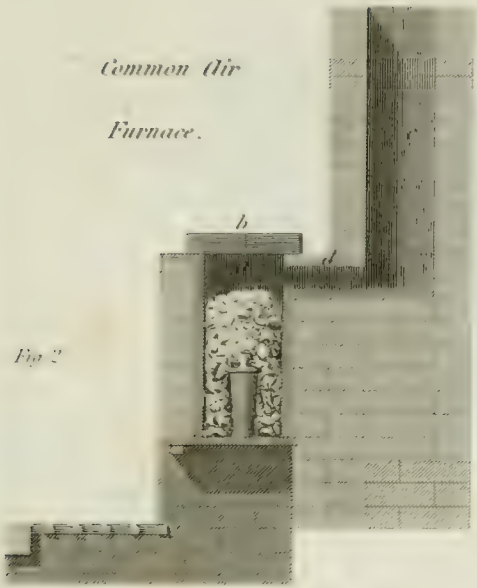


Fig. 2

D^r Black's

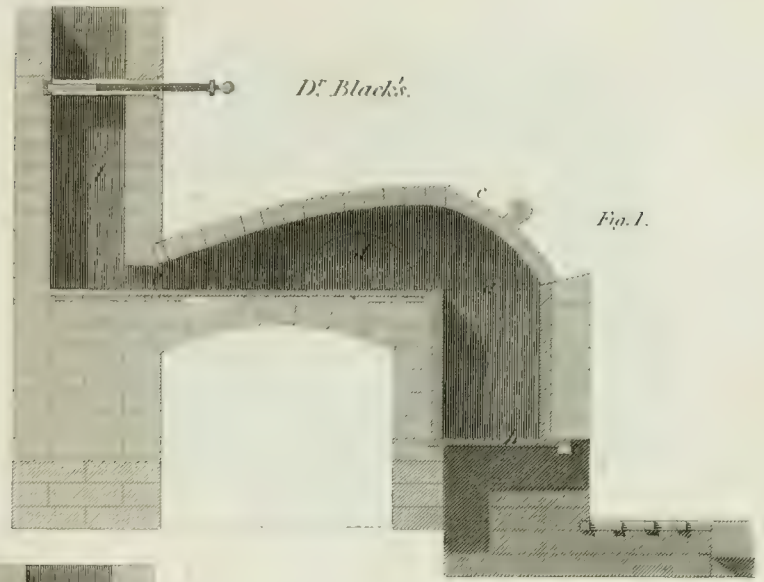


Fig. 1.

M^r Mushet's

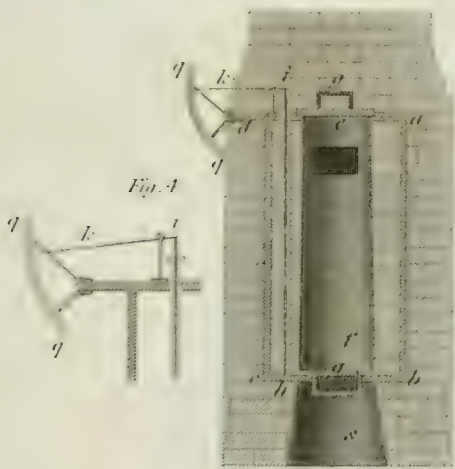


Fig. 4

M^r Knight's

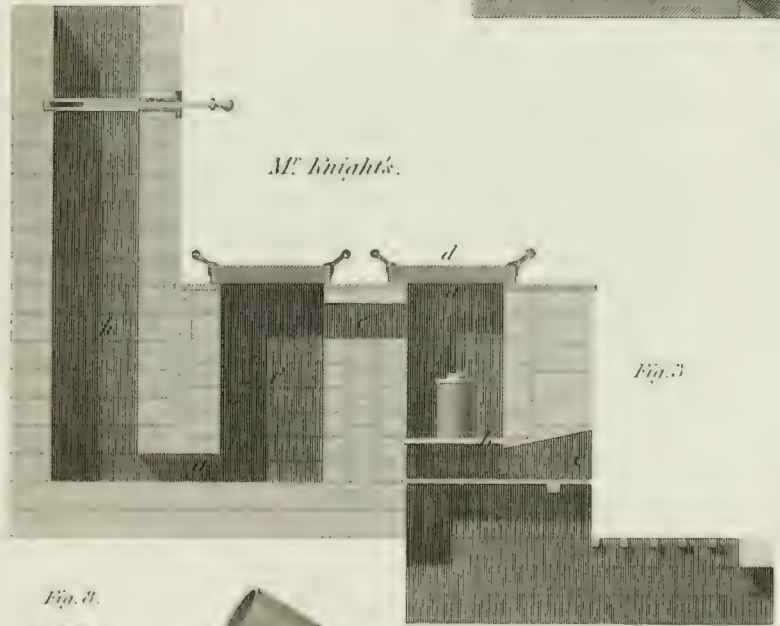


Fig. 3

Portable by D^r Black.

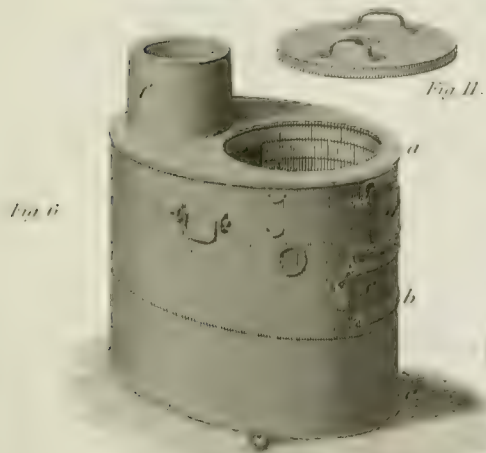


Fig. 6

Fig. 8.

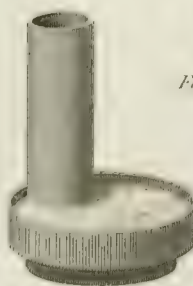


Fig. 7.

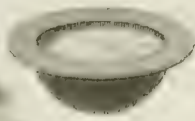


Fig. 10.



Fig. 9.

Knight's Portable.

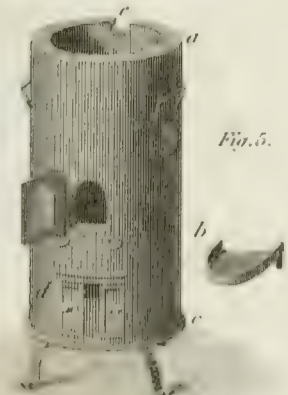
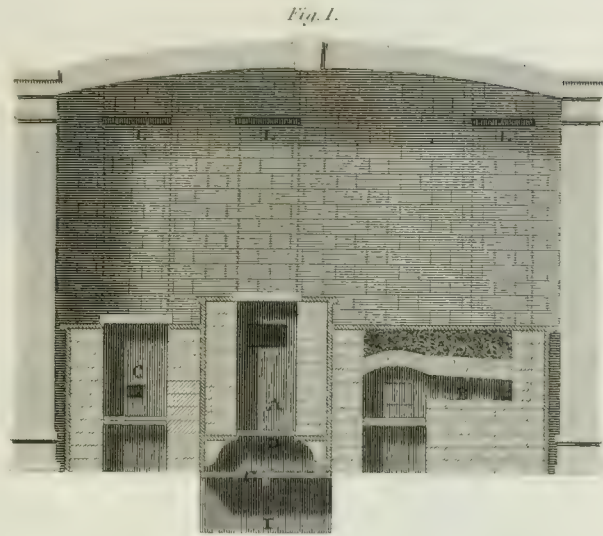
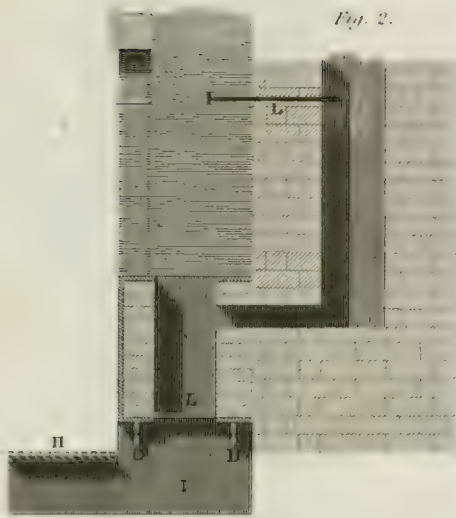
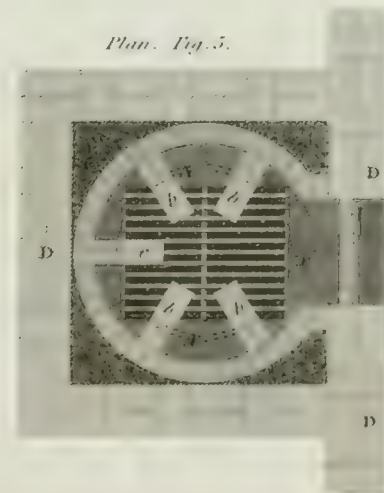
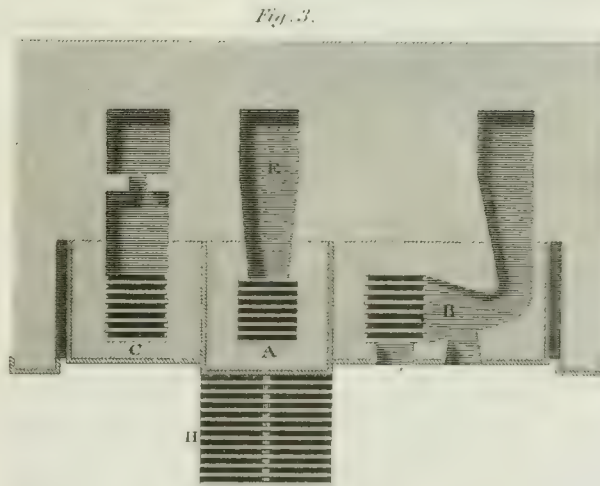
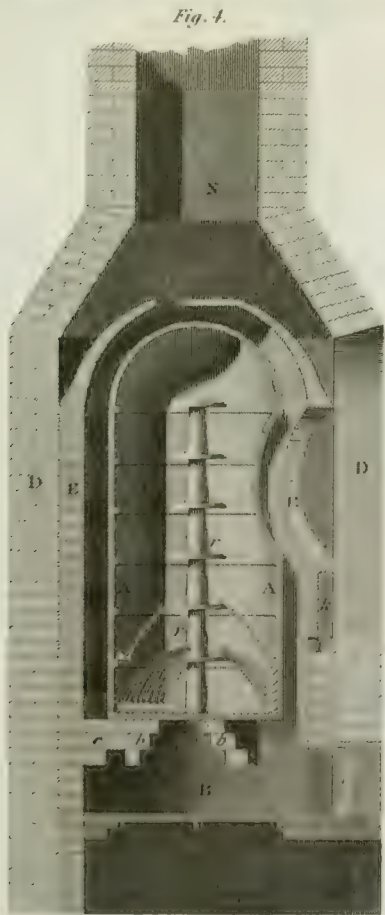


Fig. 5.

Furnaces used by M^r. Mushet for his experiments on Iron & Steel.



Section of the Tobacco pipe makers Furnace.



Furnace for Enamelling Watch Dial Plates.

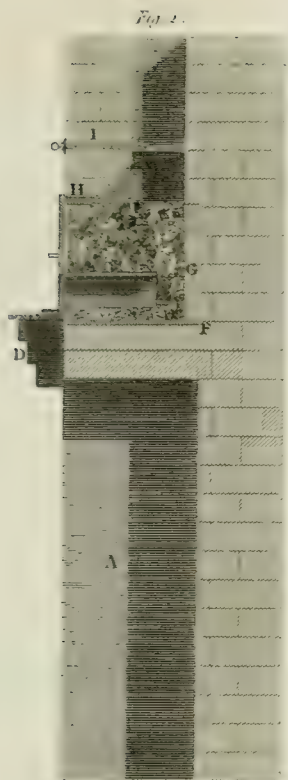


Fig. 3.

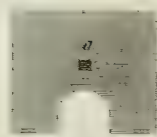


Fig. 4.

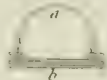


Fig. 5.

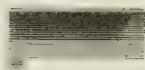


Fig. 6.

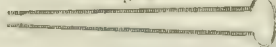


Fig. 7.

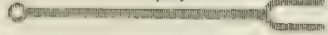


Fig. 8.



Fig. 9.

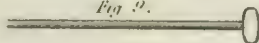


Fig. 1.

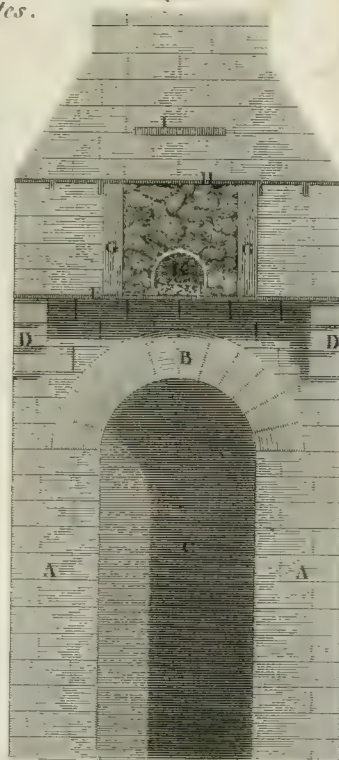


Fig. 11.

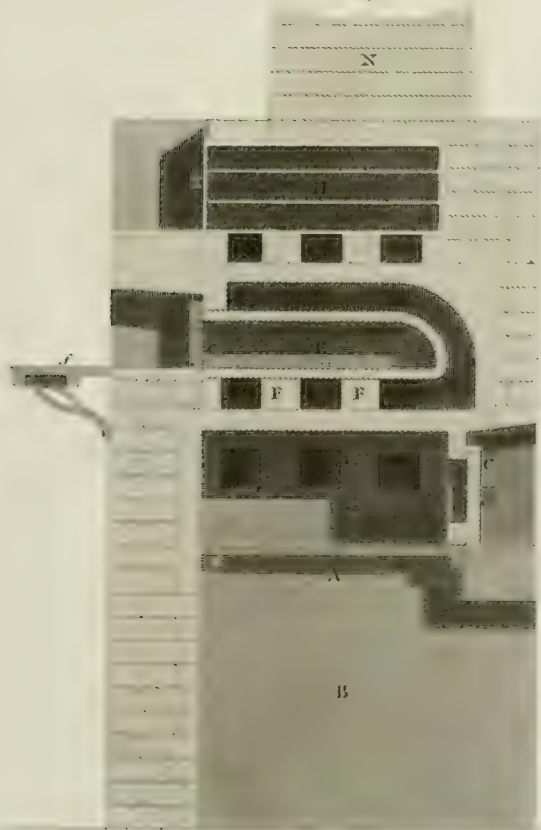
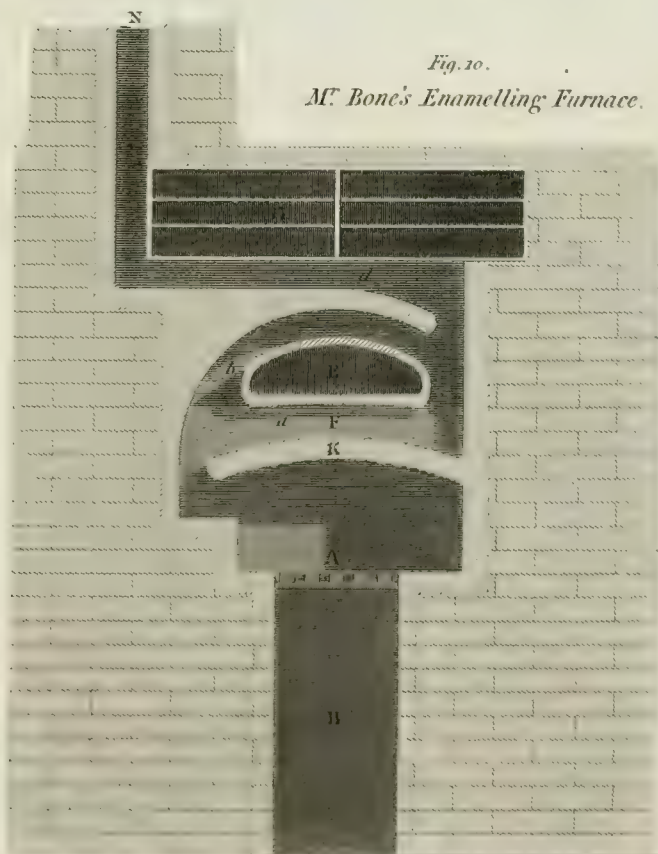


Fig. 10.

Mr. Bone's Enamelling Furnace.



Scale of Feet.

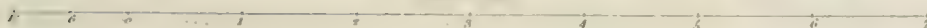
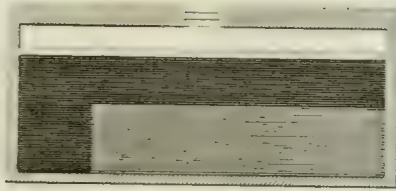
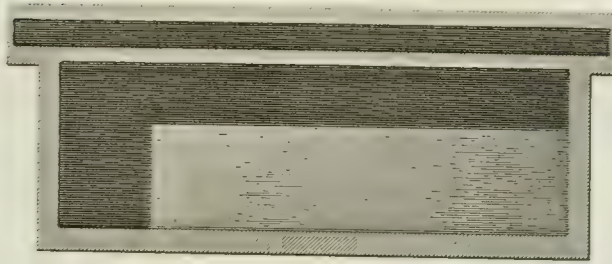


Fig. 1.



Bark Pit for succession pine apple plants, & other tender Exotics.

Fig. 2.



Plan

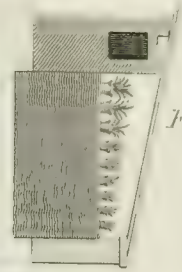
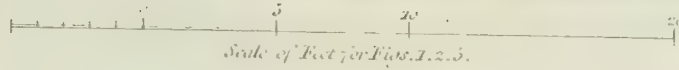


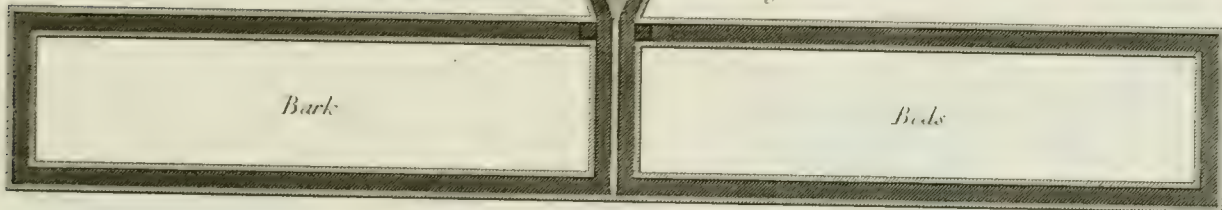
Fig. 3.



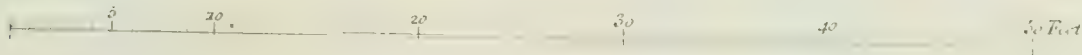
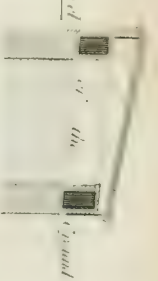
Scale of Feet for Figs. 1, 2, & 3.

Plan

Fig. 3.

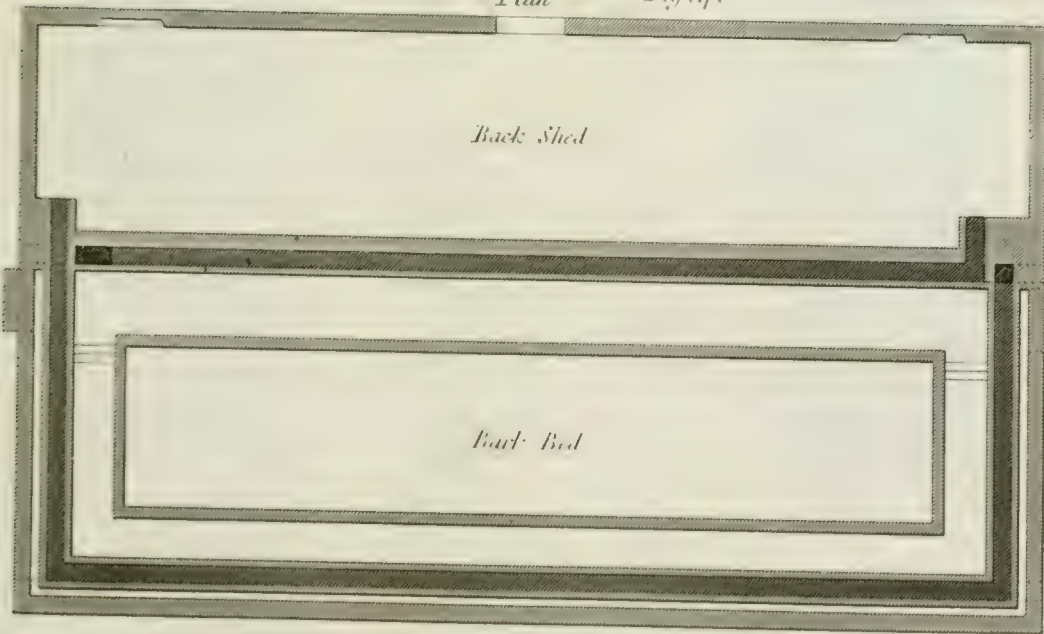


Section

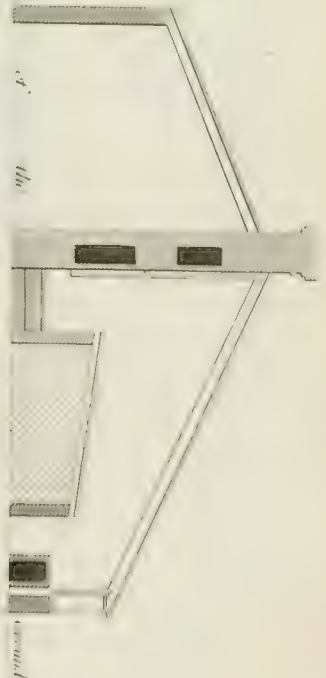


Plan

Fig. 4.



Section



CONSERVATORY AND GREENHOUSE.

Fig. 6

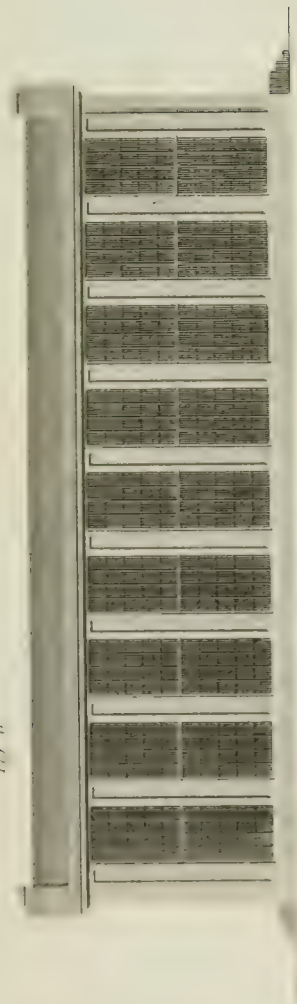


Fig. 1.

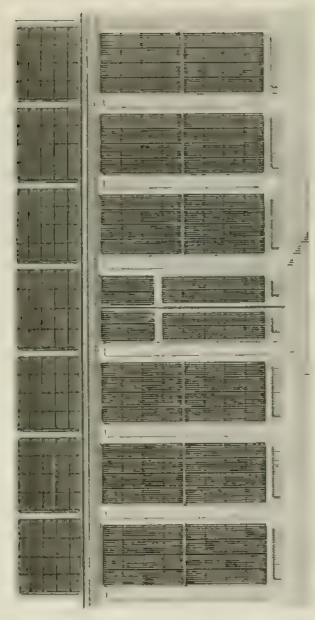


Fig. 5.

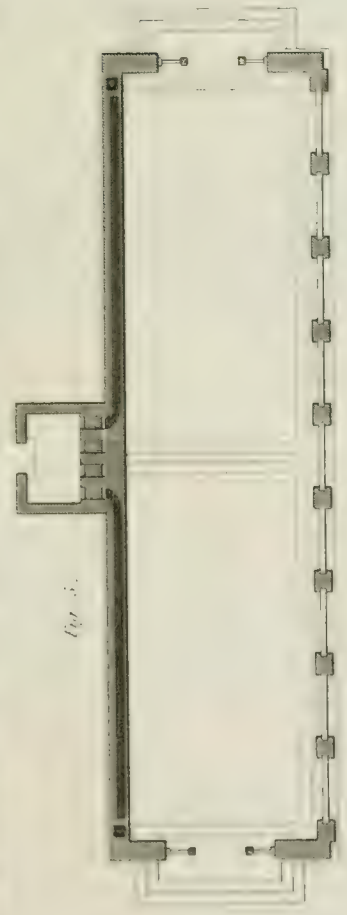


Fig. 1.

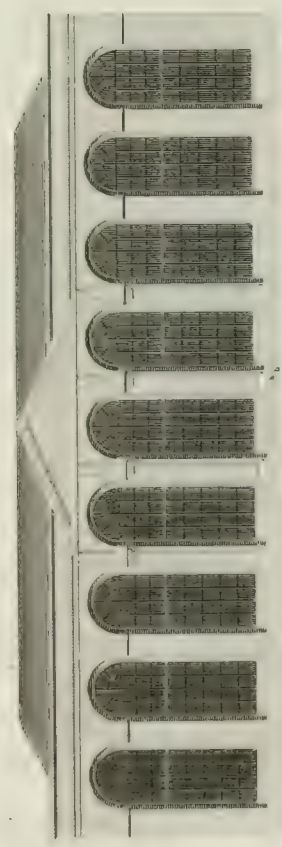
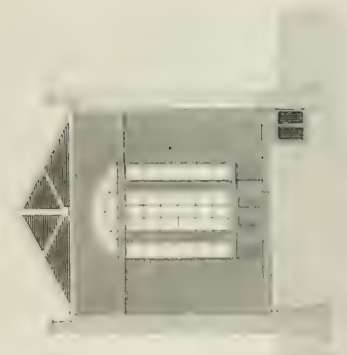


Fig. 5.



Fig. 3.



HOT - HOUSE.

Fig. 1. Elevation.

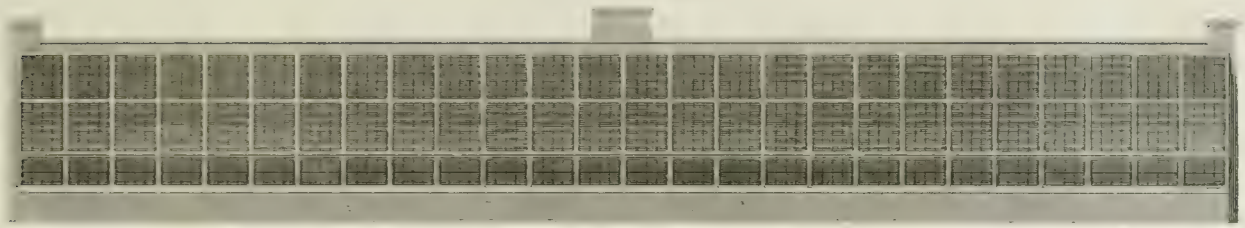


Fig. 2 Plan

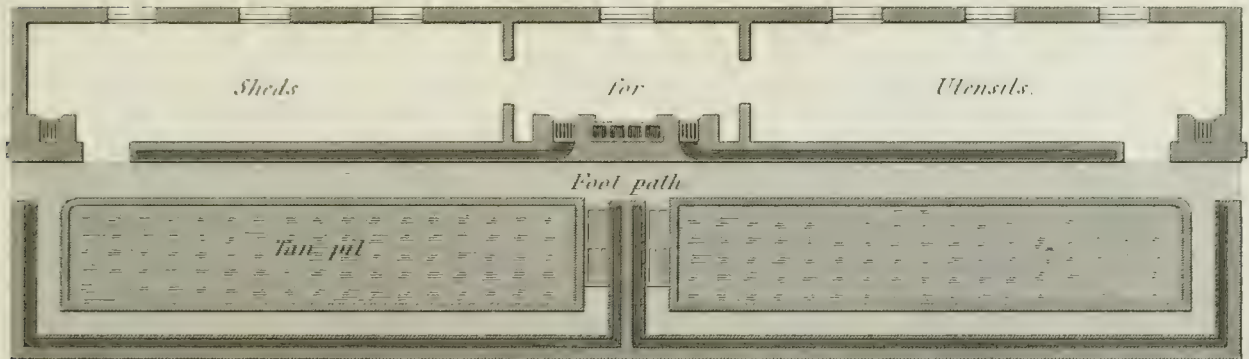


Fig. 4.

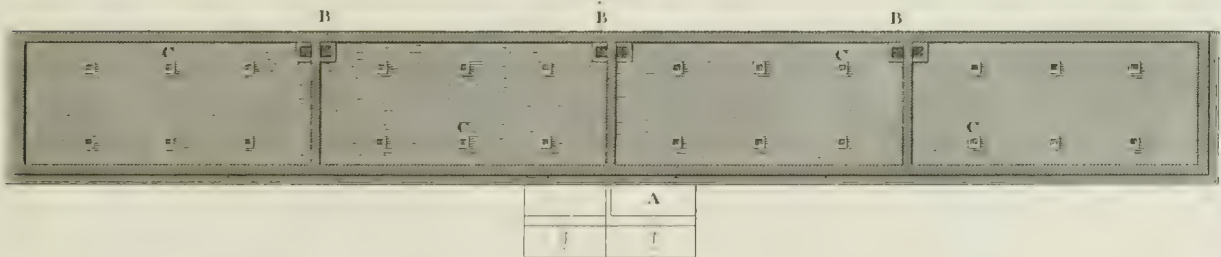


Fig. 5

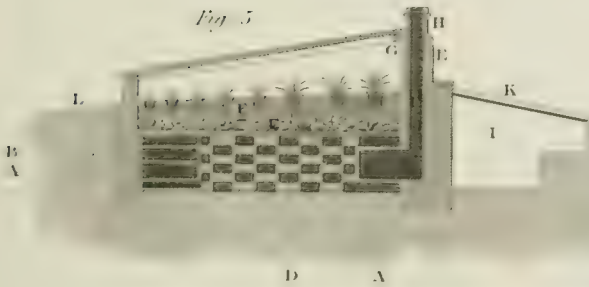


Fig. 3

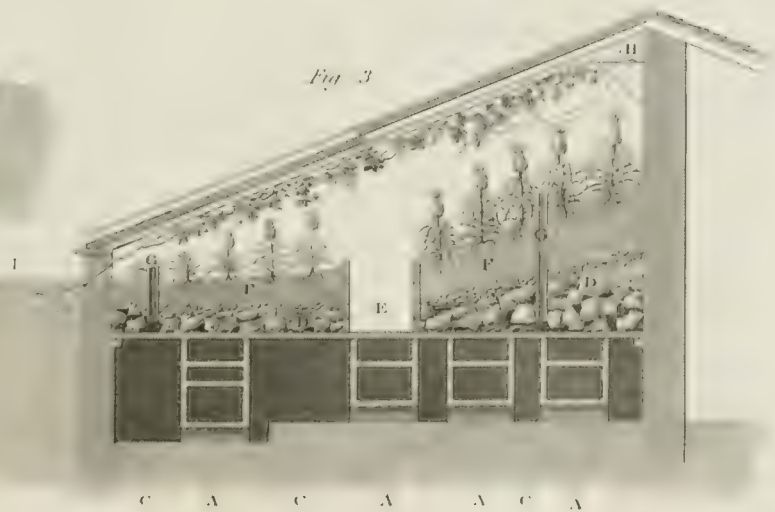


Fig. 1.
DISTANCE

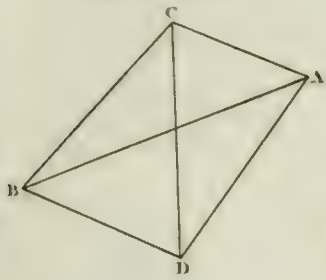


Fig. 2.

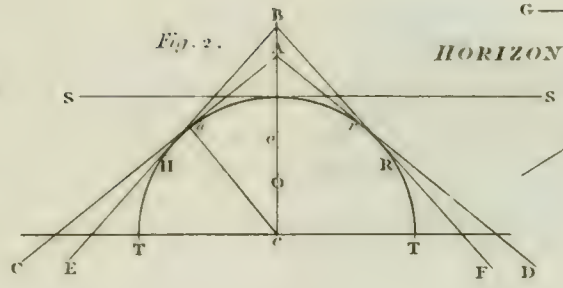


Fig. 3.

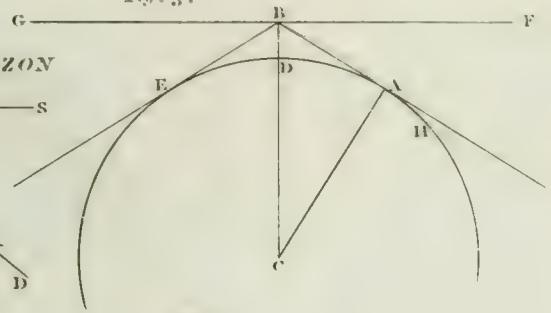


Fig. 5.

MAP

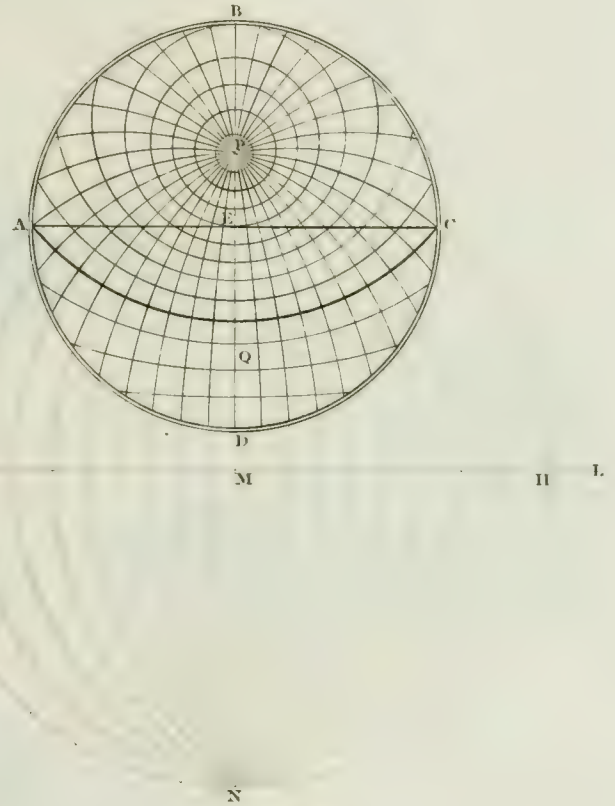
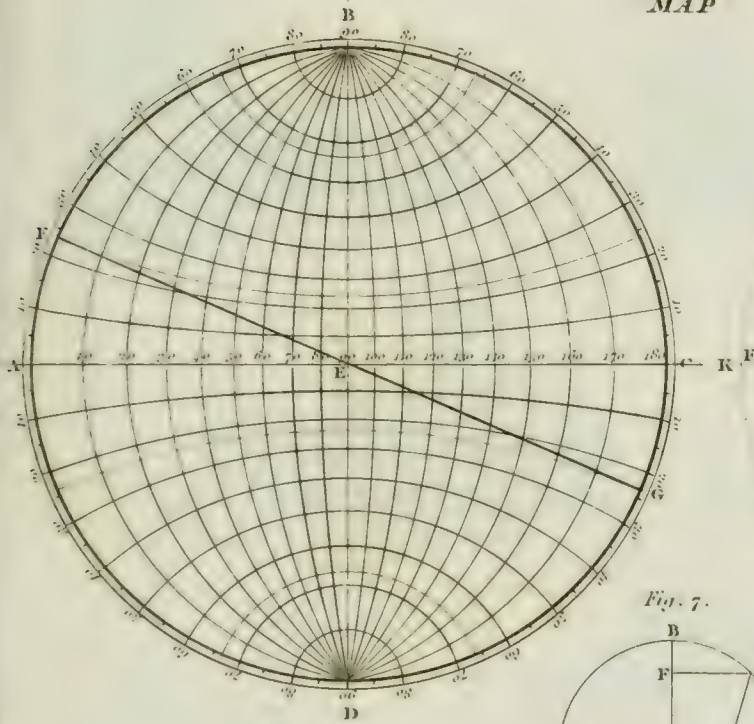


Fig. 7.

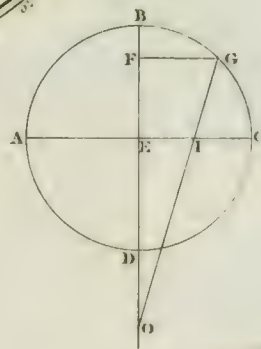


Fig. 8.

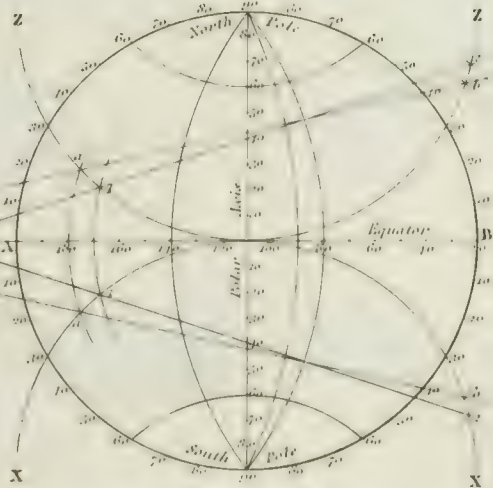
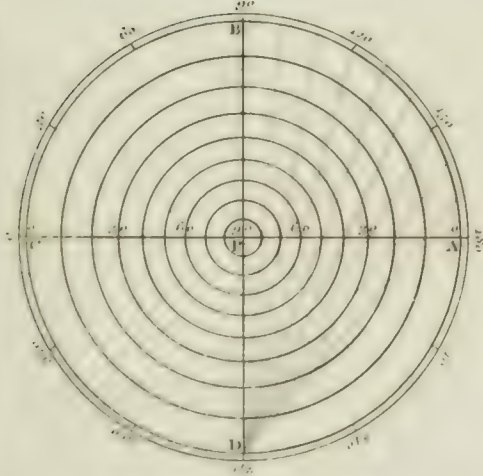
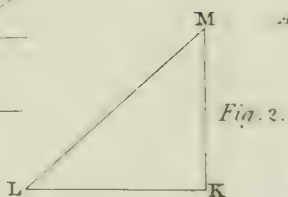
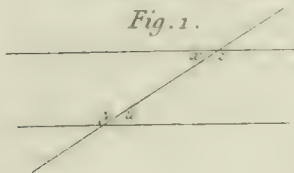


Fig. 4.



ALTERNATE ANGLES

Fig. 1.



ALTITUDE

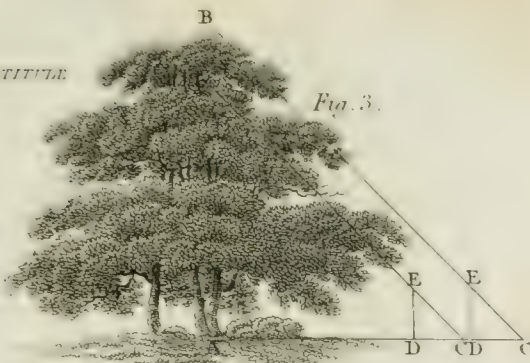


Fig. 3.

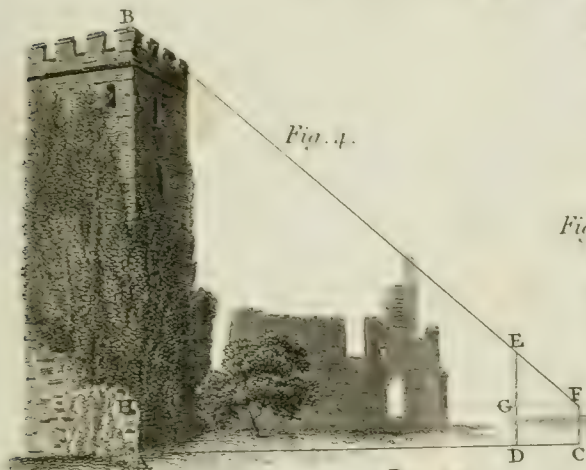


Fig. 4.



Fig. 5.

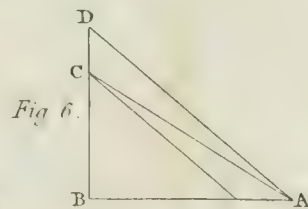


Fig. 6.

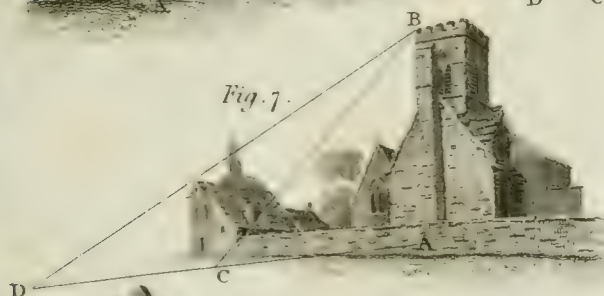


Fig. 7.

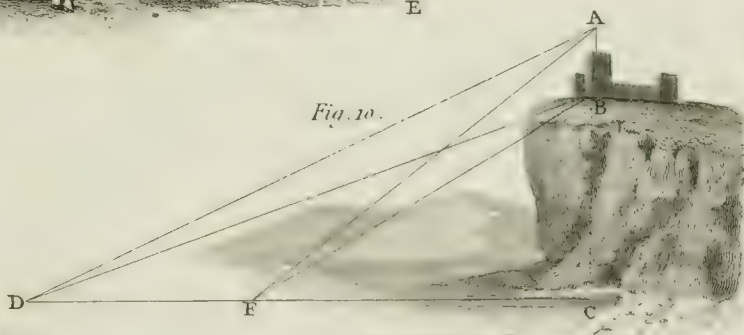


Fig. 10.



Fig. 8.



Fig. 9.

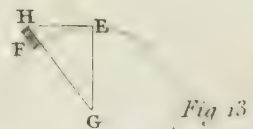


Fig. 13.



Fig. 11.

Fig. 12.

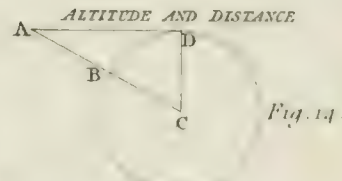
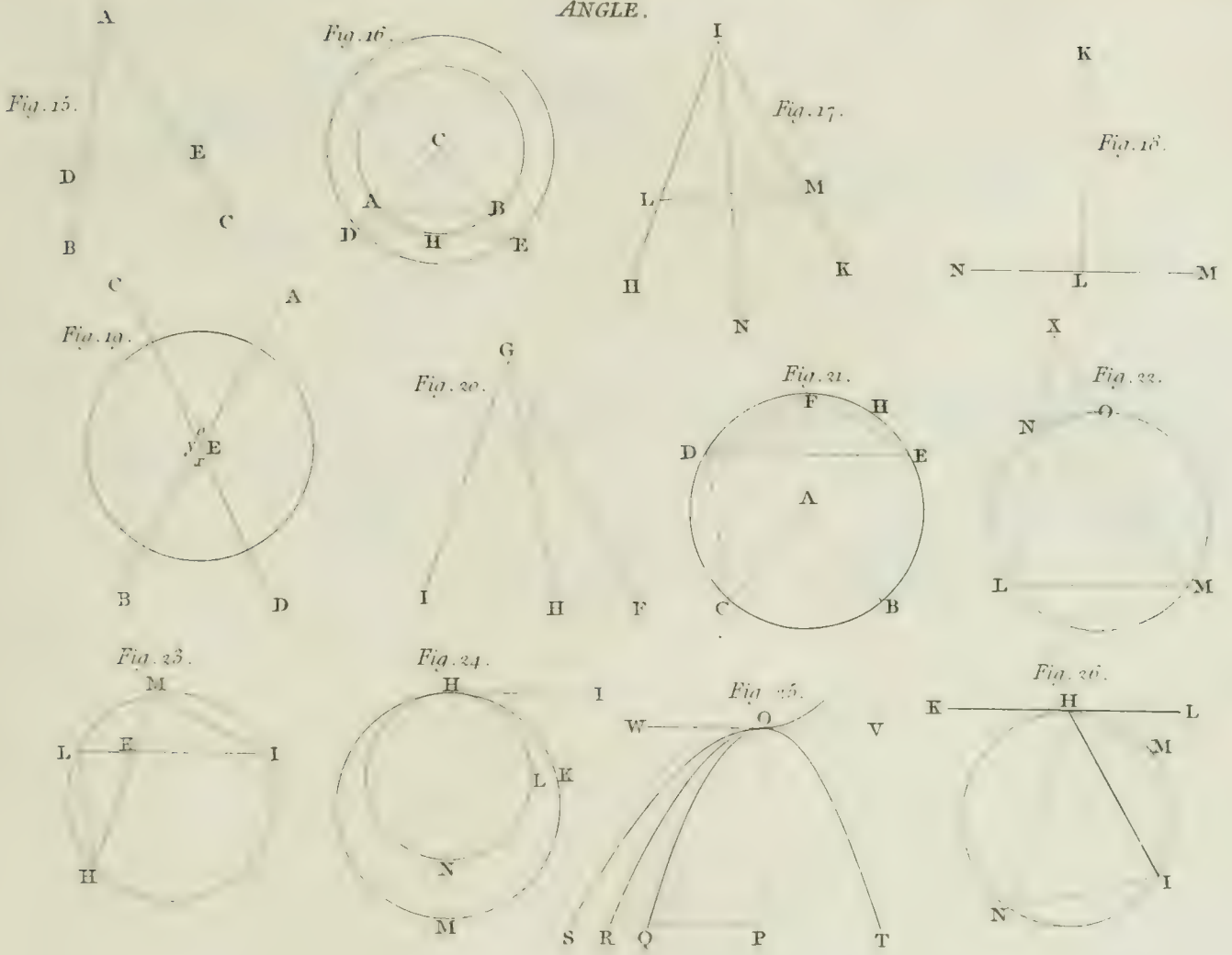
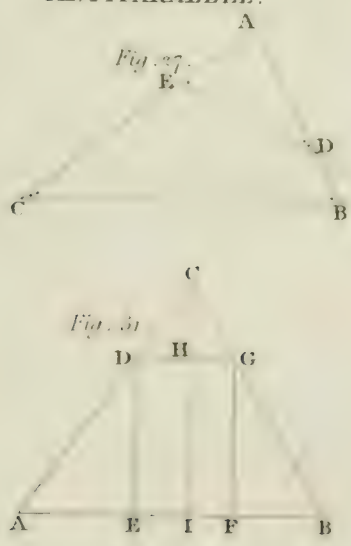


Fig. 14.

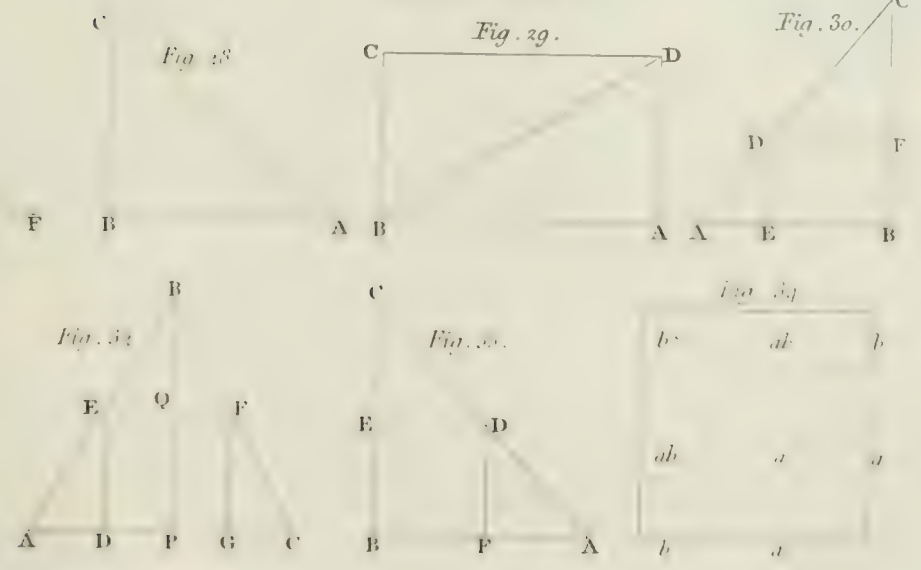
ANGLE.



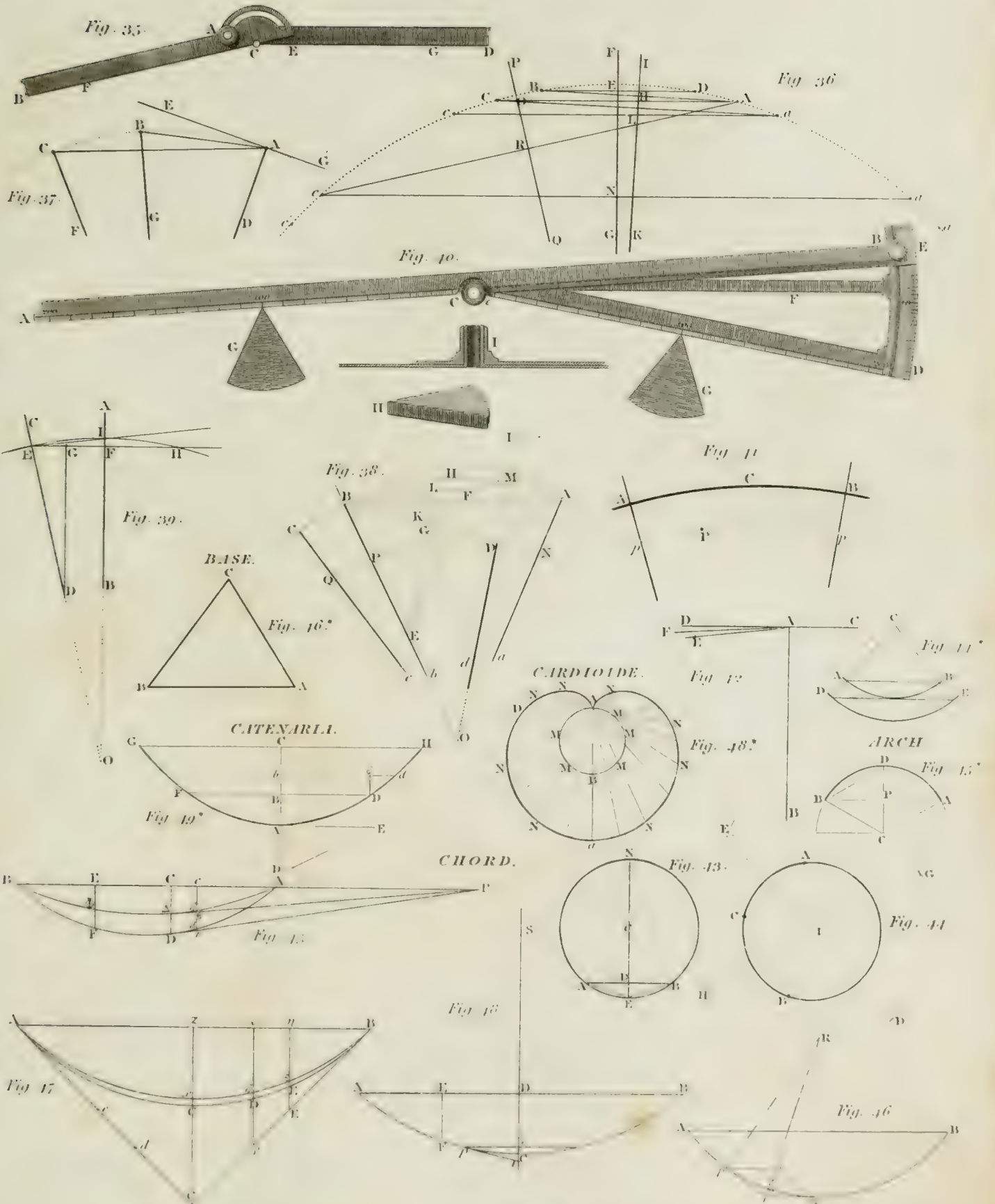
ANTIPARALLEL.



APPLICATION &c.



BEVEL &c.





GEOMETRY.

CIRCLE. Fig. 50.

Fig. 49.

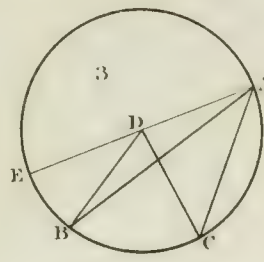
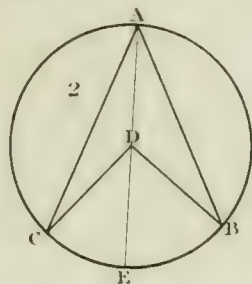
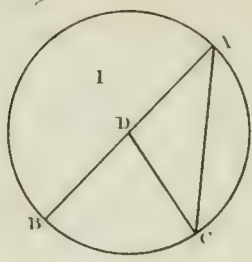
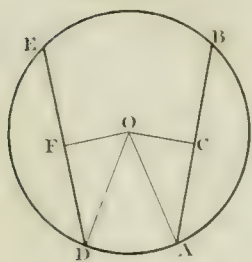


Fig. 51.

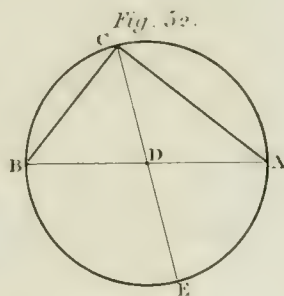
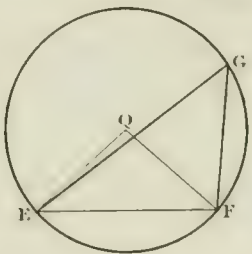
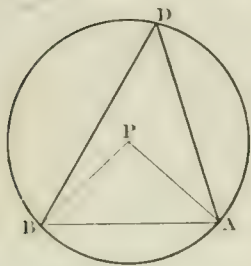


Fig. 53.

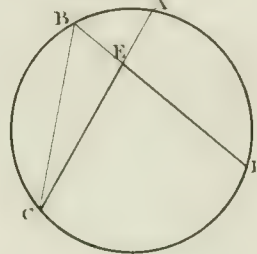


Fig. 53.

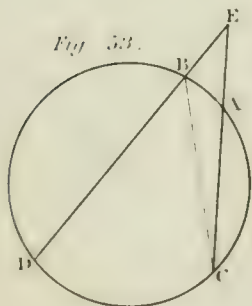


Fig. 54.

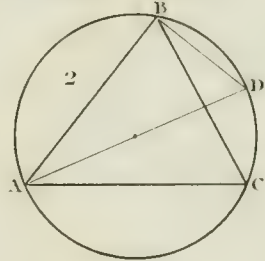
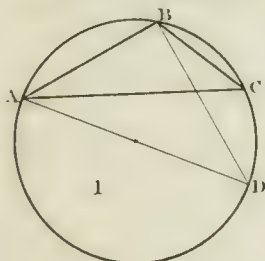


Fig. 55.

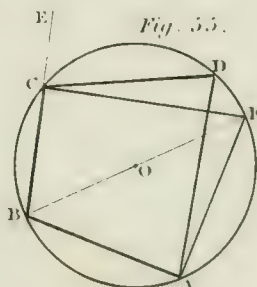


Fig. 57.

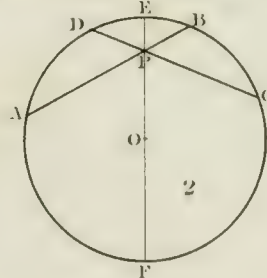
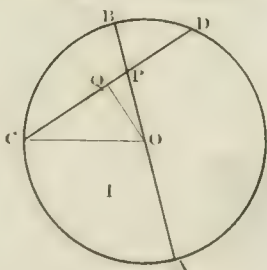
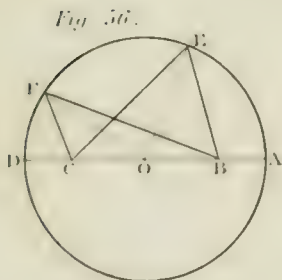


Fig. 58.

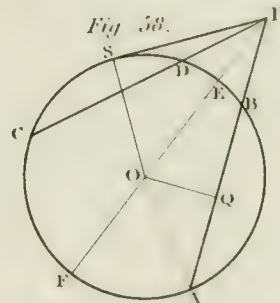


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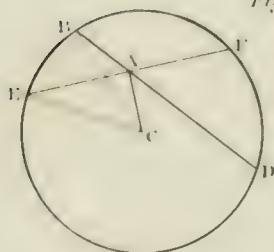


Fig. 60.

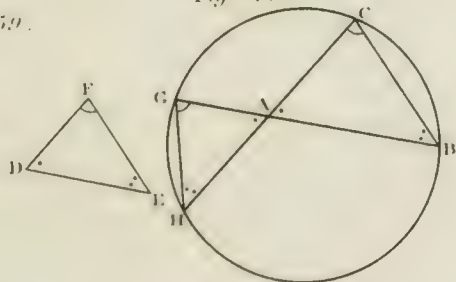
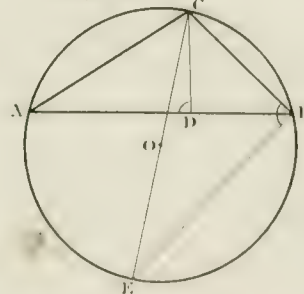


Fig. 61.



GEOMETRY.

CIRCLE.

Fig. 62.

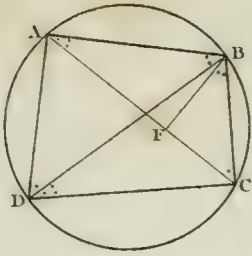


Fig. 63.

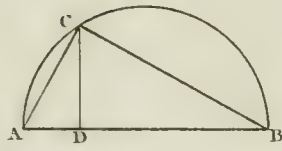


Fig. 64.

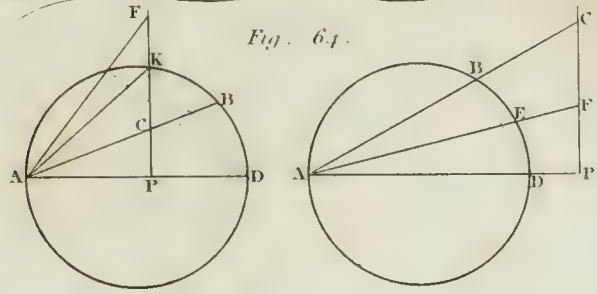


Fig. 65.

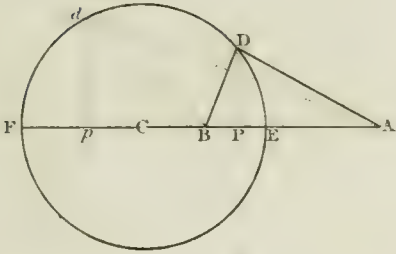


Fig. 66.

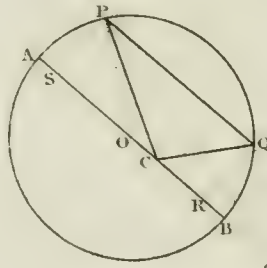


Fig. 67.

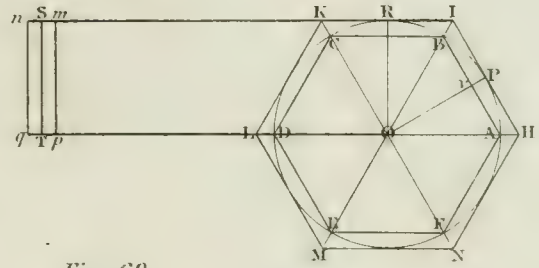


Fig. 68.

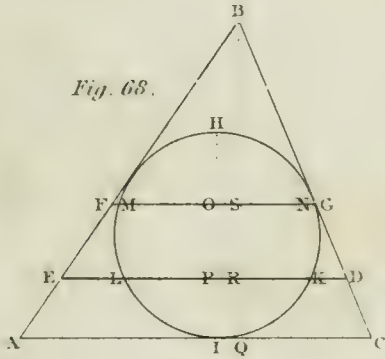


Fig. 69.

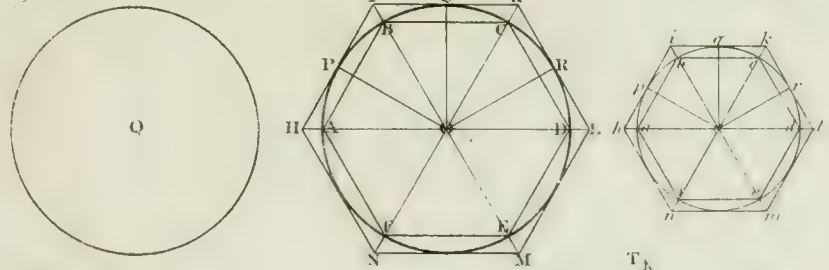


Fig. 70.

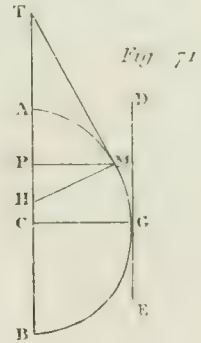
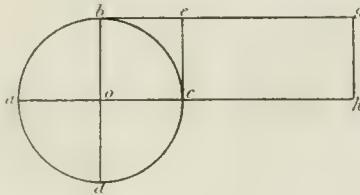
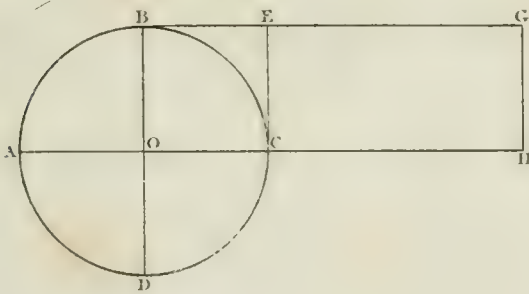


Fig. 71.

Fig. 73.

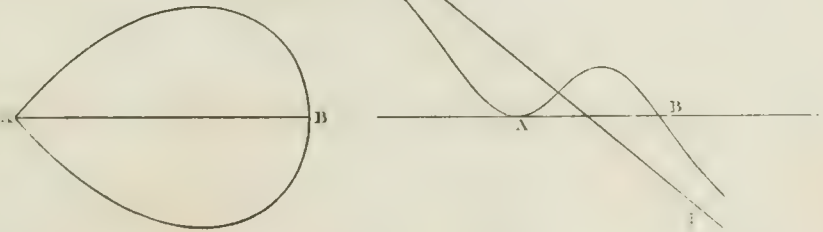
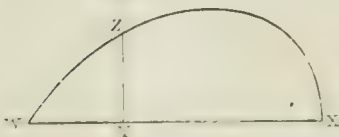
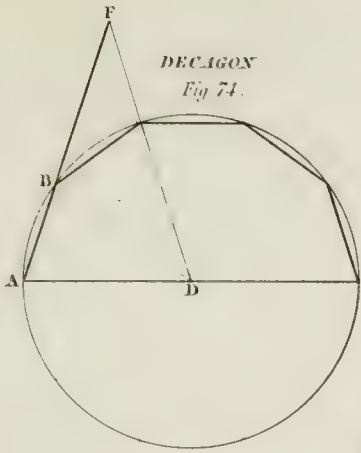


Fig. 72.





DECAGON
Fig. 74.

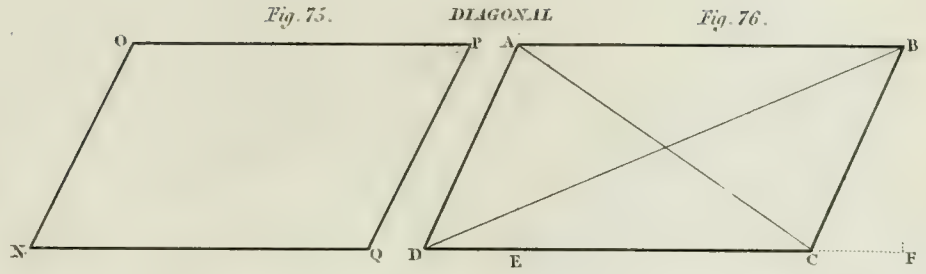


Fig. 75.

DIAGONAL

Fig. 76.

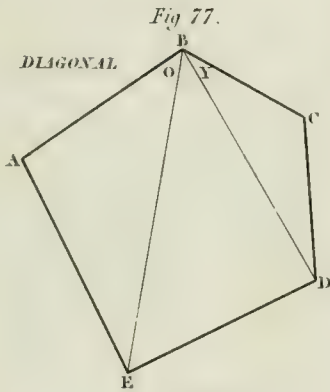


Fig. 77.

DIAGONAL

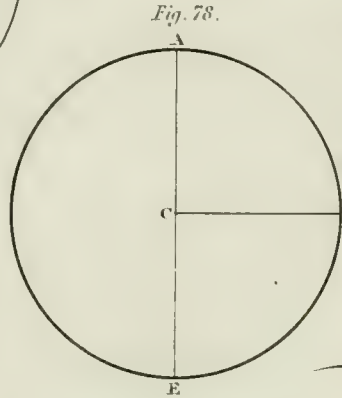


Fig. 78.

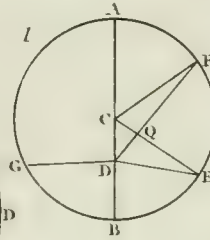
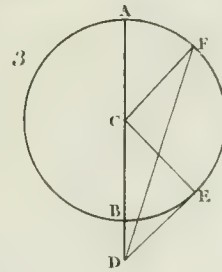
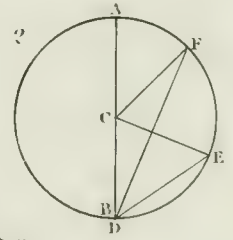


Fig. 79.



DIAMETER

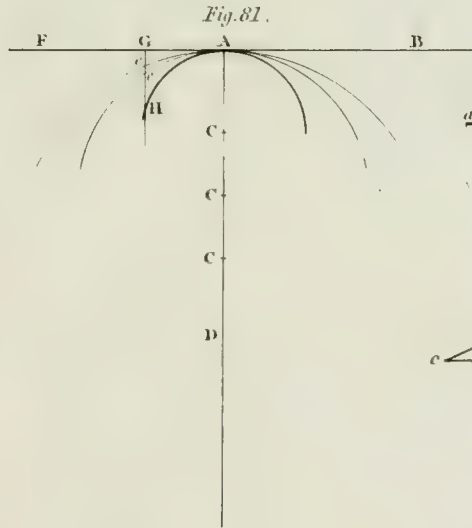
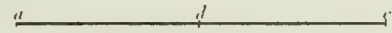
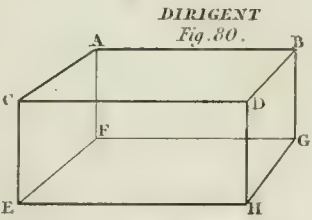
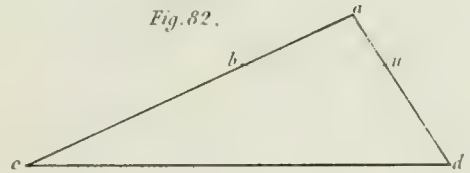


Fig. 81.



DIVISION
Fig. 82.



DIRIGENT
Fig. 80.

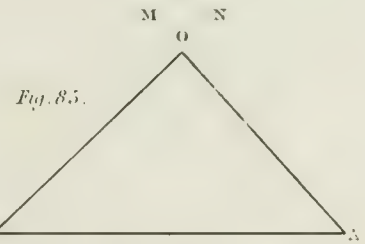
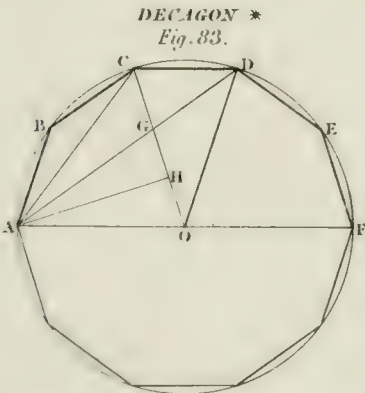
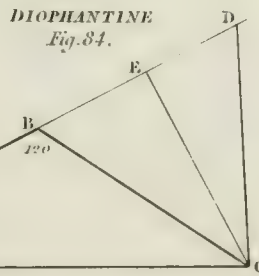


Fig. 85.



DECAGON *
Fig. 83.



DIOPHANTINE
Fig. 84.

DISTANCE

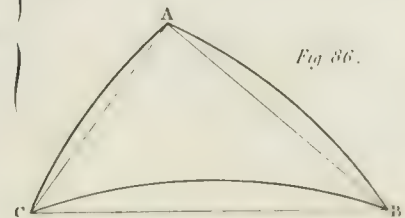
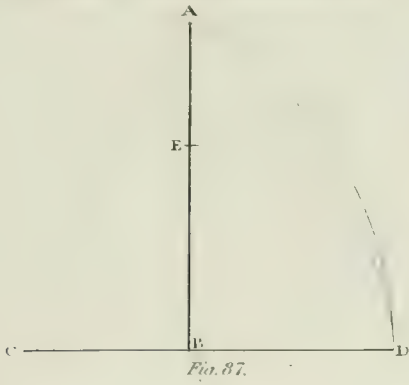


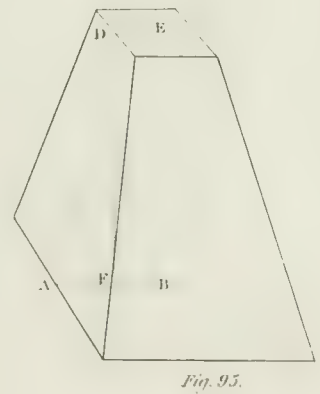
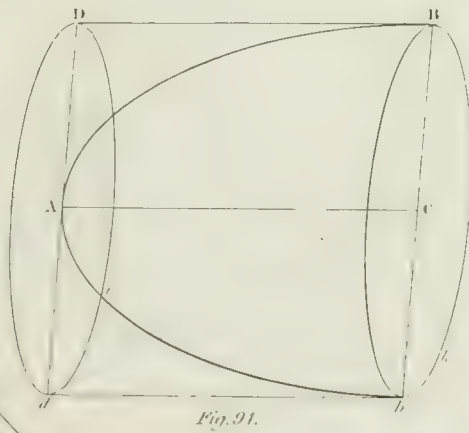
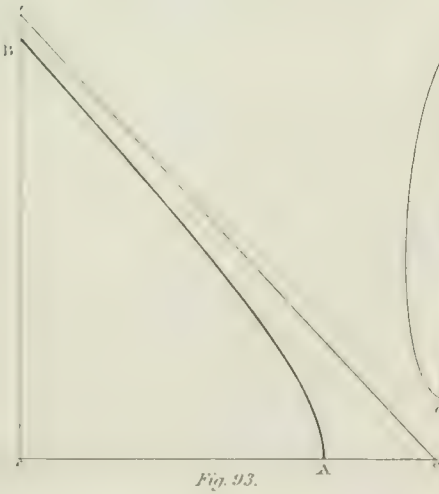
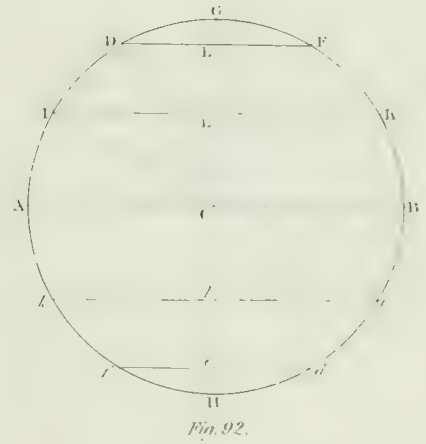
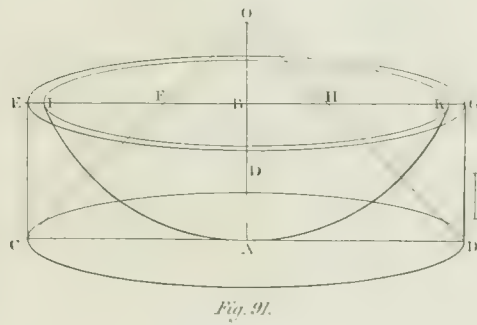
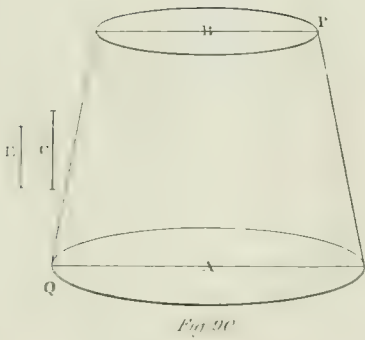
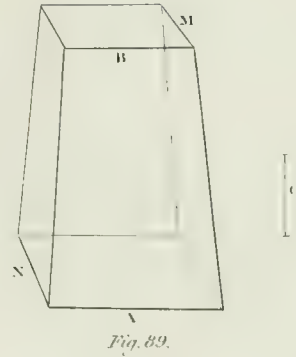
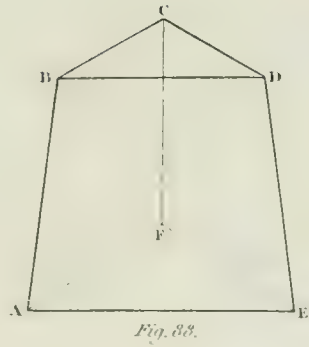
Fig. 86.

* FOR DODECAGON see HEXAGON

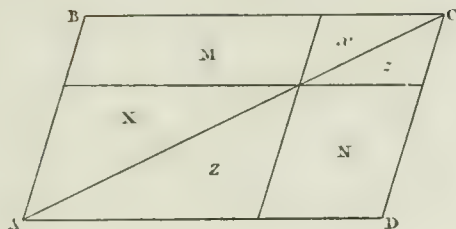
EXTREME & MEAN PROPORTION.



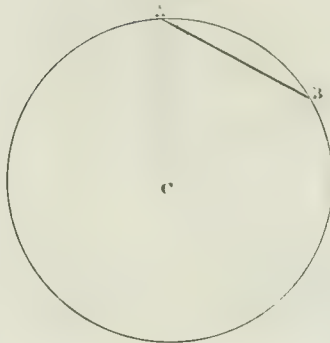
FRUSTUM.



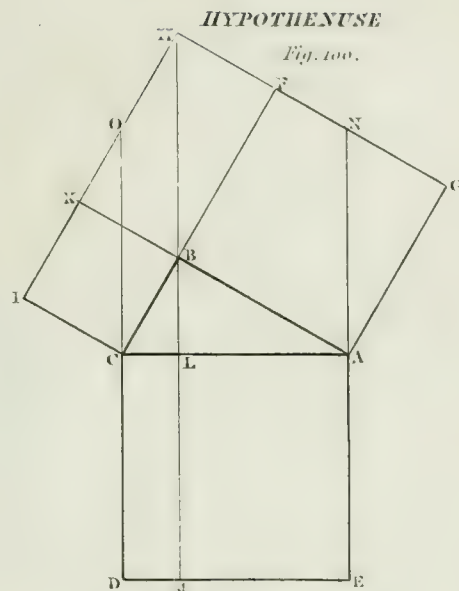
GNOMON
Fig. 96.



HEXAGON
Fig. 97.



HYPOTHENUSE
Fig. 100.



HONEY Comb

Fig. 98.

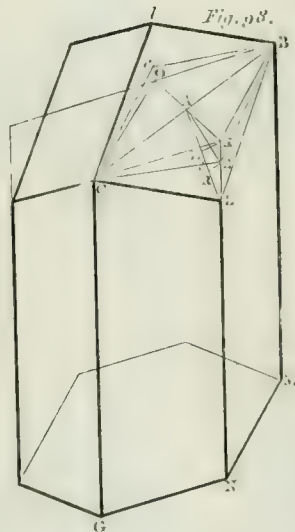
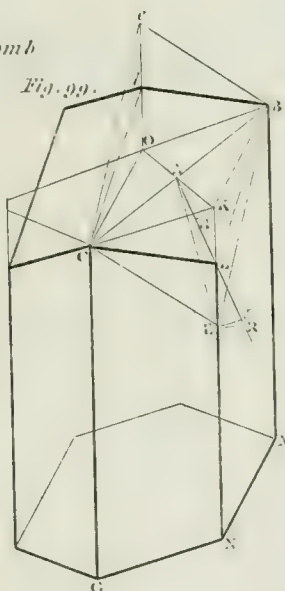
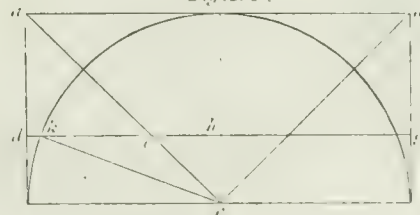


Fig. 99.

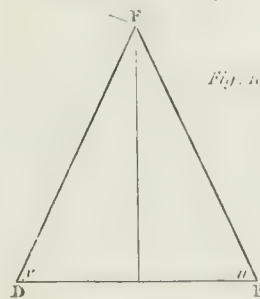


INDIVISIBLES
Fig. 102.



ISOSCELES Triangle

Fig. 105.



INCLINATION of Planes
Fig. 101.

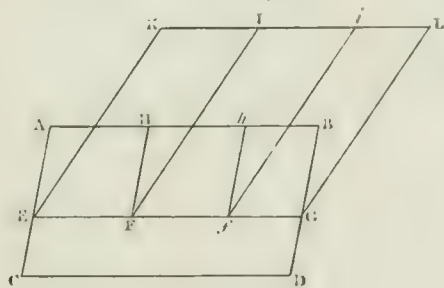
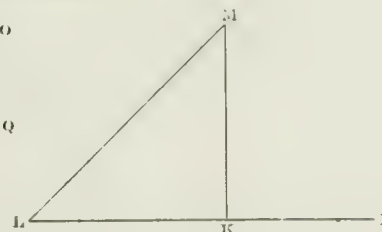
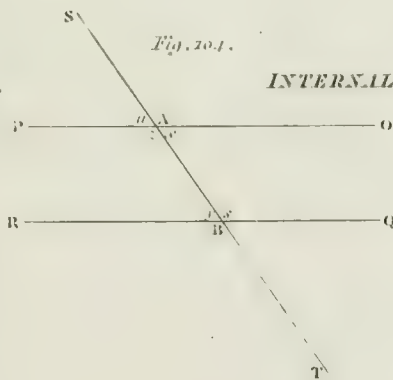


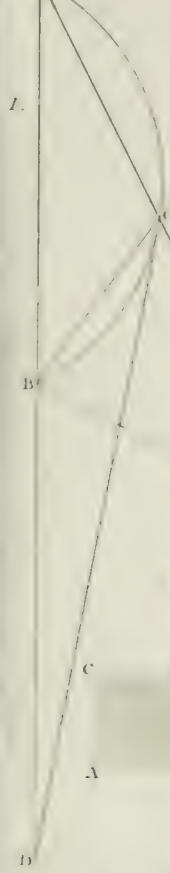
Fig. 104.

INTERNAL Angle

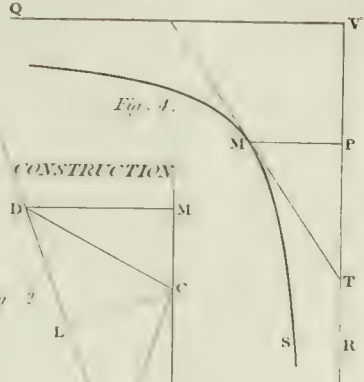
Fig. 103.



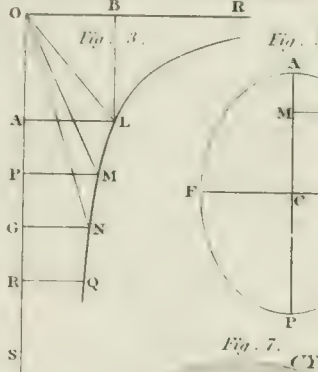
ANALYSIS



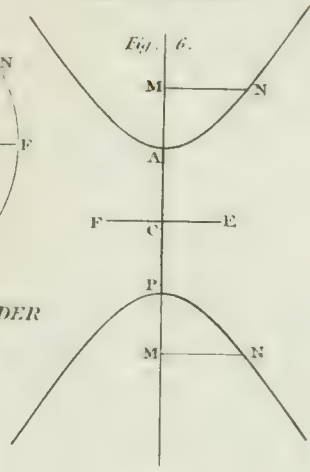
ASYMPTOTE



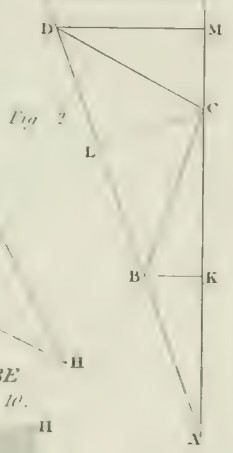
HYPERBOLIC LOGARITHMS



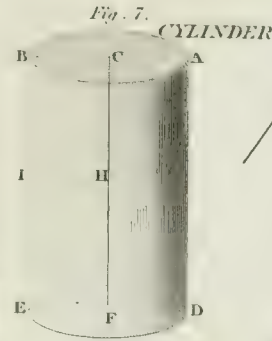
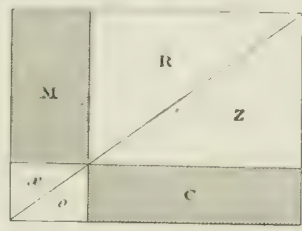
AXIS of the ELLIPSE and HYPERBOLA.



CONSTRUCTION



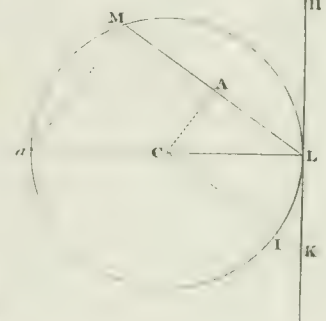
COMPLEMENT



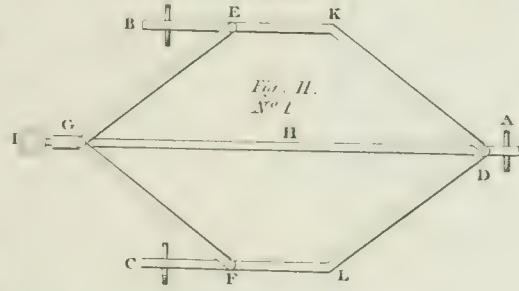
CUBE



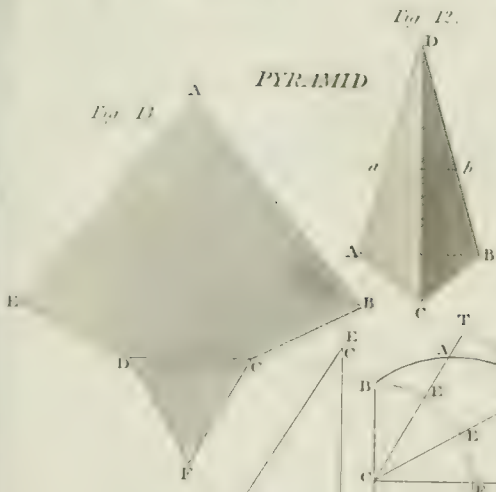
CONTACT



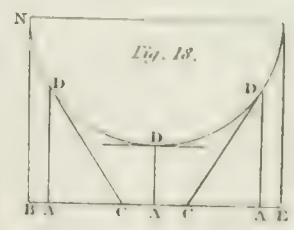
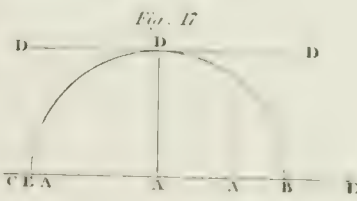
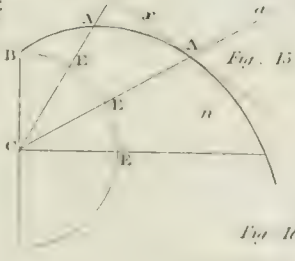
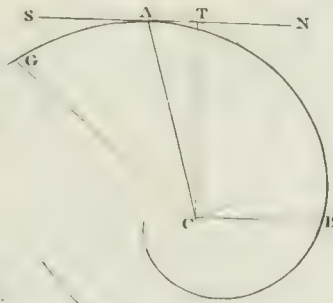
CYCLOGRAPH



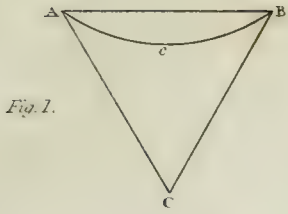
PYRAMID



TANGENT



L I N E .



L U N E S .

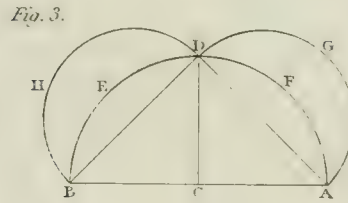
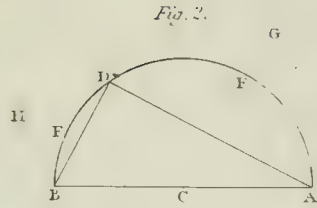
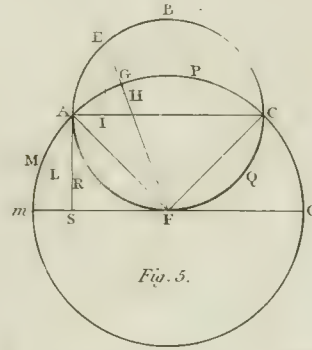
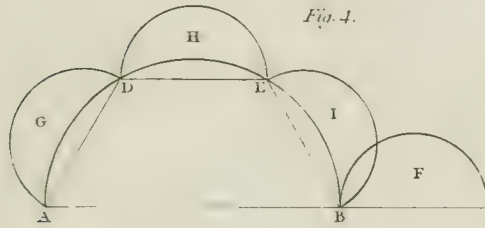
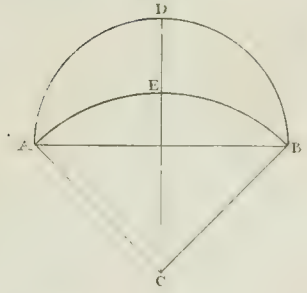
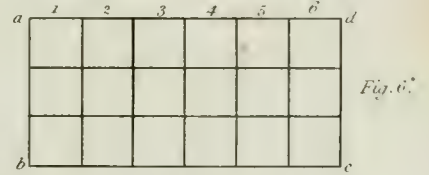


Fig. 3.



M U L T I P L I C A T I O N .



M U L T I P L I C A T I O N .

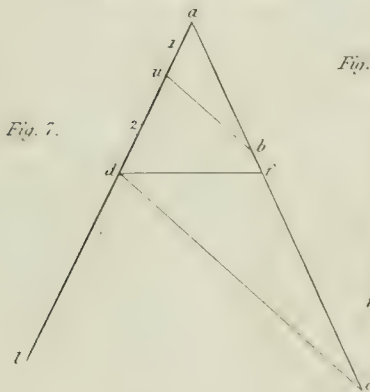
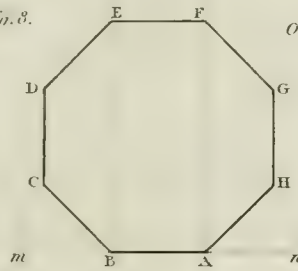
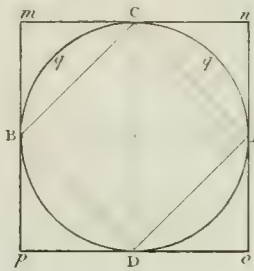


Fig. 8.

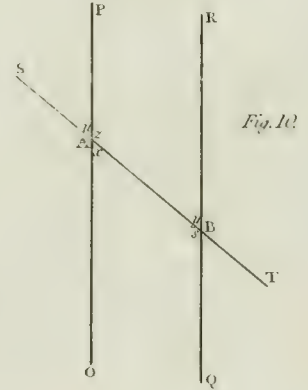


O C T A G O N .

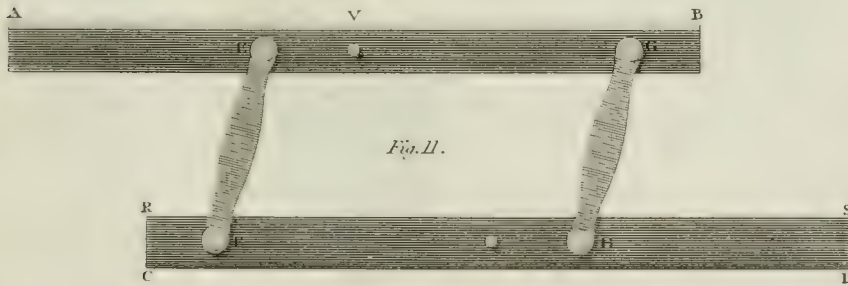
Fig. 9.



P A R A L L E L .



P A R A L L E L R U L E R .



P A R A L L E L I P E D .

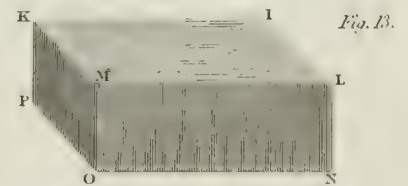


Fig. 12.

P A R A L L E L O G R A M .

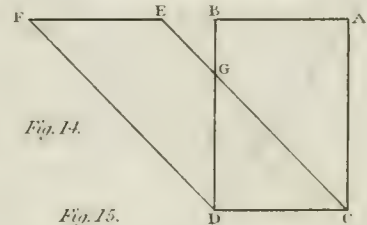
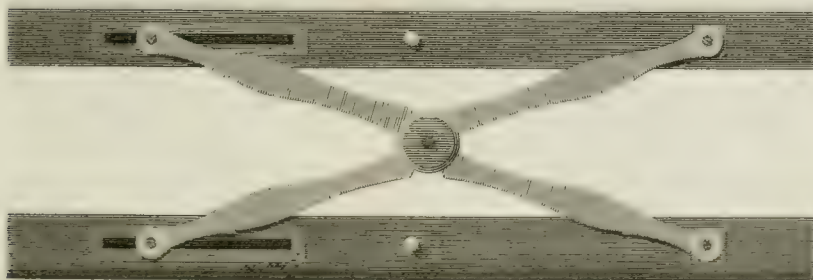
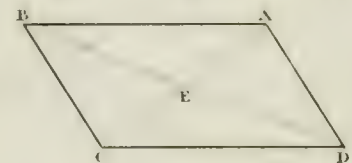


Fig. 15.



PELECOIDES

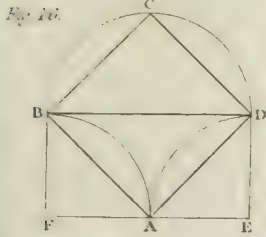
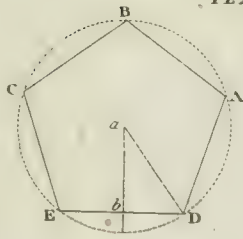
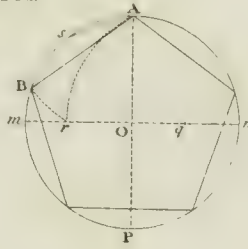


Fig. 17.



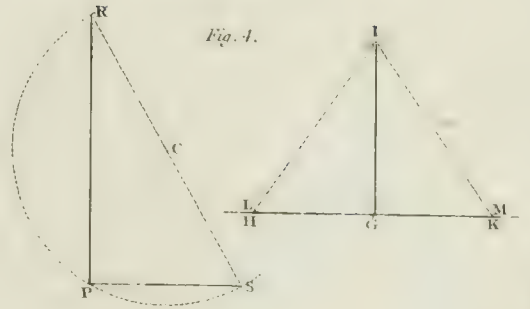
PENTAGON

Fig. 18.



PERPENDICULAR

Fig. 1.



POLYGON

Fig. 6.

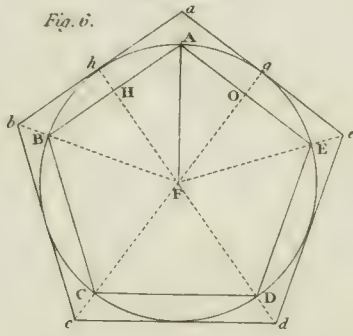


Fig. 5.

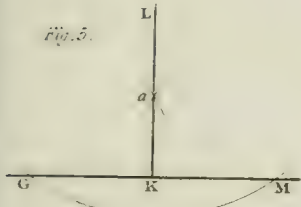
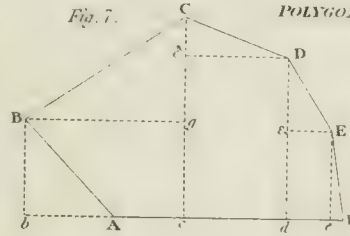


Fig. 7.



POLYGONOMETRY

Fig. 8.

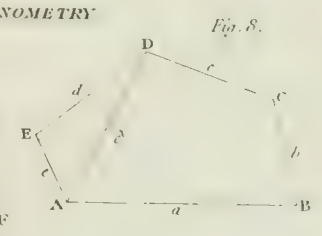


Fig. 9.

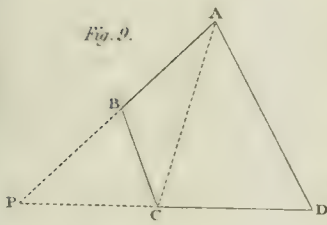


Fig. 10.

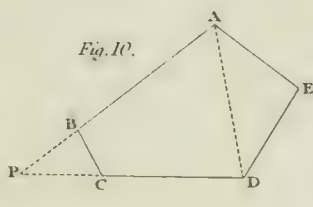
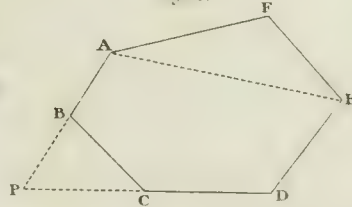


Fig. 11.



PORISM

Fig. 12.

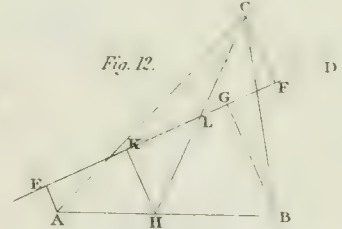
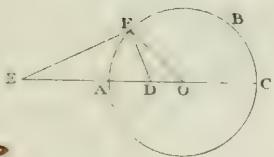


Fig. 13.



PRISM

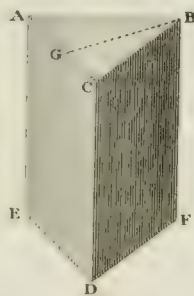
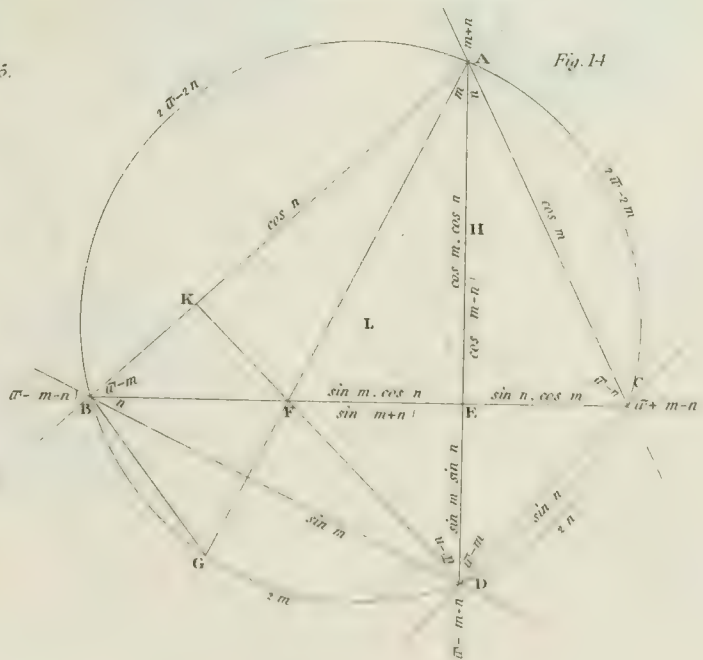


Fig. 13.

Geometry of POSITION

Fig. 14.



PROPORTIONAL

Fig. 16.

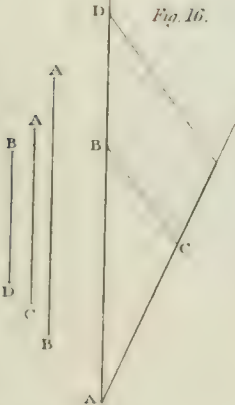


Fig. 17.

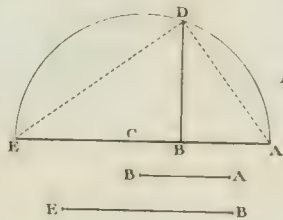


Fig. 1.
QUALITY.

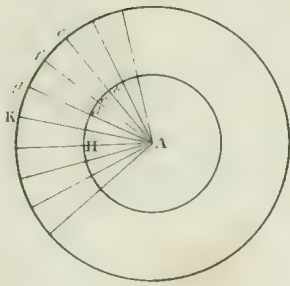
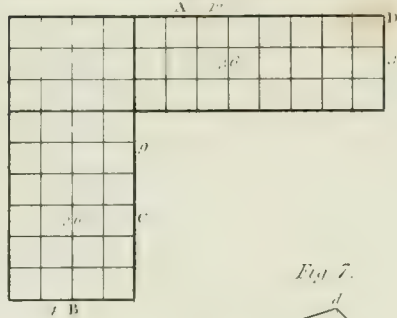


Fig. 2.
RECIPROCAL Figures.



RECTANGLE

Fig. 3.



Fig. 4.

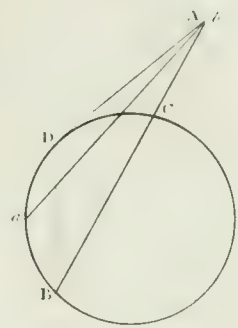


Fig. 5.
REDUCTION

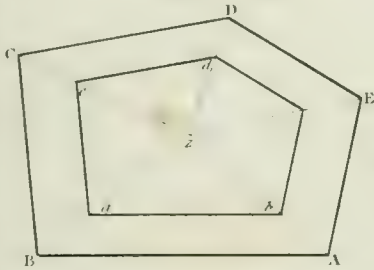


Fig. 7.

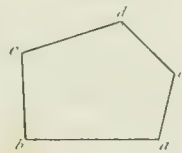


Fig. 6.

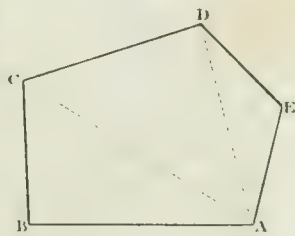


Fig. 8.

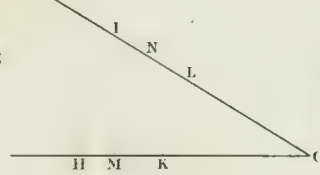
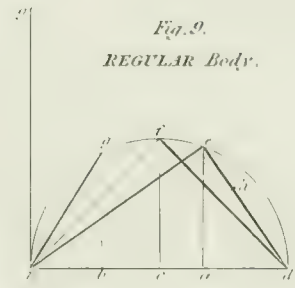
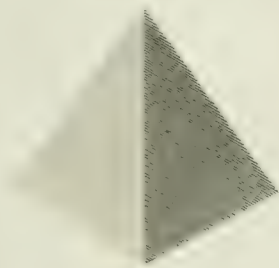


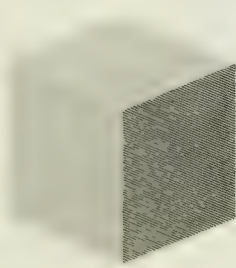
Fig. 9.
REGULAR Body.



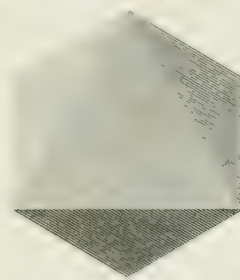
TETRAHEDRON



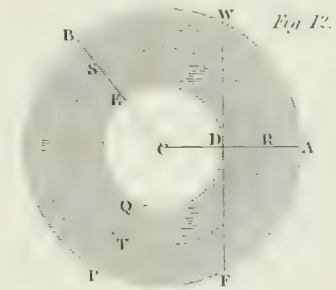
CUBE



OCTAHEDRON



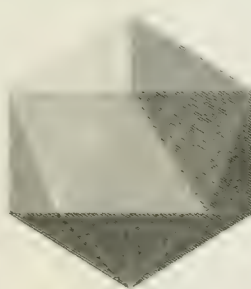
RING



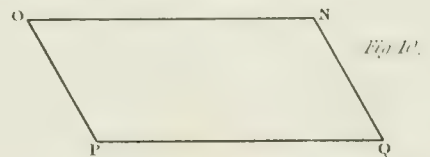
DODECAHEDRON



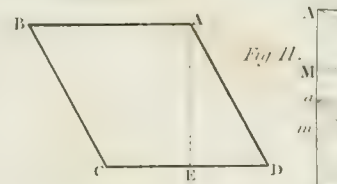
ICOSAHEDRON



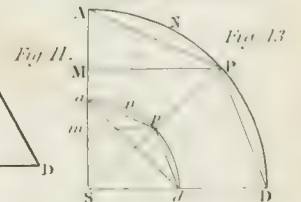
RHOMBOIDES



RHOMBUS



SIMILAR Curves



SCALE

Fig. 1.

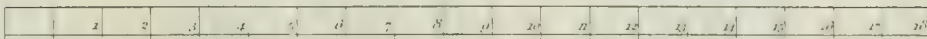
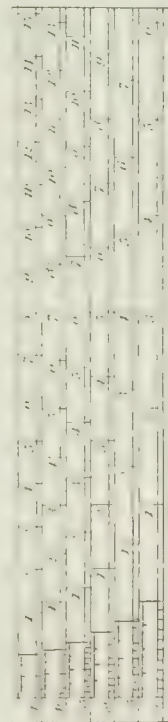
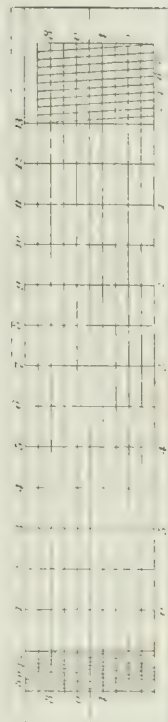


Fig. 2.



SECTOR

Fig. 7.

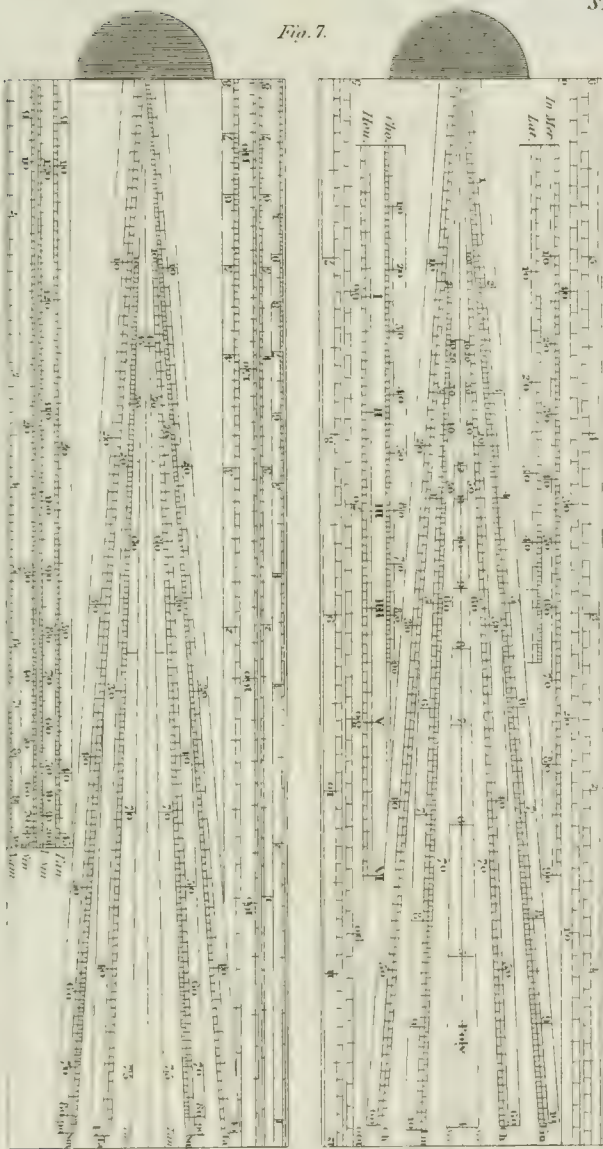


Fig. 5.

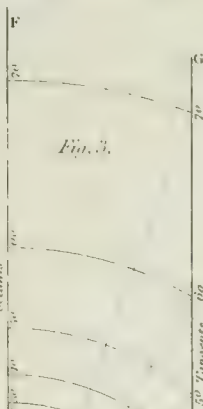
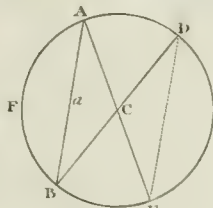
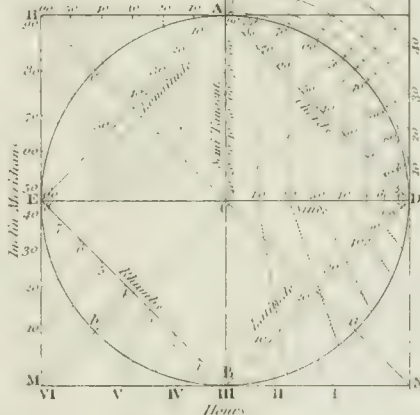


Fig. 3.



SECANT

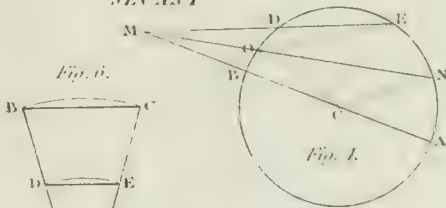
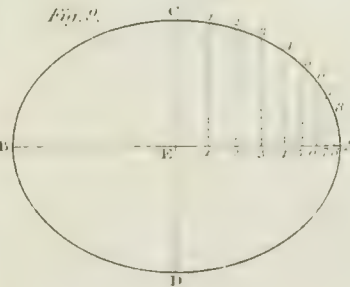


Fig. 9.



SEGMENT

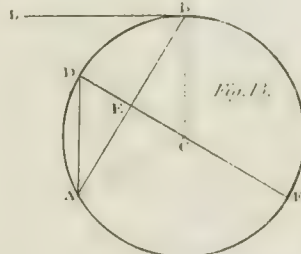


Fig. 10.

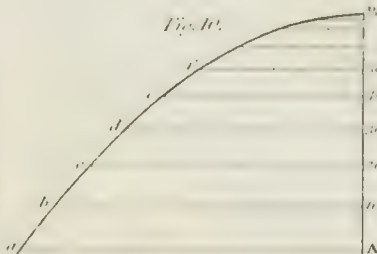


Fig. 11.

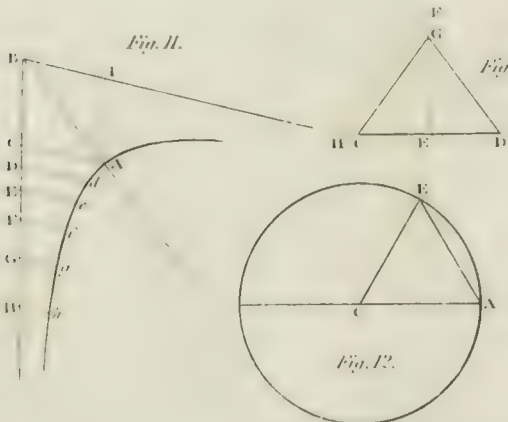


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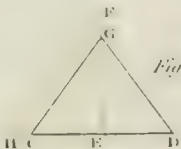
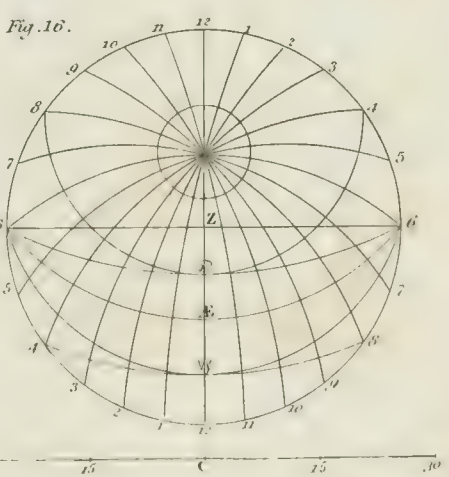
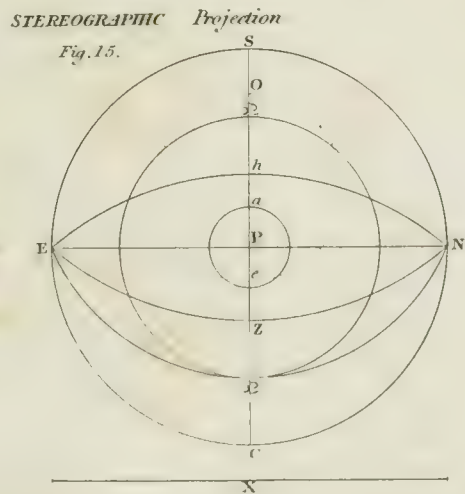
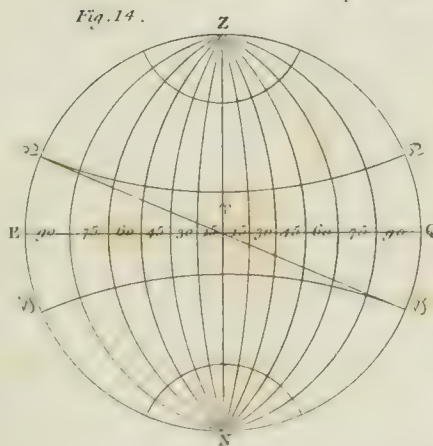
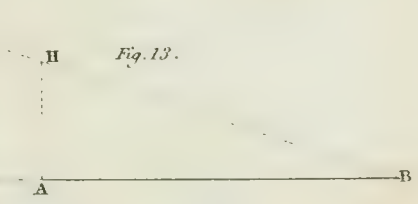
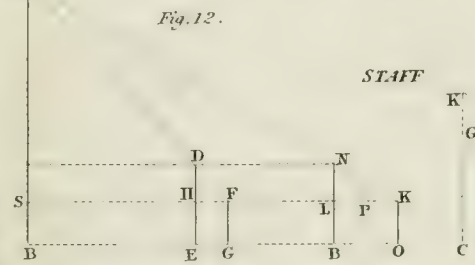
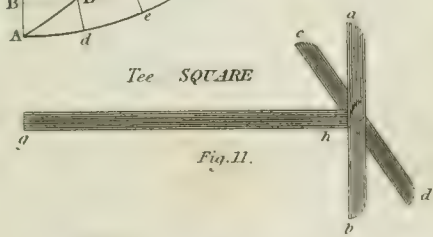
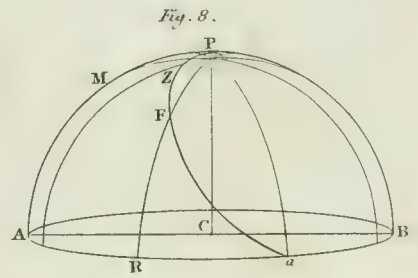
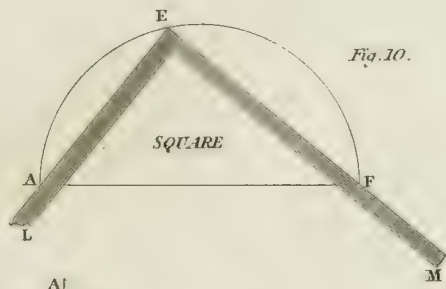
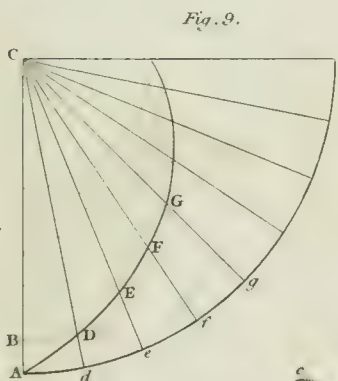
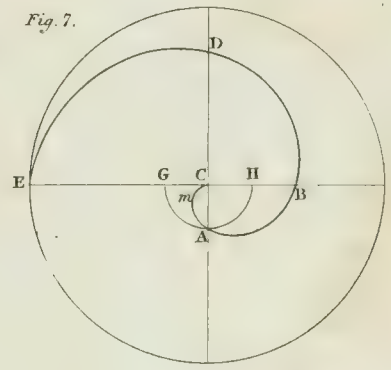
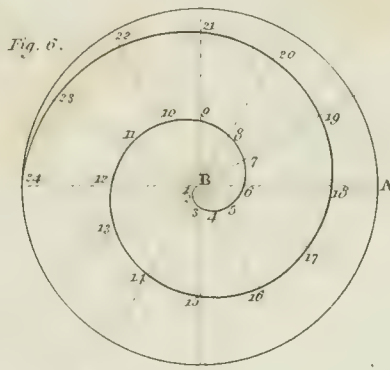
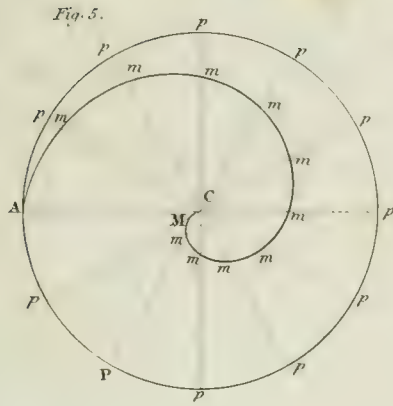
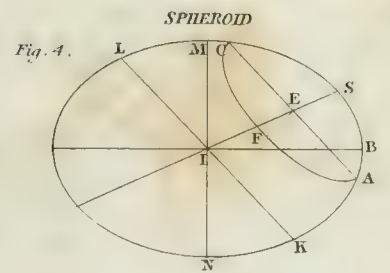
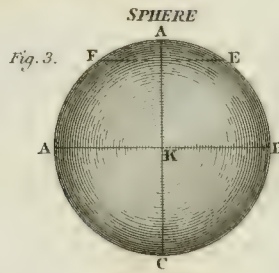
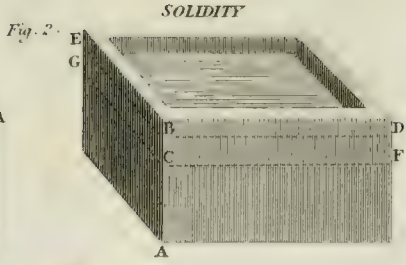
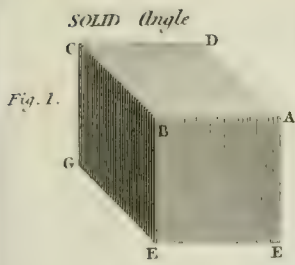


Fig. 12.

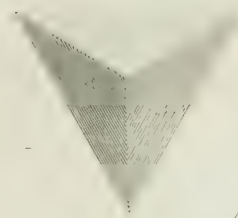
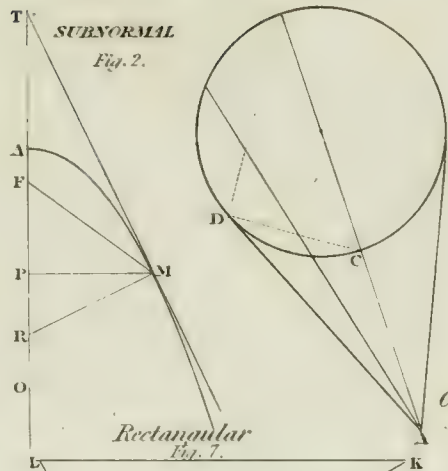
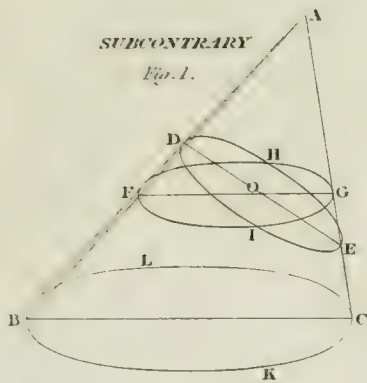


TANGENT
Fig. 3.

TETRAEDRON
Fig. 4.

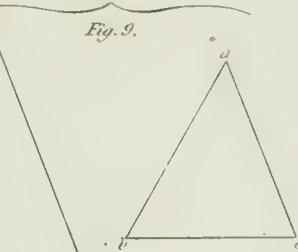
SUBCONTRARY
Fig. 1.

SUBNORMAL
Fig. 2.

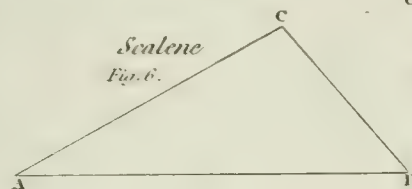


TRIANGLE
Equilateral
Fig. 5.

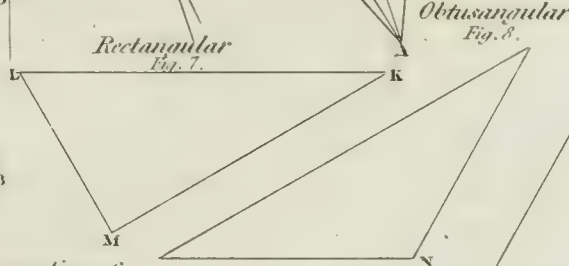
Similar
Fig. 9.



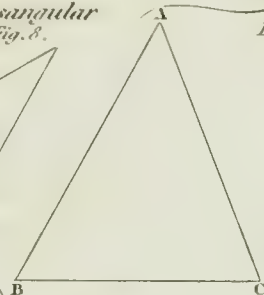
Scalene
Fig. 6.



Rectangular
Fig. 7.



Obtuseangular
Fig. 8.



Mensuration of
Fig. 10.

Properties of
Fig. 11.

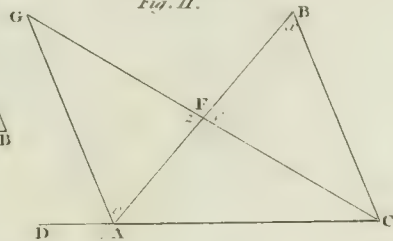
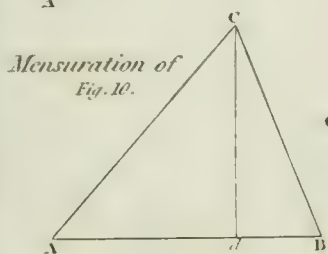
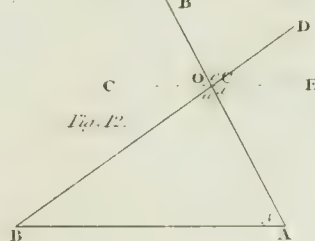


Fig. 12.



Isoceles
Fig. 13.

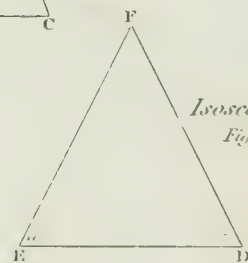


Fig. 11.

Fig. 15.

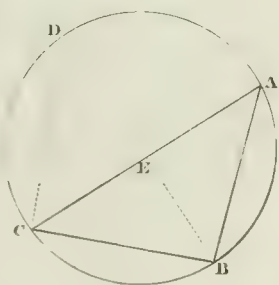
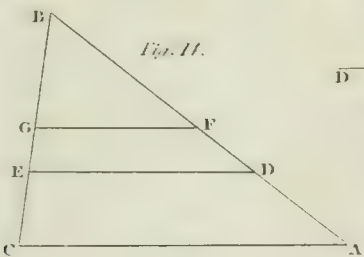
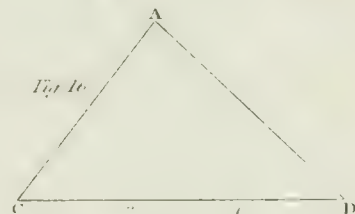


Fig. 16.



VERTEX
Fig. 18.

Fig. 21.

Goldman's
VOLUTE
Fig. 20.

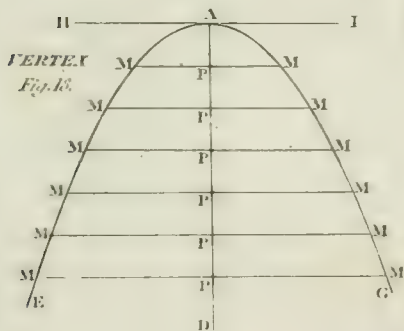
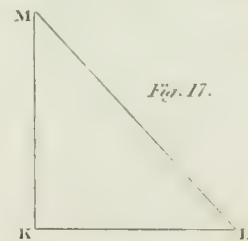


Fig. 17.



ANGULAR

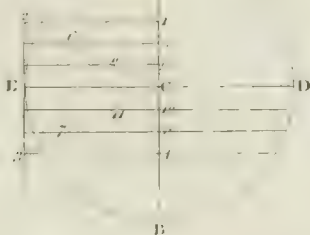
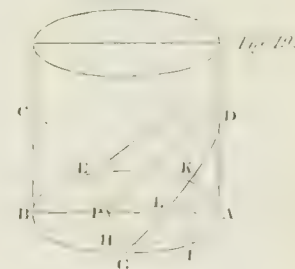
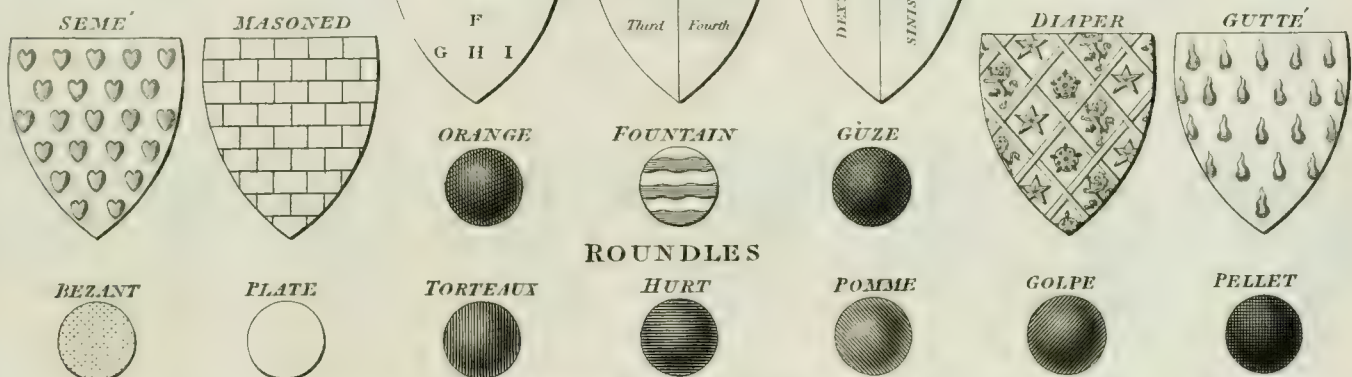
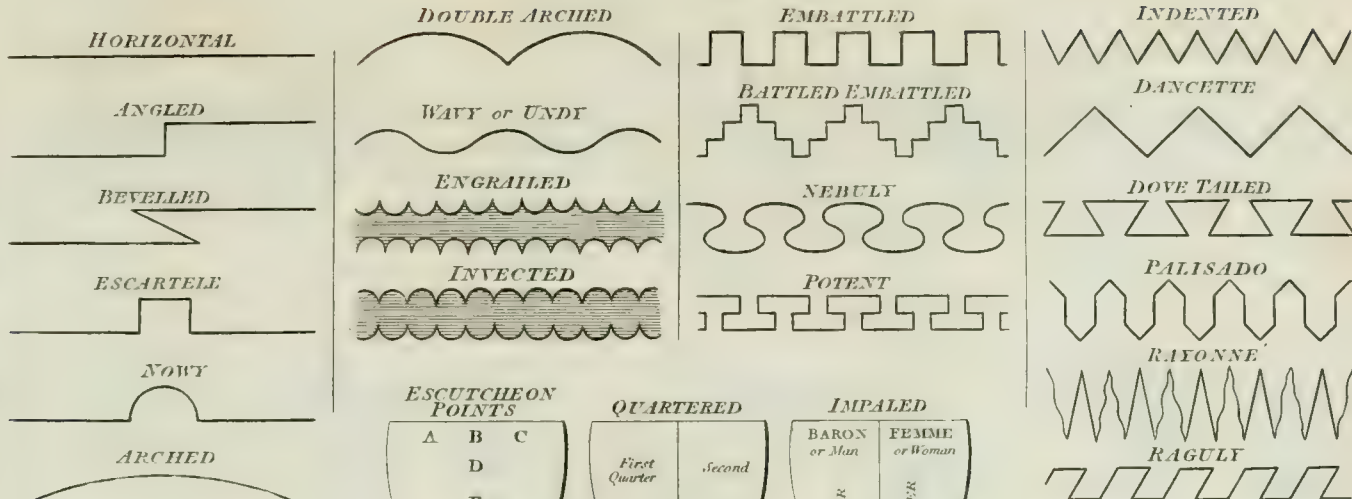


Fig. 19.

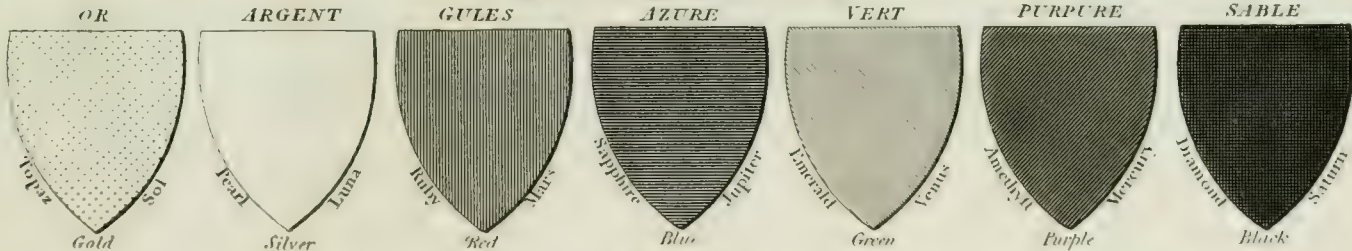


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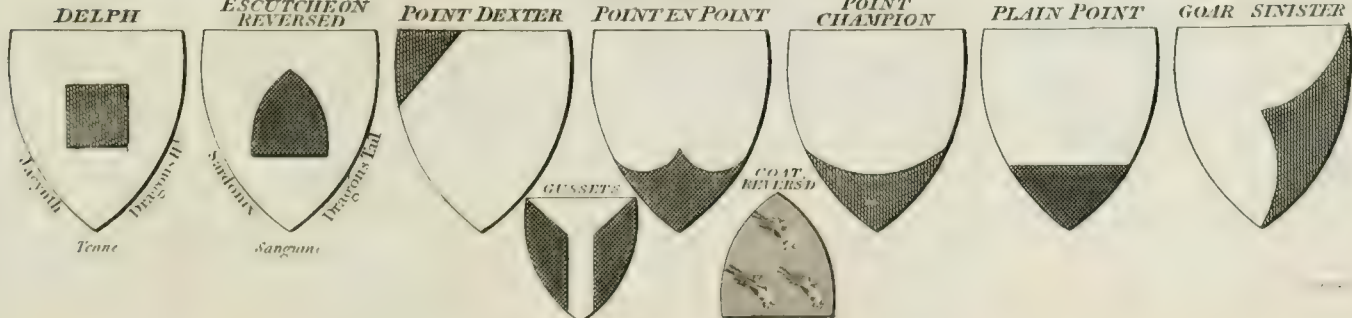
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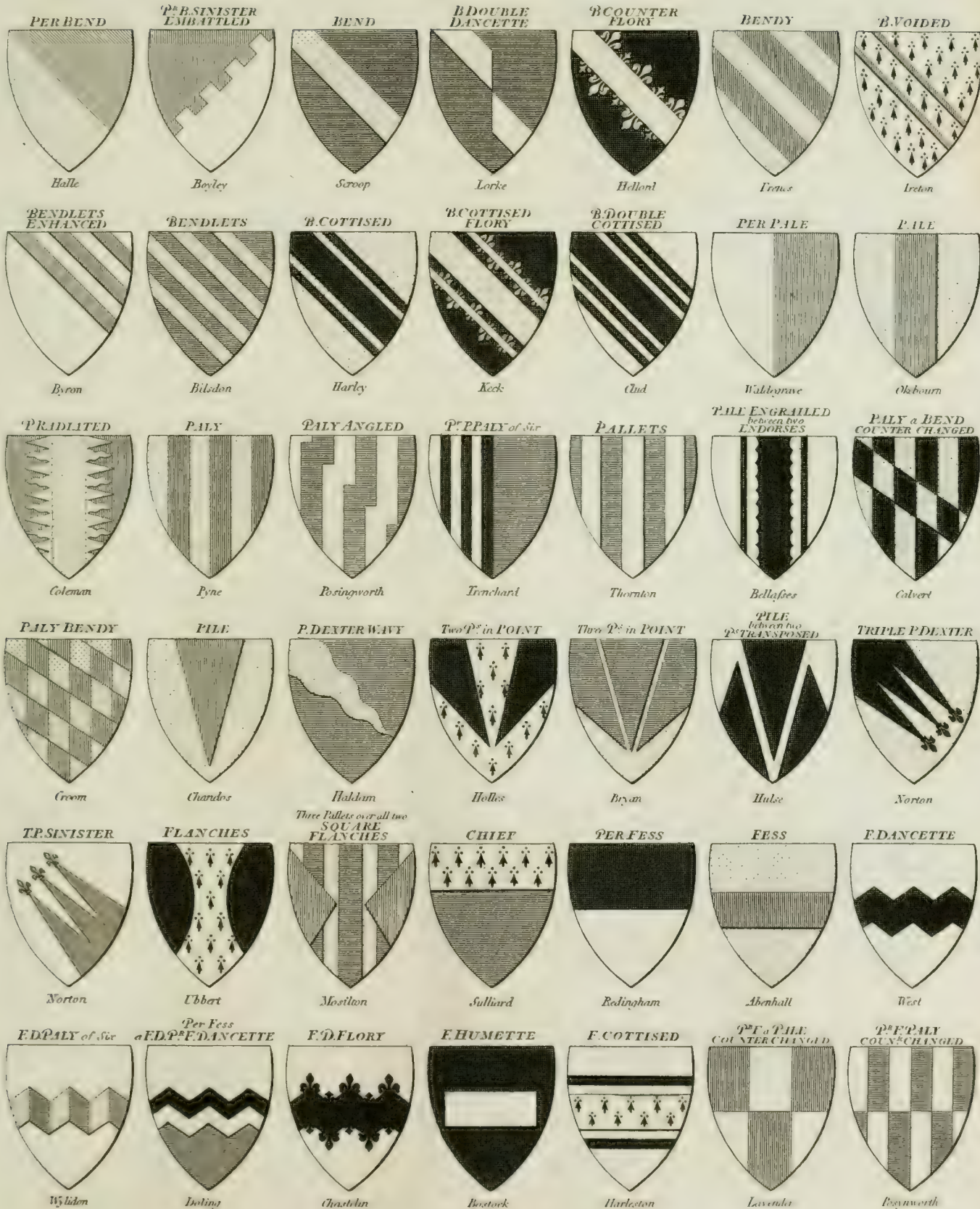


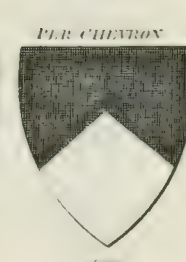
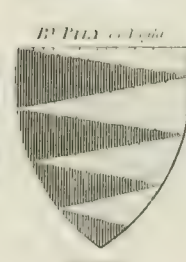
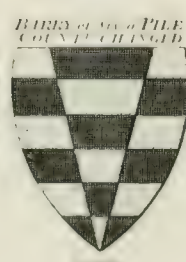
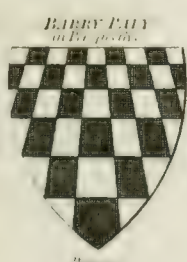
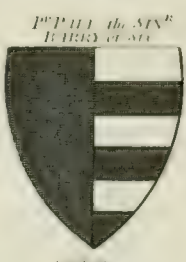
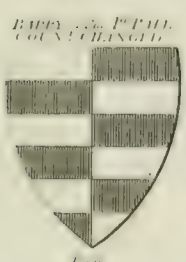
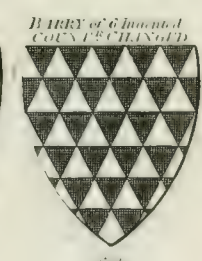
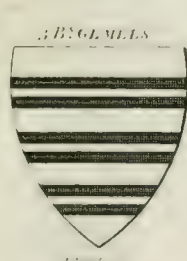
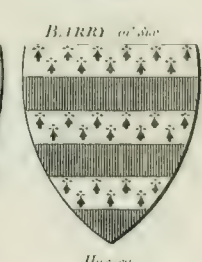
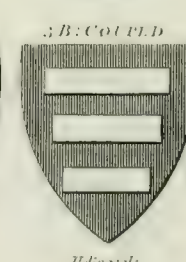
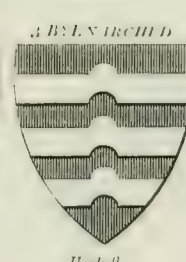
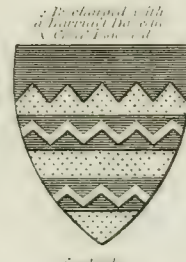
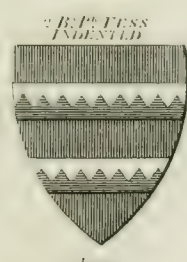
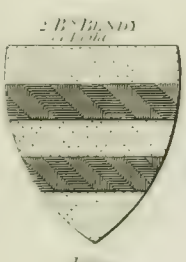
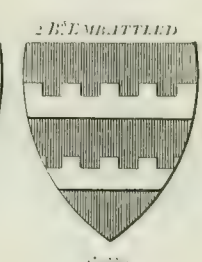
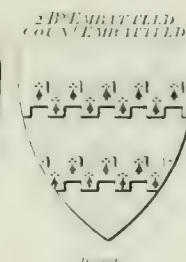
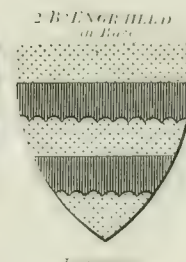
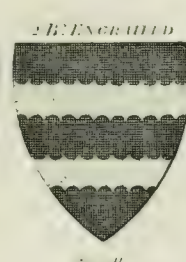
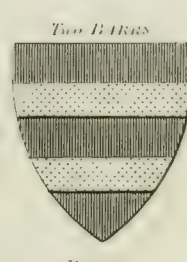
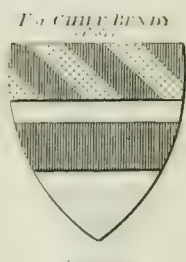
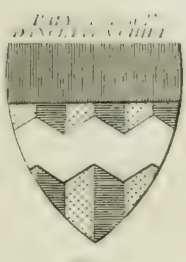
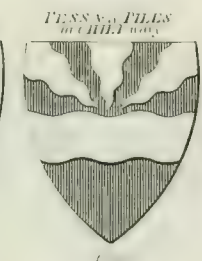
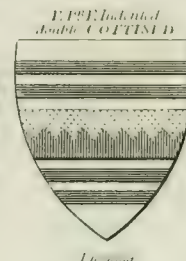
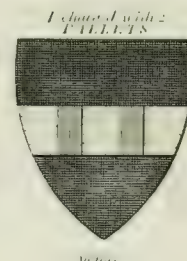
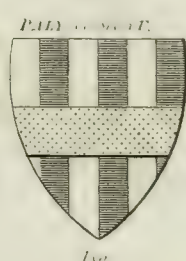
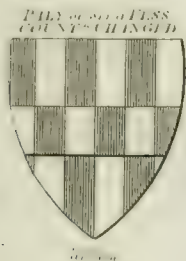
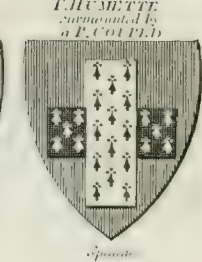
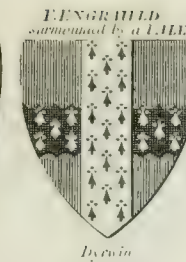
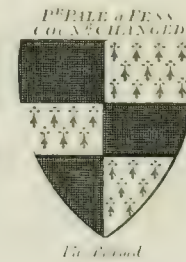
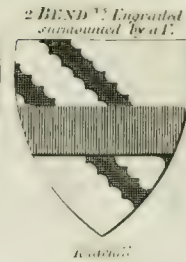
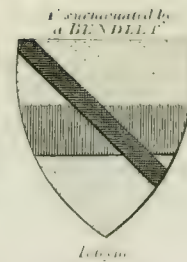
METALS and COLOURS




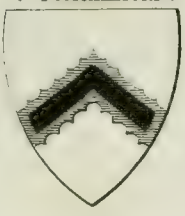
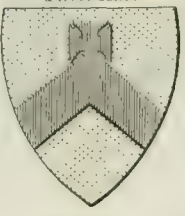


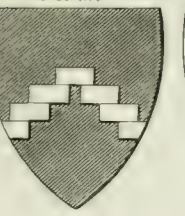


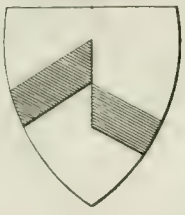





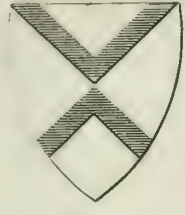





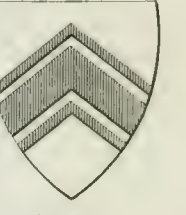
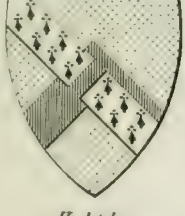
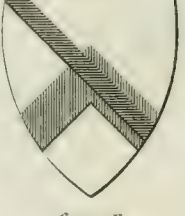


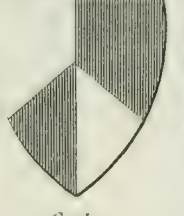



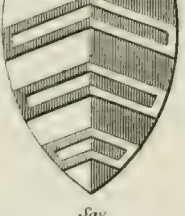
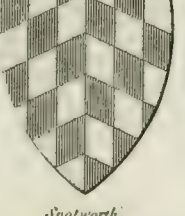



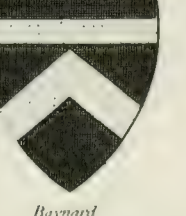

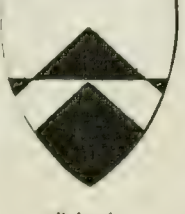
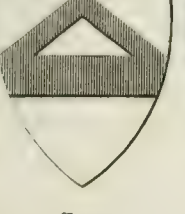




ABATEMENTS







HERALDRY.

CHEVRON VOIDED.  Dudley	C. FIMBRILATED.  Staley	C. the Point ending with a Cross flûte.  Holdbrook	C. with the Ring & Beam of an Anchor.  Walker	C. ENARCHED.  Holbourne	C. BILLETY of Seven.  Grice	C. TRIPARTED.  Smithley
C. COUPED.  Jones	C. REMOVED.  Shaketail	C. ROMPÉE.  Sorton	C. FRACTED.  Winterhall	C. COUCHED SINIS^{te}.  Bightin	CHEVRONS of 6.  Grimeby	CHEVRONS.  Fettyplace
The CHEVRONS COUNTER POINTED.  Travie	CHEV^{rs} FRETTE^d with one reversed.  Wedward	Two C^{he} COUCHED Dexter & Sinister.  Couch master	CHEVRONS REVERSED.  Newton	3 CHEV^{rs} FRETTE^d in Base.  Brakenbery	CHEVRON and a DEMI C^{he} SIN^{ist} in Base.  Rossiell	C. COTTISED.  Langford
a C. pierced with a BEND.  Hodebke	a C. surmounted by a BENDLET.  Crumwell	BENDY SINISTER of Six a C.  Westerdale	BEND charged with 3 C.  Briley	P^{er} PILE and P^{er} C.  Garth	P^{er} PILE a CHEVRON COUNTER CHANGED.  Blundell	PALY of Six a C.  Barblum
P^{er} PILE 6 CHEV^{rs} COUNTER CHANGED.  Enderby	P^{er} PILE 3 CHEV^{rs} FIMBRILATED & C^{he} C^{he}.  Soy	PALY CHEVRONS.  Spotworth	P^{er} PILE and P^{er} C.  Corvic	a PILE surmounted by a CHEVRON.  Dyeton	a PILE & CHEVRON COUNTER CHANGED.  Noseworth	a C. and CHEV^{rs} P^{er} FESS.  Baynard
C. on CHEV^{rs} a BAR ENGRAILED.  Solyngton	P^{er} FESS a C. COUNTER CHANGED.  Balnesie	a FESS & C. in Chief.  Kerton	a FESS & C. in Base.  Baynard	a FESS between 2 CHEV^{rs}.  Lish	a FESS between 4 CHEV^{rs}.  Andlby	a FESS charged with a C^{he} COUCHED SINISTER.  Tremouth

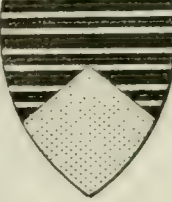


P^{le} PALE BARRY of 8
changed a CHEVRON



Metham

P^{le} C in CHIEF
3 BARS GEMELLS.



Allerton

Charg'd with
3 B^{le} GEMELLS.



Throckmorton

P^{le} C a C^{le} P^{le} C
COUNTS CHANG^{le}.



Withorse

C. charg'd with a
C^{le} NEBULE.



Hankord

P^{le} C^{le} CHEVRONNELLS
COUNTS CHANG^{le}.



Grimsby

P^{le} C^{le} CHEVRONS
of Chief.



Grimsby

CANTON



Blinco

2 BENDLETS a C^{le} N^{le}
charg'd with a
BEND.



Harford

P^{le} NY of 6 a C^{le} N^{le}
charg'd with 3
ERMINE SPOTS.



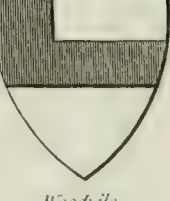
Shirley

2 B^{le} on a CHIEF P^{le} FESS
indented a C^{le}.



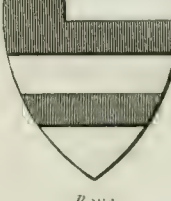
Hotham

FESS & C^{le}.



Woodville

2 BARS & C^{le}.



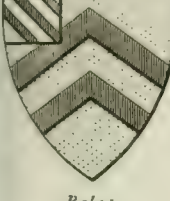
Boys

BARRY of Eight
a C^{le} P^{le} P^{le} L^{le}.



Ballstid

2 CHEV^{le} a C^{le} N^{le}
charg'd with
3 BENDLETS.



Balus

C^{le} N^{le} charg'd with a C.



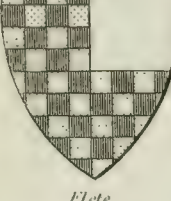
Middleton

C^{le} N^{le} charg'd with an
ORLE.



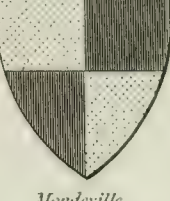
Surteys

QUARTER
Sulziers.



Flete

QUARTERLY



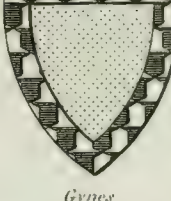
Mondeville

BORDURE



Tugton

B^{le} V^{le} L^{le}



Gynes

an Eagle displayed within a
B. COMPONE.



Somerset

B. COMPONE



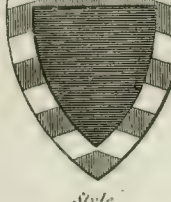
—

CHEVRON
charg'd with 3 Malles within
a B. CHEV^{le} Q.



Ker

B. CHEVRON
of Light.



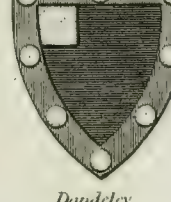
Kyle

P^{le} PALE a B.
charg'd with 9. scolops
COUNTS CHANG^{le}.



Maule

CANTON within a B.
charg'd with 9
BEZANTS.



Dandele

QUARTERLY a B.
of England
COUNTS CHANG^{le}.



Courtney
Temp. Hen. 3rd.

ORLE



Betram

DOUBLE ORLE



Bagway

TRIPLE ORLE



late Bishop
of Maine

O. enrailed inside
within a B. enrailed.



Rothland

O. surmounted by a
BEND.



Quincey

a Lion Rampant within a
TREASURE.



Littleton alias Lodge

a Malle within a
DOUBLE TREASURE.



Hablethorp

INESCOCHEON



Holgrave

INESCOCHEON
within a B. enrailed.



Heppell

2 BARS surmounted
by 3 INES^{le}.



Hull

3 INES^{le}
each within a B. enrailed.



Burrell

BARRY of 6 on a
Chief 2 Pallets,
an INES^{le} B^{le} on a Bar.



Burley

3 BARS an INES^{le} on
a CHIEF 2 PALLETS
between 2 CHEVRONS.



Mortimer

QUARTERLY a B. a double C^{le} N^{le} a 2^d
a Barre a C^{le} N^{le} in base a CHEVRON all
Gunter Channel. In the Gutter Point an
INES^{le} and a B^{le} on a
a BORDURE.



Londona

CROSS



St George

C ENGRAILED



Warner

C WAVY



Colley

C QUARTERLY



Beverley

C FLAMANT



Firecrofs

C PIERCED



Duckenfield

C RECOURSIE



Klucher

C RAGULY



Lawrence

C NOWED LOZENGY



Nowellerofs

C CROSSED



Dazell

C NOWY



Bounderofs

C PATEE throughout DOUBLE REBATED



Baconcell

C DEGRADED & CONJOINED



Wyntworth

C NOWED DEGRADED & CONJOINED



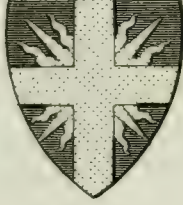
Die Hofwart of Holland

C CORDED



Sensly

C RAYONNANT



—

C FLEURY



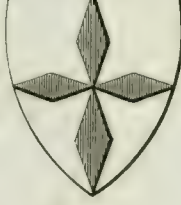
Flowersby

C INTERLACED with an Inralet



Van Crusannell

4 FUSILS in CROSS



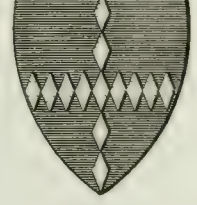
Fusilerofs

C of 5 LOZENGES



Maderine

C FUSILLY



Fotheringhay

C BEZANTE



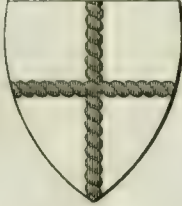
Lovegold

C or TRIANGLES



Burcher

C CABLED



Cabley

C VOIDED



Apuldenfield

C DOUBLE VOIDED



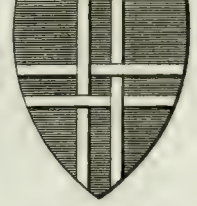
Crevequer

C DOUBLE PARTED



Douler

C DOUBLE PARTED & FRETTE



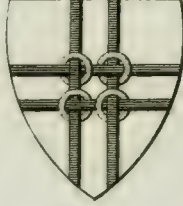
Trulove

C TRIPARTED & FRETTE



Frache

C DOUBLE PARTED and FRETTE with ANNULETS



Tyfer

C ANCIENT



—

C PITEE ENTIRE



Colville

1^{re} PILE a C PITEE ENTIRE FITCHED in the Top & Counter Charged



Clopton

C COUPED & PIERCED



Grille

C RECOURSIE & COUPED



Coursier

C RECERCELLE



Woodwol

C PATEE



Lelipe

C PATEE PIERCED of the FIELD



Wilkinson

C PATEE CONCAVED



Wandley

C PATEE FITCH



Mapleden

C PATEE FITCH & REBATED



Count Littleholden

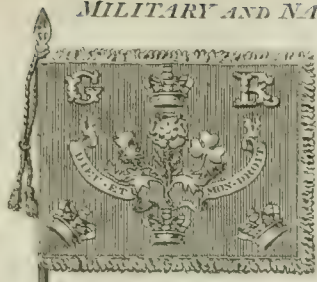
C PILL



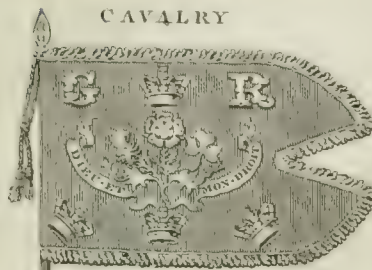
Paullino



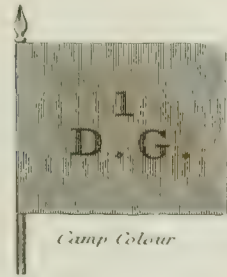
CAVALRY



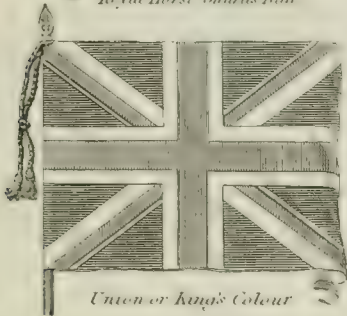
Standard of the Royal Horse Guards



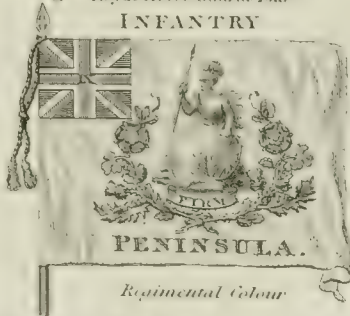
Guidon of the Royal Horse Guards



Camp Colour



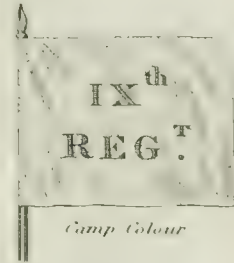
Union or King's Colour



INFANTRY

PENINSULA.

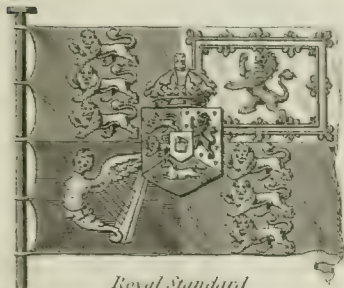
Regimental Colour



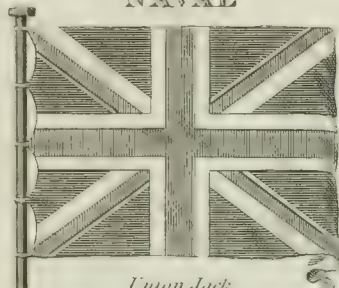
IXth REG^t.

Camp Colour

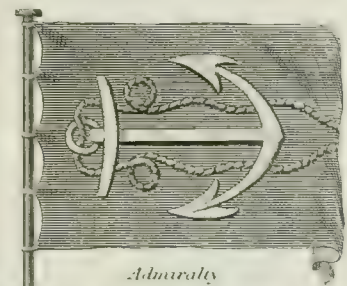
NAVAL



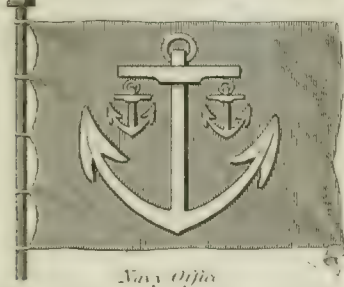
Royal Standard



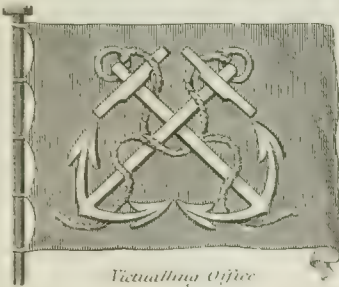
Union Jack



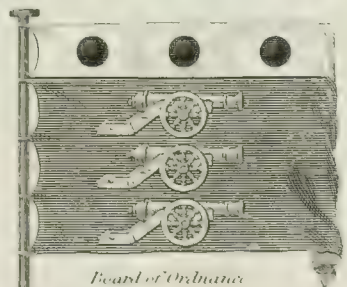
Admiralty



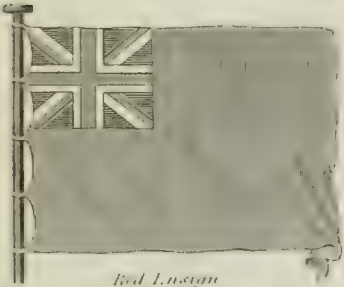
Navy Office



Vice-Admiral's Office



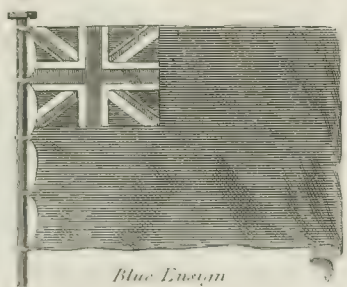
Pearl of Orbits



Red Ensign



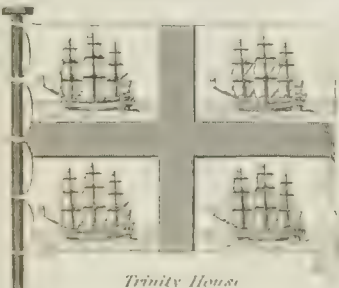
White Ensign



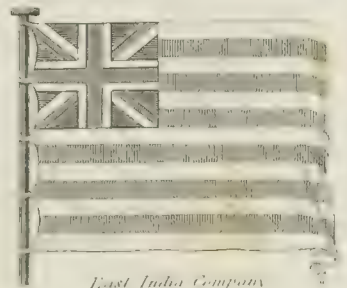
Blue Ensign



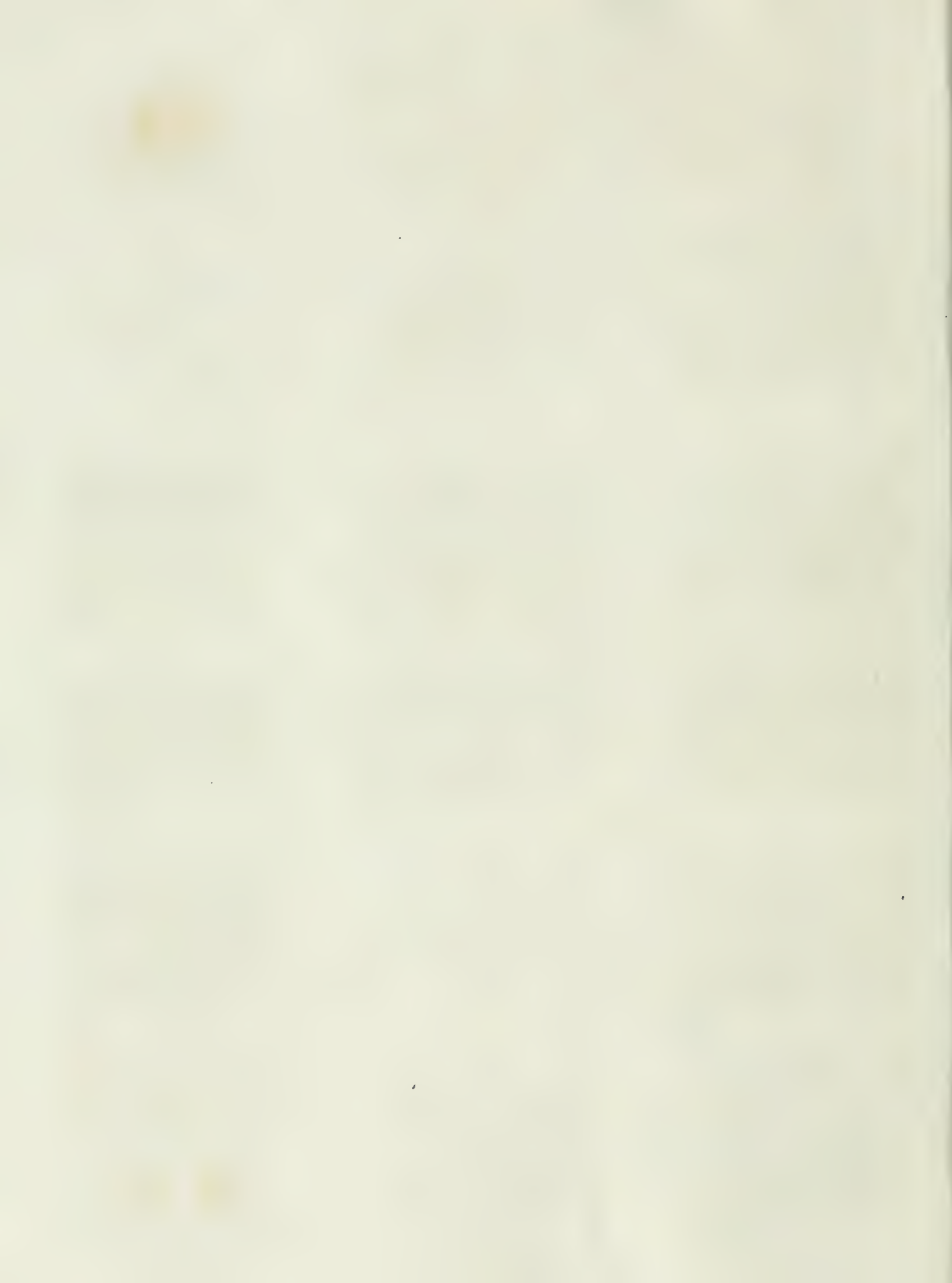
Custom House



Trinity House



East India Company

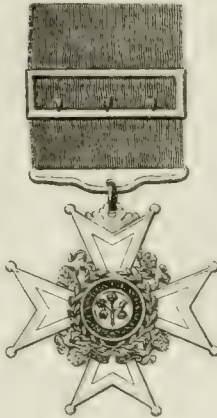


HERALDRY.
ORDERS of KNIGHTHOOD.

Star Collar and Badge
of the Order
of the GARTER



Badge of a Companion
of the Order of the BATH



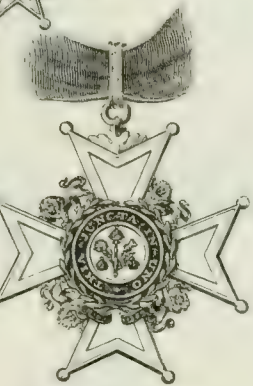
Star Collar and Badge
of a Military Knight Grand Cross
of the Order of the BATH



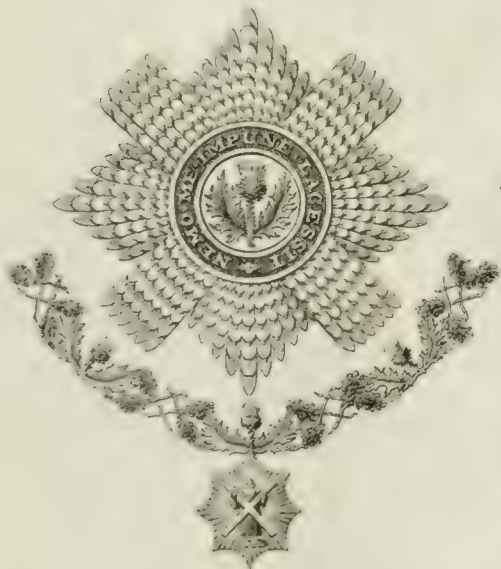
Star Collar and Badge
of a Military Knight Grand Cross
of the Royal Hanoverian Guelphic Order



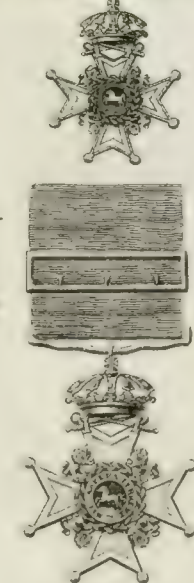
Badge of a Military Commander
of the Royal Hanoverian Guelphic Order



Badge of a Knight Commander
of the Order of the BATH.



Star Collar and Badge
of the Order of the THISTLE.



Badge of a Military Knight
of the Royal Hanoverian
Guelphic Order.



Star Collar and Badge
of the Order of ST. PATRICK

Milton sculp

Star Collar & Badge of a Civil Knight Grand Cross of the Order of the BATH.

HERALDRY.

Star Collar & Badge of a Civil Knight Grand Cross of the Royal Hanoverian GUELPHIC Order.

ORDERS OF KNIGHTHOOD.



Star of a Civil Commander of the Royal Hanoverian GUELPHIC Order



Ribbon & Badge of a Civil Commander of the Royal Hanoverian GUELPHIC Order



Reverse of the Ribbon & Badge of the Royal Hanoverian GUELPHIC Order.



Badge of a Civil Knight of the Royal Hanoverian GUELPHIC Order

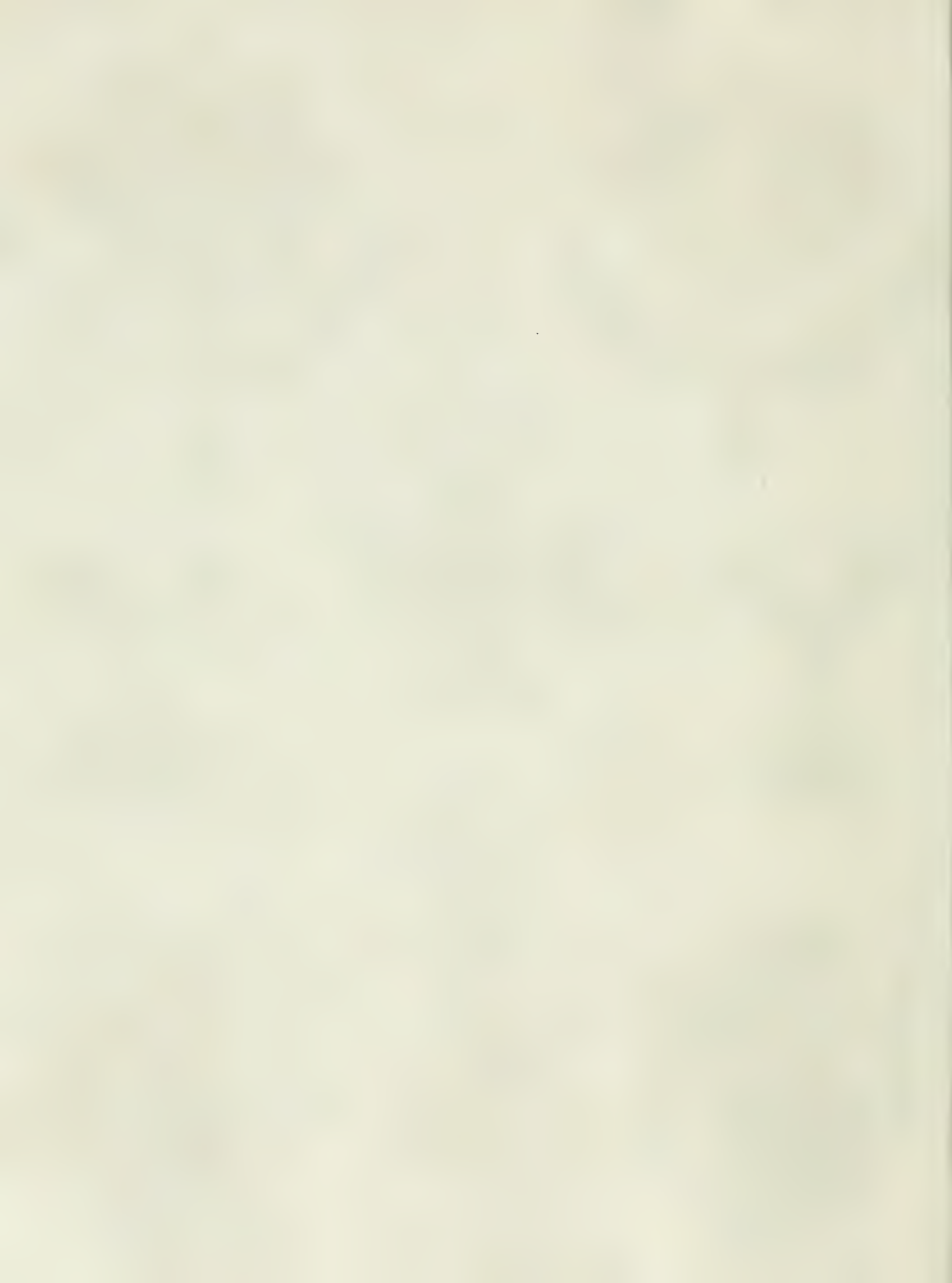


Star of a Knight Commander of the Order of the BATH.



Star of a Military Commander of the Royal Hanoverian GUELPHIC Order





HERALDRY.

CROWNS, CORONETS AND MITRES



Nephew of the King



Scotland



England



Hanover



Niece of the King



Younger Sons of the King



Prince of Wales



Daughters of the King



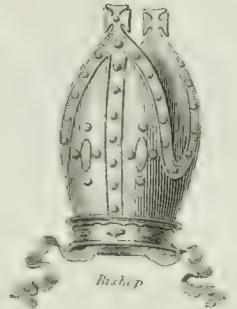
Arch Bishop



Grand Daughters of the King



Prince Leopold of Saxe Coburg



Bishop



Duke



Marquess



Earl



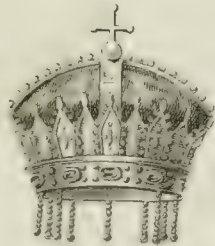
Viscount



Baron



Count of Hanover



Hungary



Austria



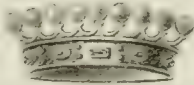
Bohemia



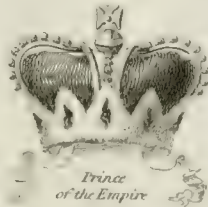
Baron of Hanover



Russia



Count of the Empire



Prince of the Empire



Baron of Austria



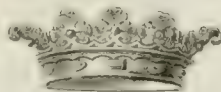
France



Dauphin of France



French Prince of the Blood



Duke of France



Marquis of France



Charlemagne

HERALDRY.

CROWNS, CORONETS, MITRES, &c.



Comte of France



Prussia



Spain



Sweden



Vicomte of France



Duke of Spain



Sicily



Portugal



Netherlands



Denmark



Wurttemberg



Bavaria



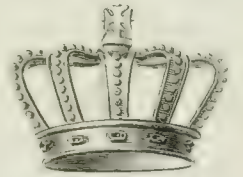
Grand Signor



Royal Hara



Persia



Saxony



Sardinia



Hatti



Cardinals Hat



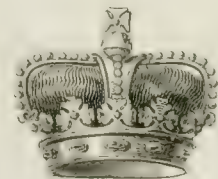
Grand Duke of Hesse



Poland



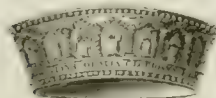
Grand Duke of Saxe-Weimar



Landgrave of Hesse



Imperial Crown worn by Napoleon Buonaparte



Italy



Doge of Venice



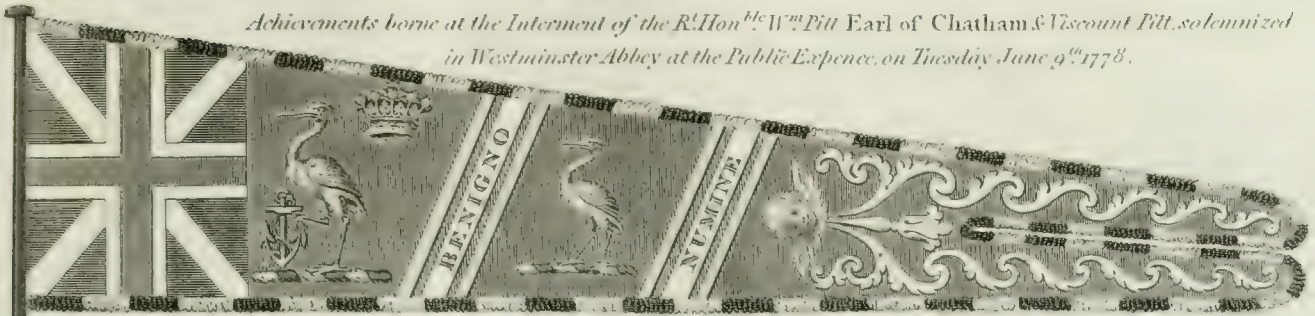
Grand Duke of Tuscany



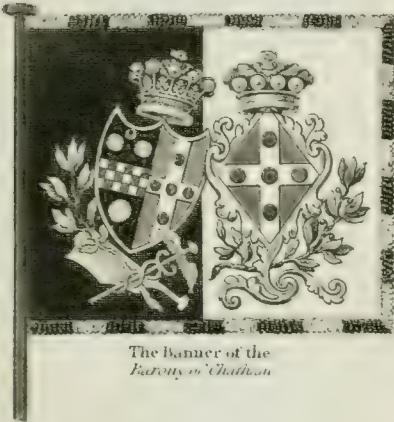
Lord Mayor of London



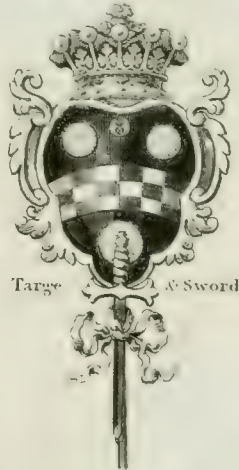
Achievements borne at the Interment of the Rth Hon^{ble} W^m Pitt Earl of Chatham & Viscount Pitt, solemnized in Westminster Abbey at the Public Expence, on Tuesday June 9th 1778.



The Standard



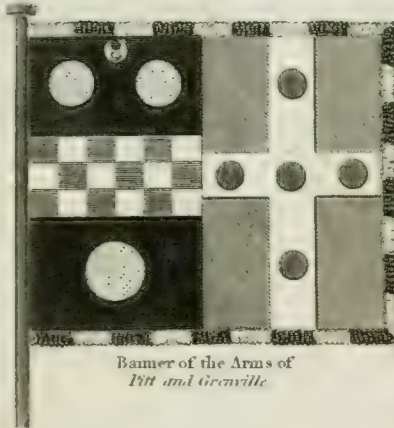
The Banner of the Parony of Chatham



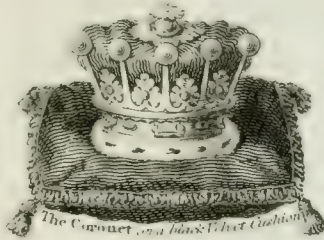
Targe & Sword



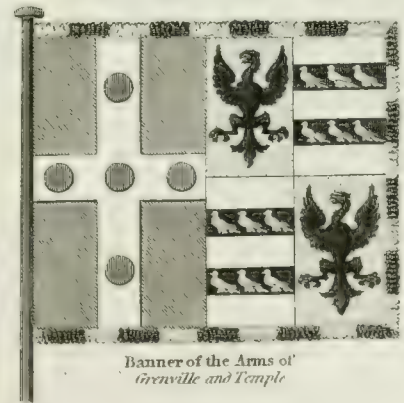
The Great Banner.



Banner of the Arms of Pitt and Grenville



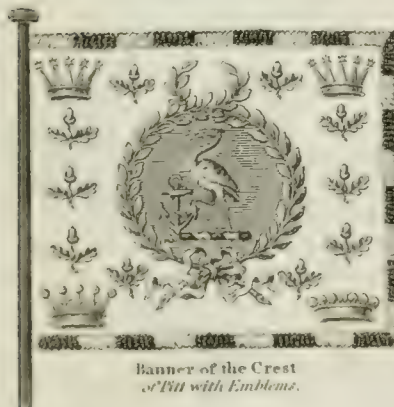
The Coronet and a pair of Silver Cushions



Banner of the Arms of Grenville and Temple



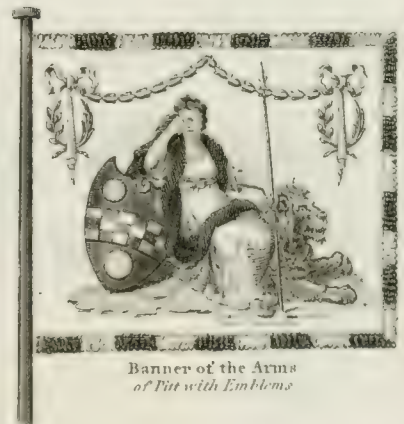
Helmet & Crest



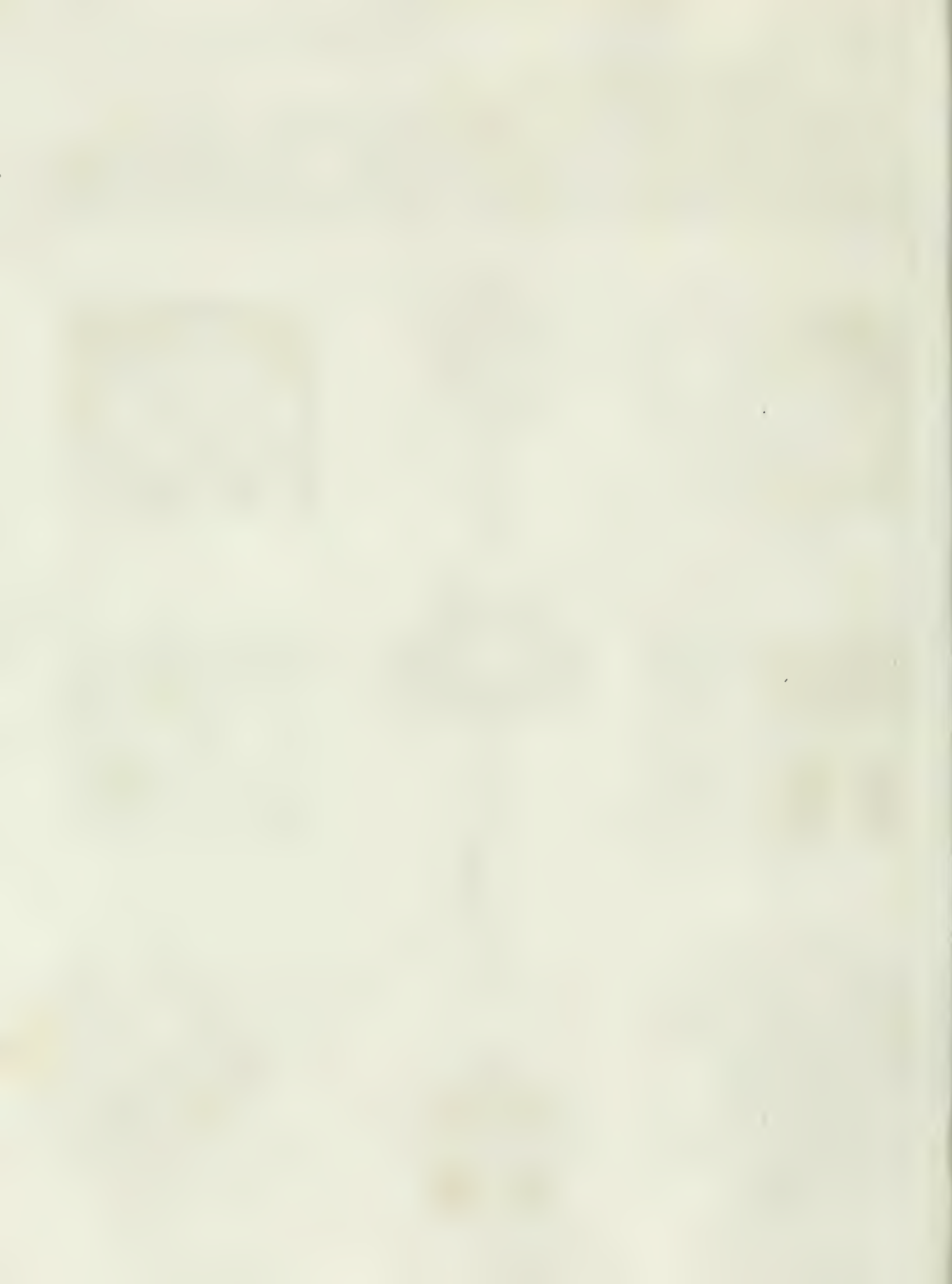
Banner of the Crest of Pitt with Emblems.



Surcoat



Banner of the Arms of Pitt with Emblems



Funeral

Achievements

Bachelor



Lamb

Peer



Earl of Warwick KG
Wife surviving

Spinster



Egerton

Husband



Beaumont & Evelyn
Wife surviving

Arch Bishop



Lord Eokeby
ARCH BISHOP of ARMAGH

Wife



Beaumont & Evelyn
Husband surviving

Husband & Wife



James & Ancho
both dead

Bishop



Harley
BISHOP of HEREFORD
& Vaughan his Wife surviving

Widow



Raper & Porter



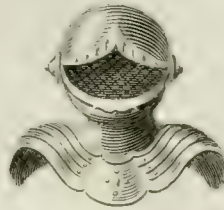
Heraldic Crowns Coronets and Helmets.



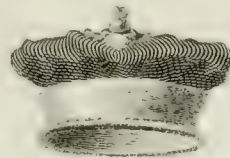
Nobility



King of Arms



Baronet & Knight



Ancient Barons Cap
worn previous to 1601.



Esquire



Helmet, Crest and Mantling or Lambrequin
of the
BRITISH SOVEREIGN.



Ducal



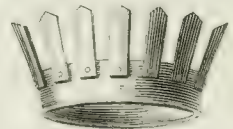
Mural



Naval



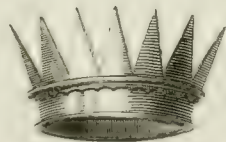
Vallarie



Palifado
or Castrenzial.



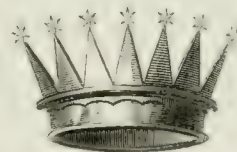
Circlet



Eaters



Chapeau
or Cap of Maintenance.



Celestial



Chaplet
or Garland



Wreath



Laureate



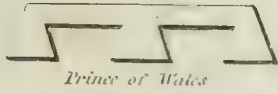
Obdional



Olive



Trigonal



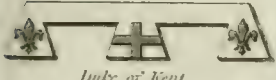
Prince of Wales



Duke of York



Duke of Clarence



Duke of Kent



Duke of Cumberland



Duke of Sussex



Duke of Cambridge

DISTINCTIONS OF HOUSES

FIRST HOUSE					
First Son	Second Son	Third Son	Fourth Son	Fifth Son	Sixth Son
SECOND HOUSE					
THIRD HOUSE					
FOURTH HOUSE					
FIFTH HOUSE					
SIXTH HOUSE					



Duke of Gloucester



Princess Royal
Charlotte Augusta Matilda



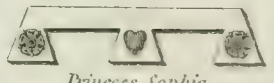
Princess Augusta Sophia



Princess Elizabeth



Princess Mary



Princess Sophia



Princess Amelia



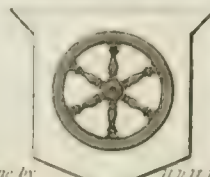
Princess Sophia Matilda of Hanover

FIRST HOUSE CONTINUED

Seventh Son	Eighth Son	Ninth Son



Badge of Barons
of England & Ireland.



Badge borne by
H.R.H. Duke of York
as Bishop of Osnaburgh.



Badge of Barons
of Nova Scotia.

ANCIENT CLEPSYDRE.

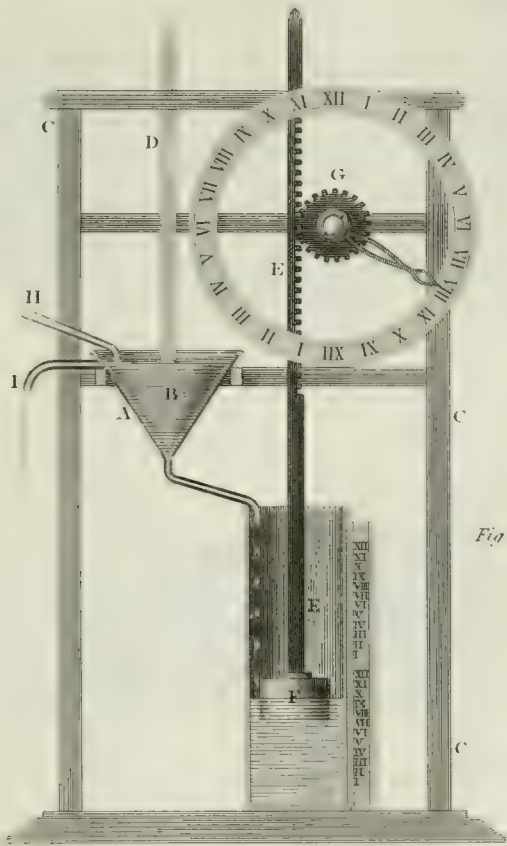


Fig 1.

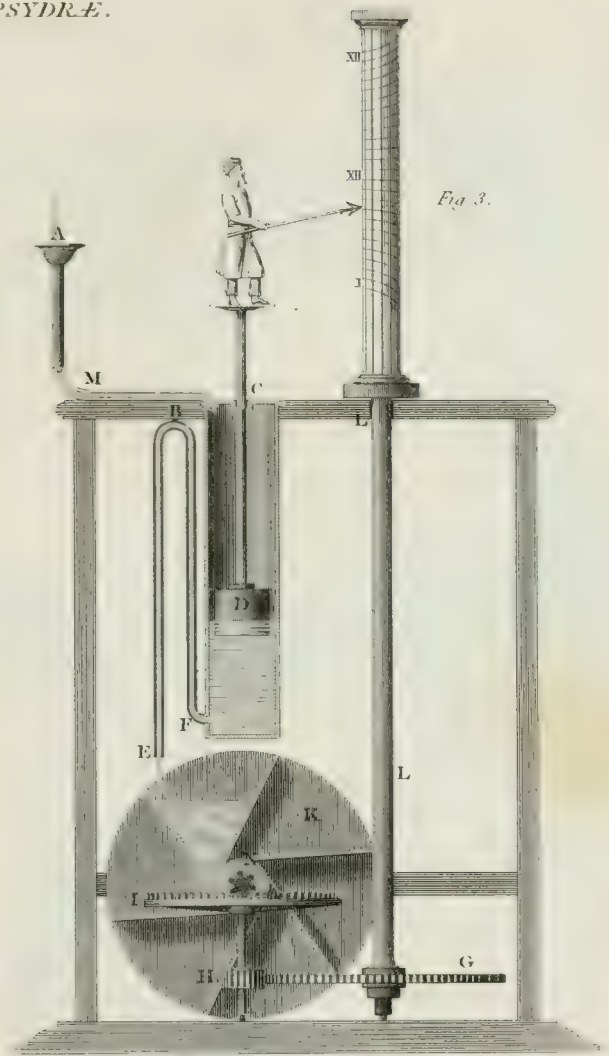


Fig 3.

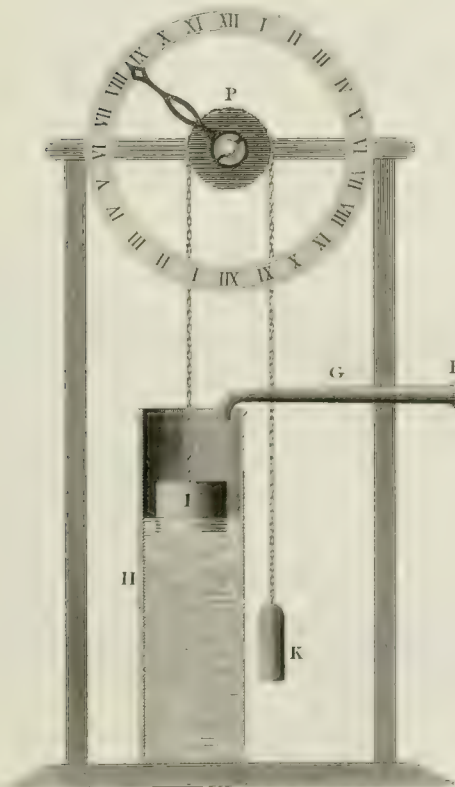
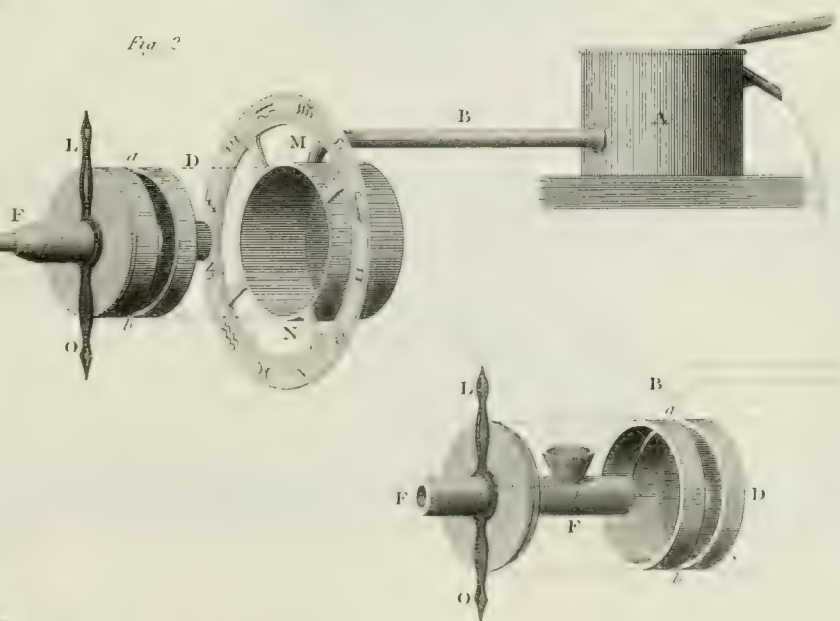
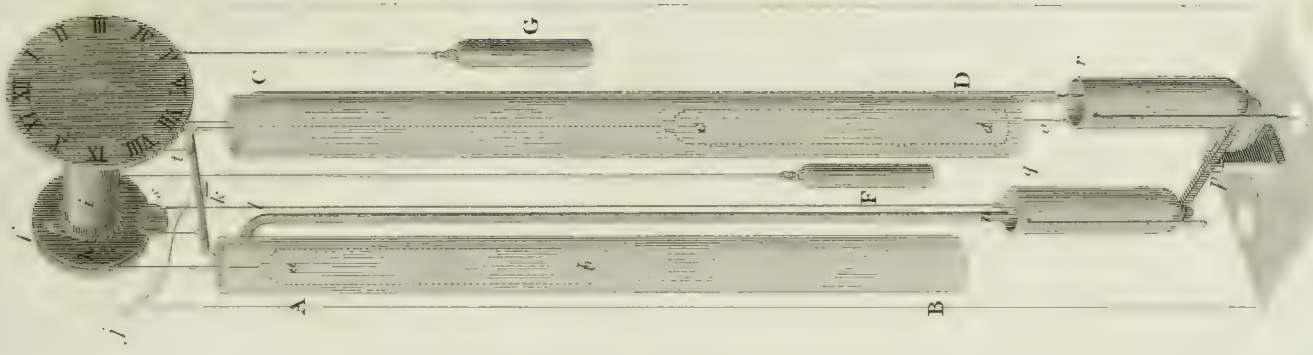
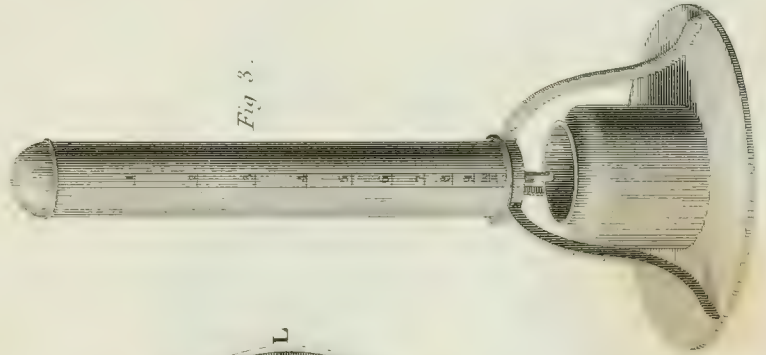
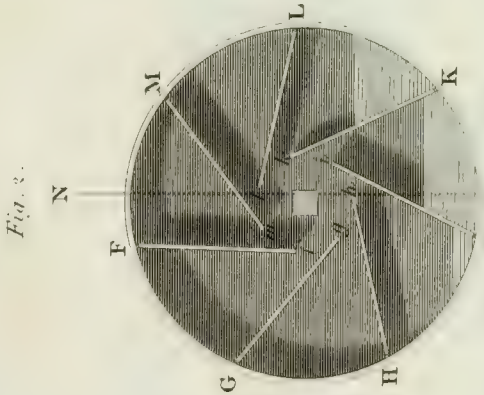
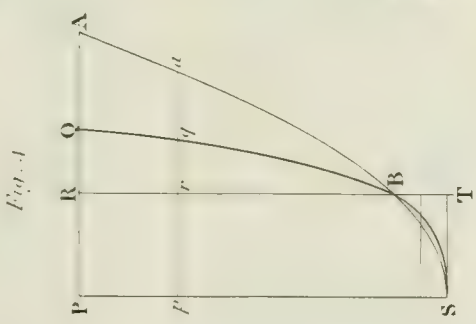
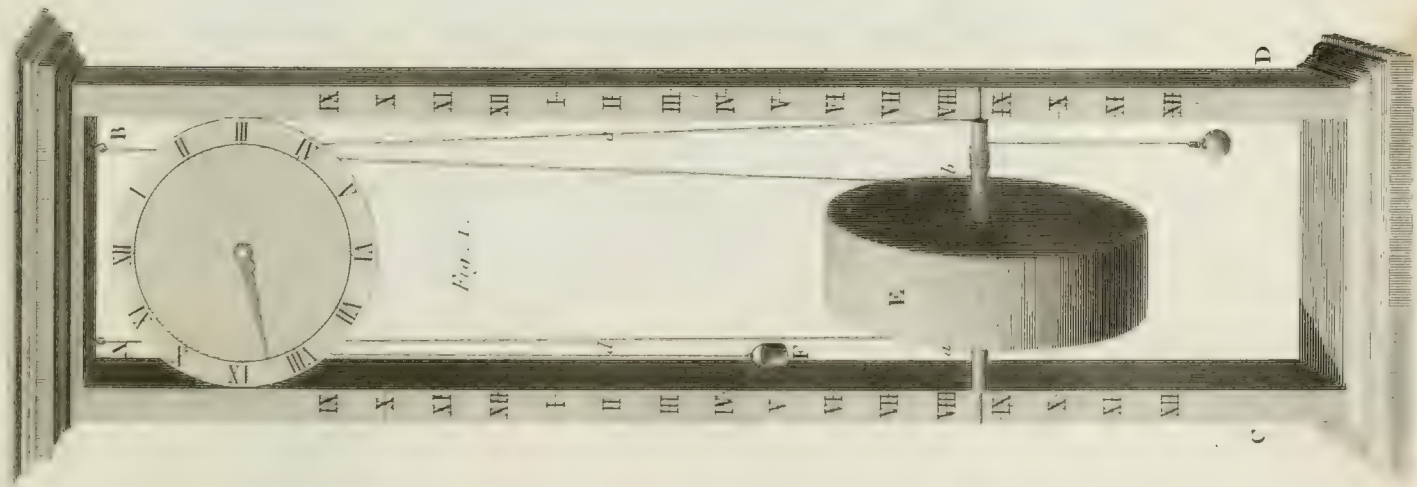


Fig 2



HYDROLOGY.
MODERN CLEPSYDRAE.



CLOCK-MOVEMENT.

Fig. 7

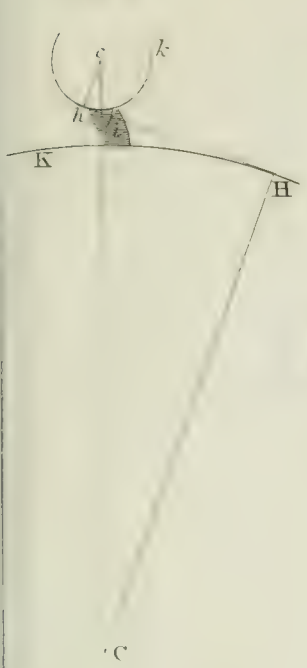


Fig. 1

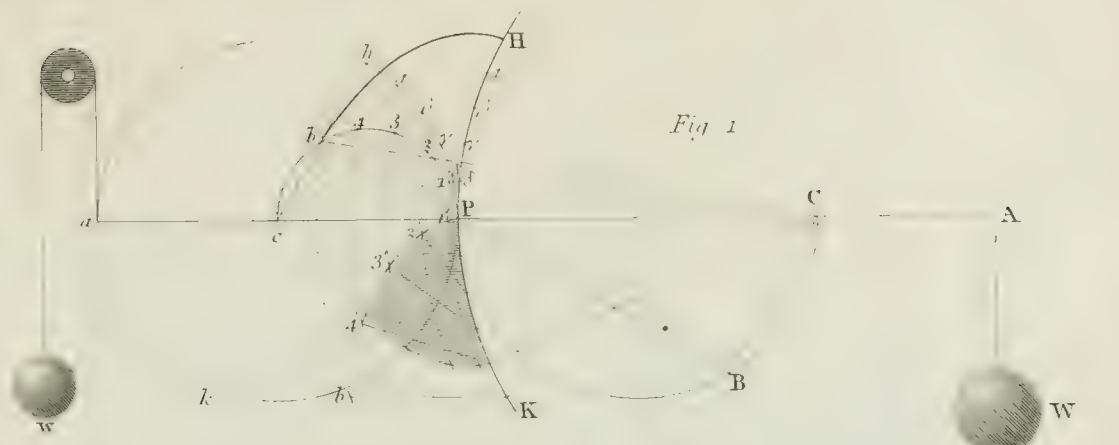


Fig. 2

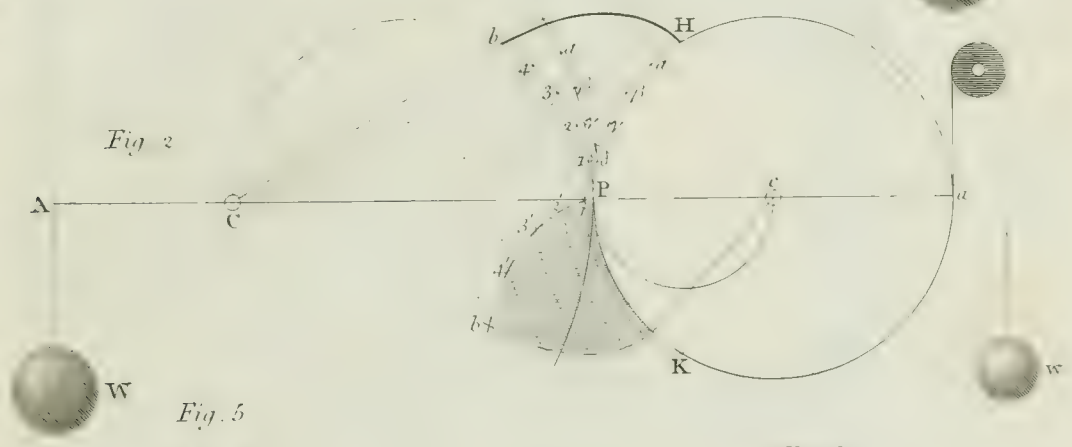


Fig. 5

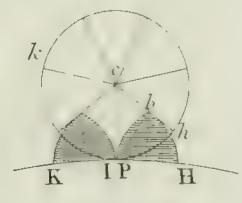


Fig. 3

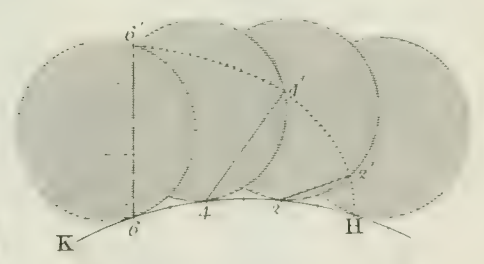


Fig. 4

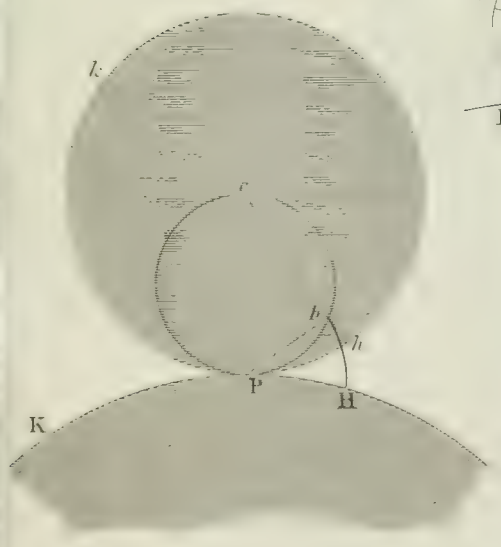
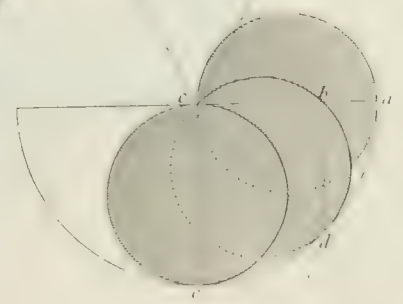
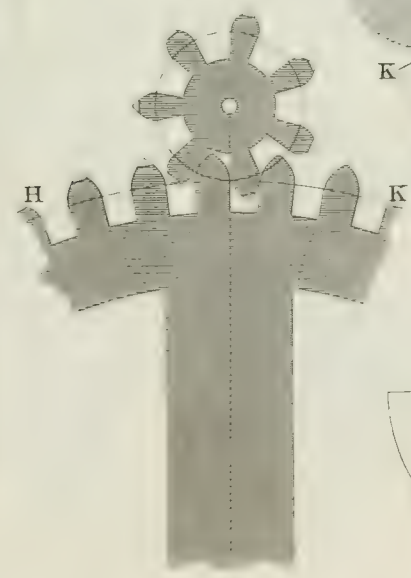


Fig. 6



*Chime Work in the Clock Room
of St. Maryard's Church, Westminster;*

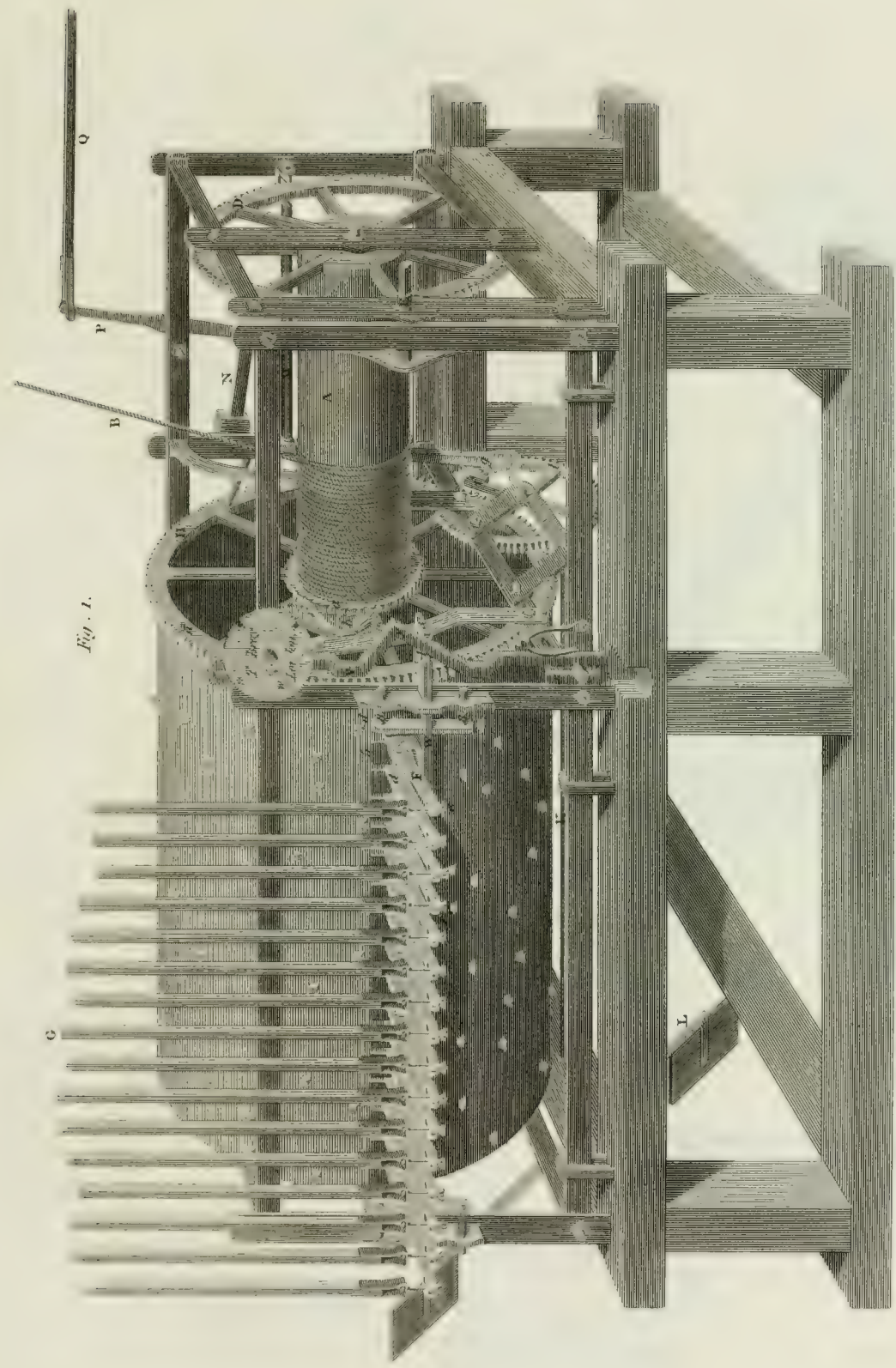


Fig. 1.



Fig. 2.

*Chime Work in the Clock-Room
of St. Margaret's Church, Westminster.*

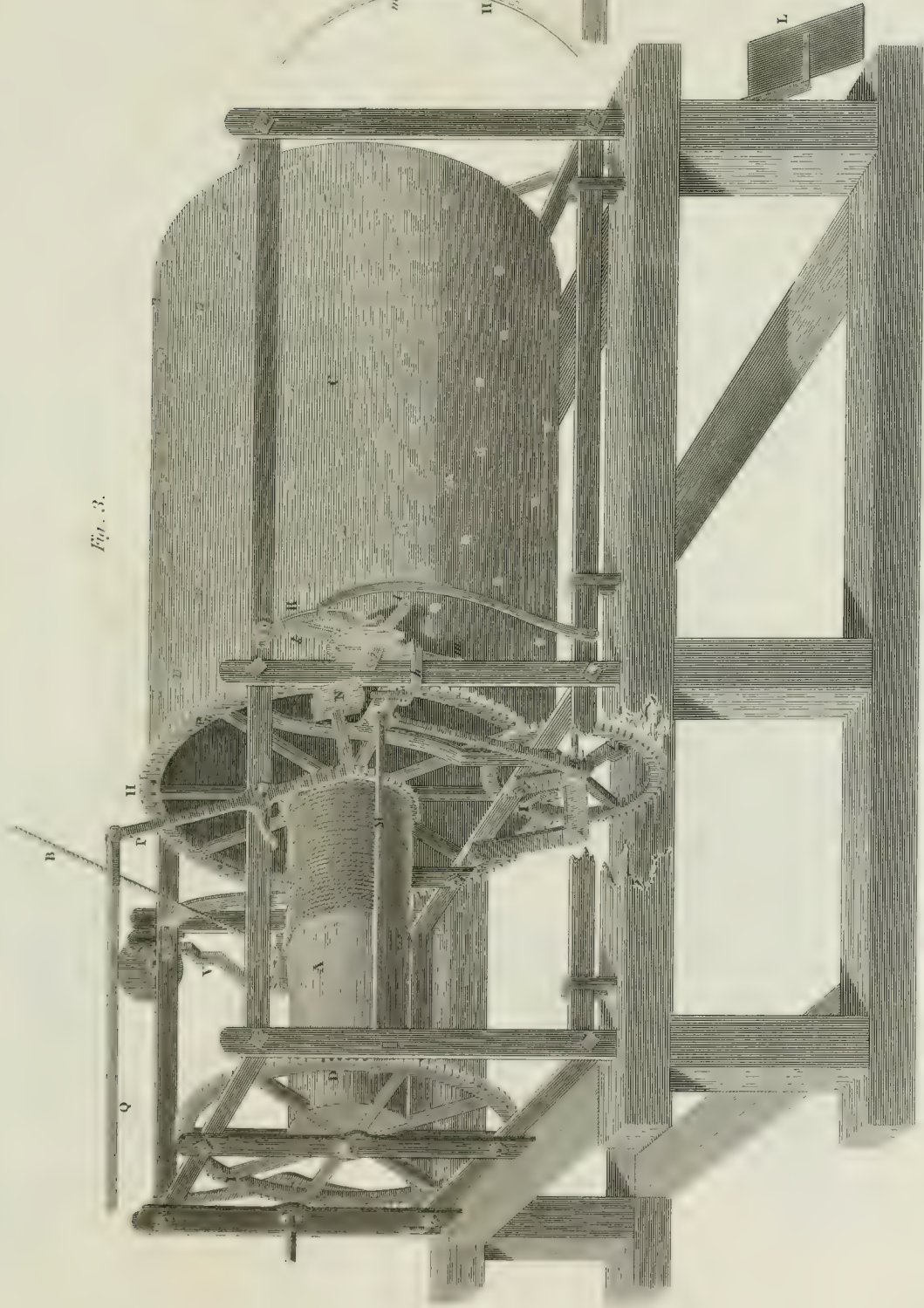


Fig. 3.

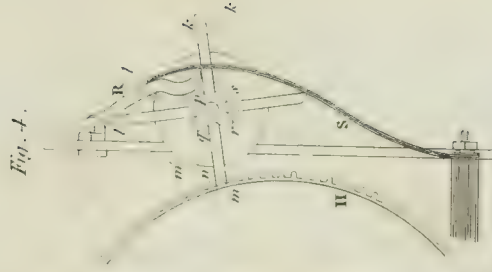


Fig. 4.

HOROLOGY.

CHIMES.

Pleyel's German Hymn.

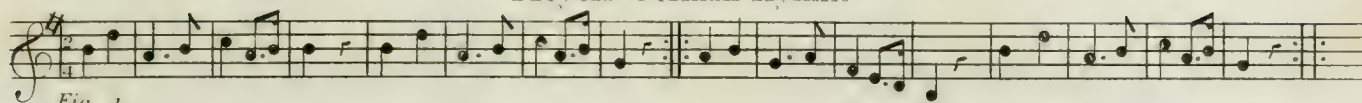


Fig. 1.

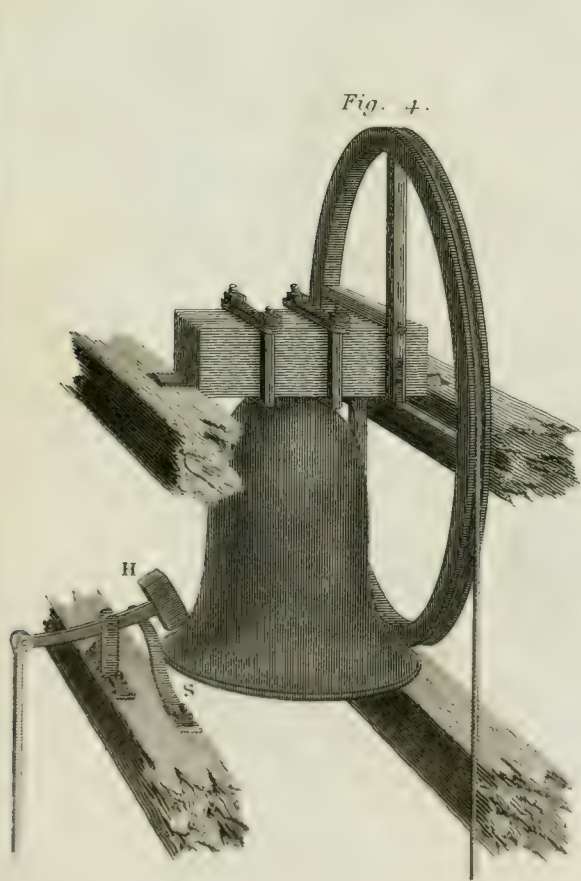
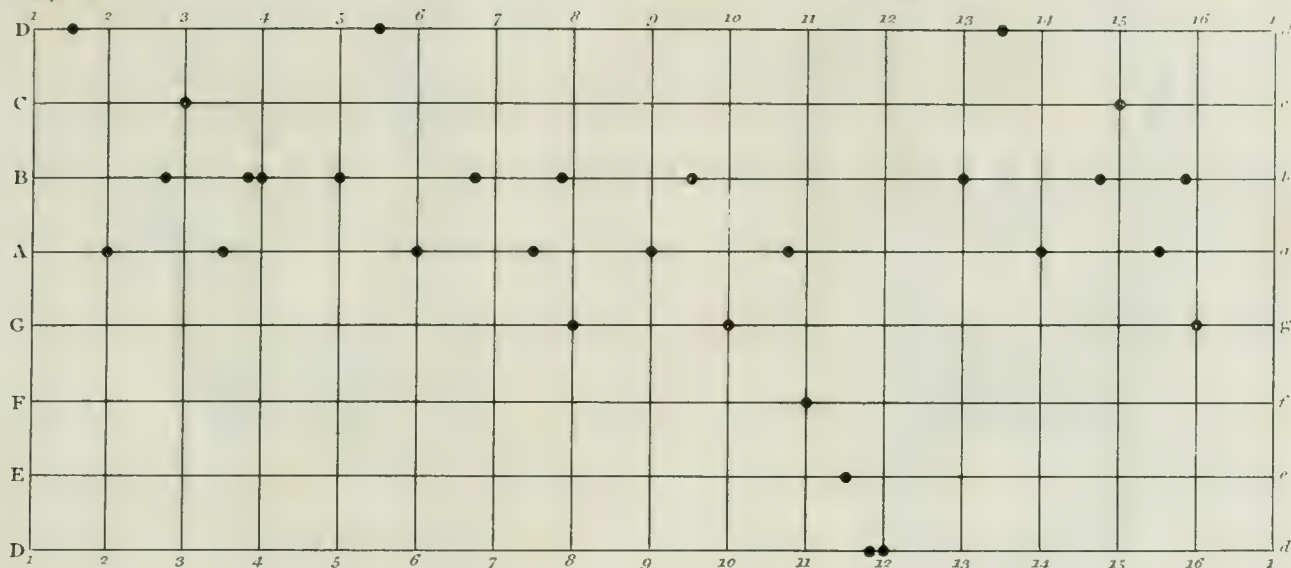


Fig. 4.

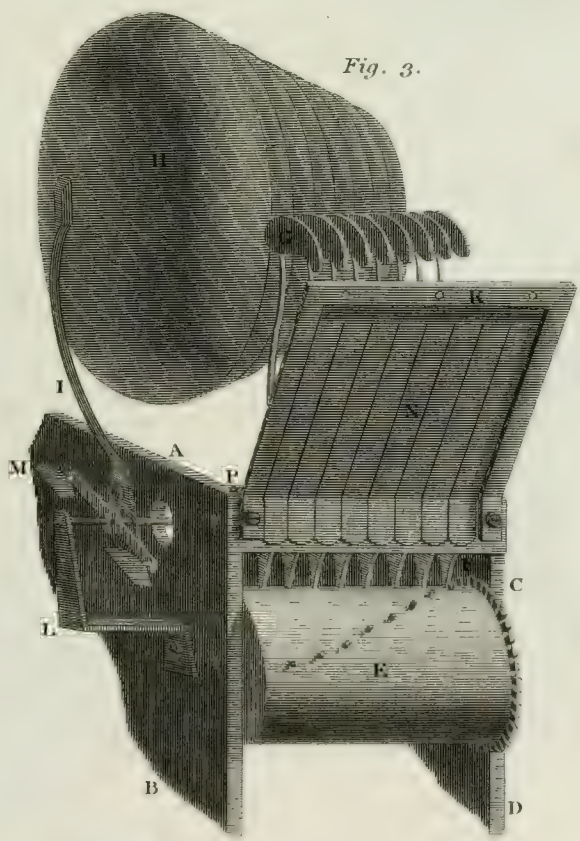


Fig. 3.

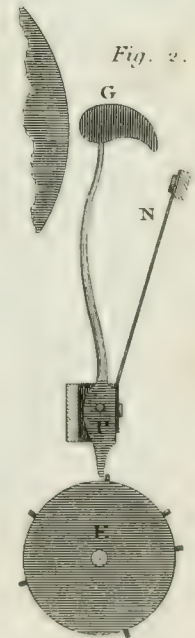


Fig. 2.

ANCIENT CLOCK BY HENRY DE WICK, IN 1370.

Fig. 1.

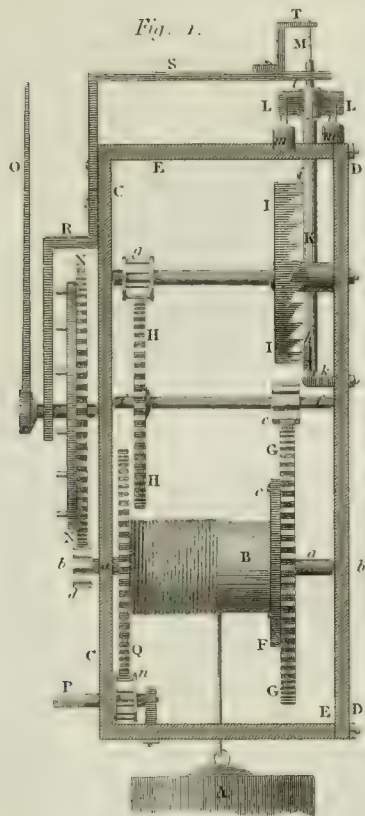


Fig. 3.

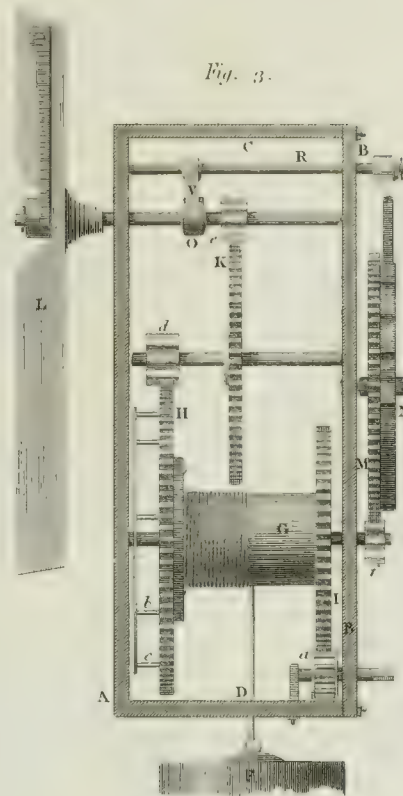


Fig. 2.

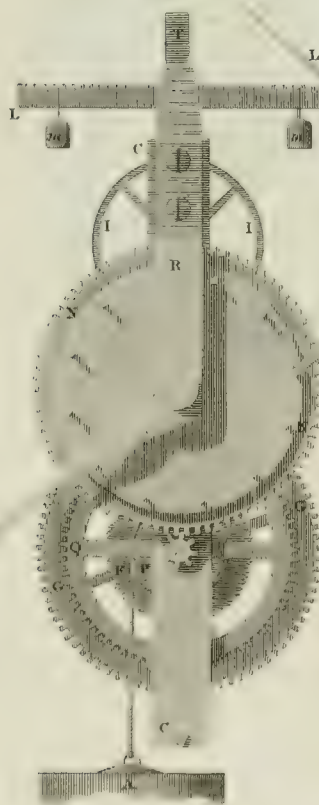


Fig. 4.

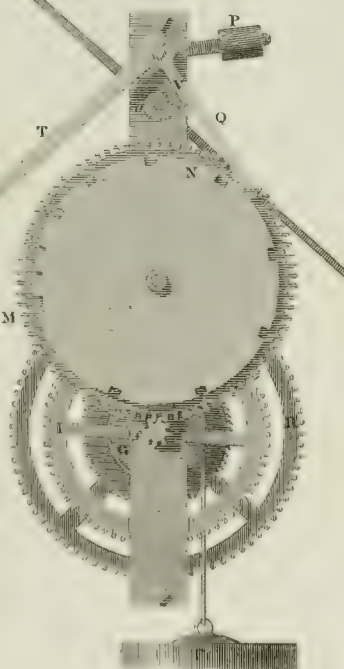
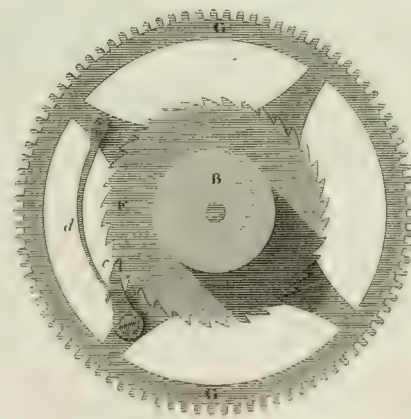


Fig. 5.



A Thirty hours Clock with "Alarm and Count Wheel Striking" Work.

Fig. 1.

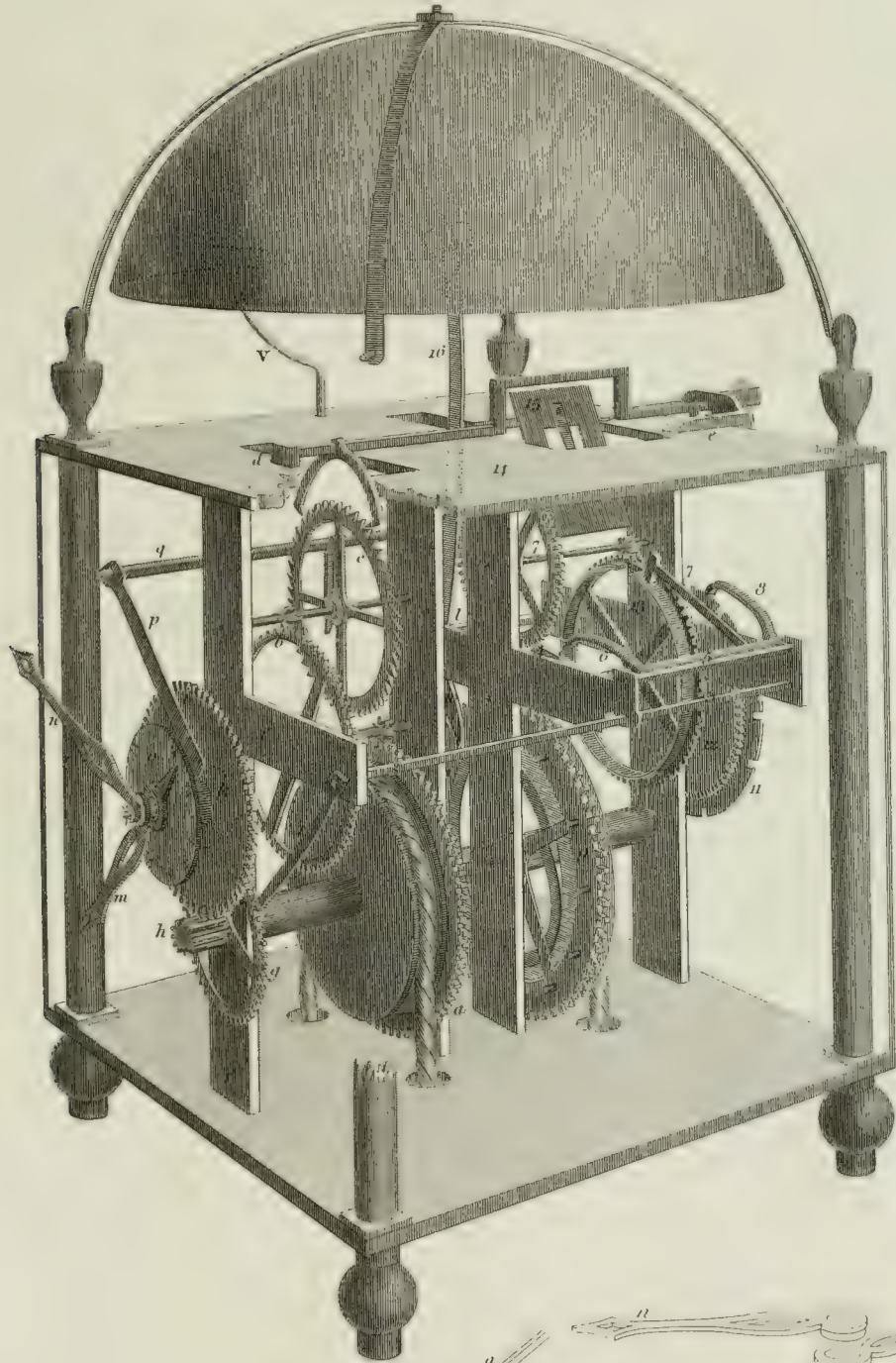


Fig. 3.

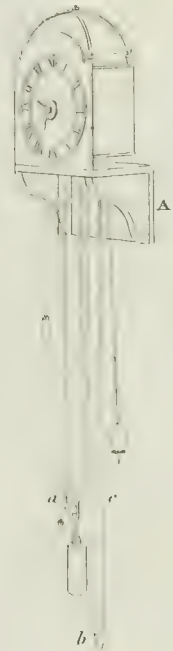
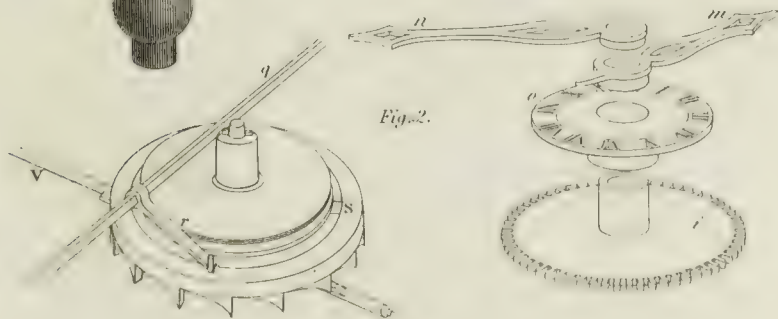


Fig. 2.



CALLIPERING.

(ART. CLOCK)

Fig. 1.

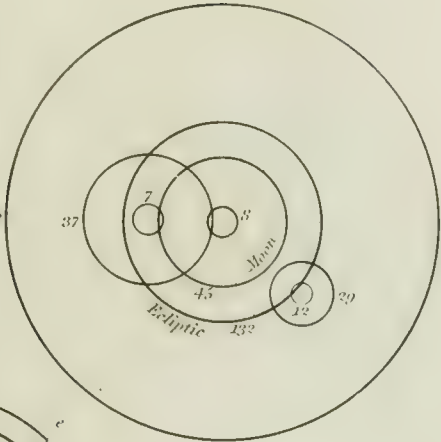


Fig. 2.

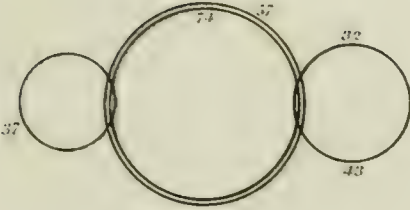
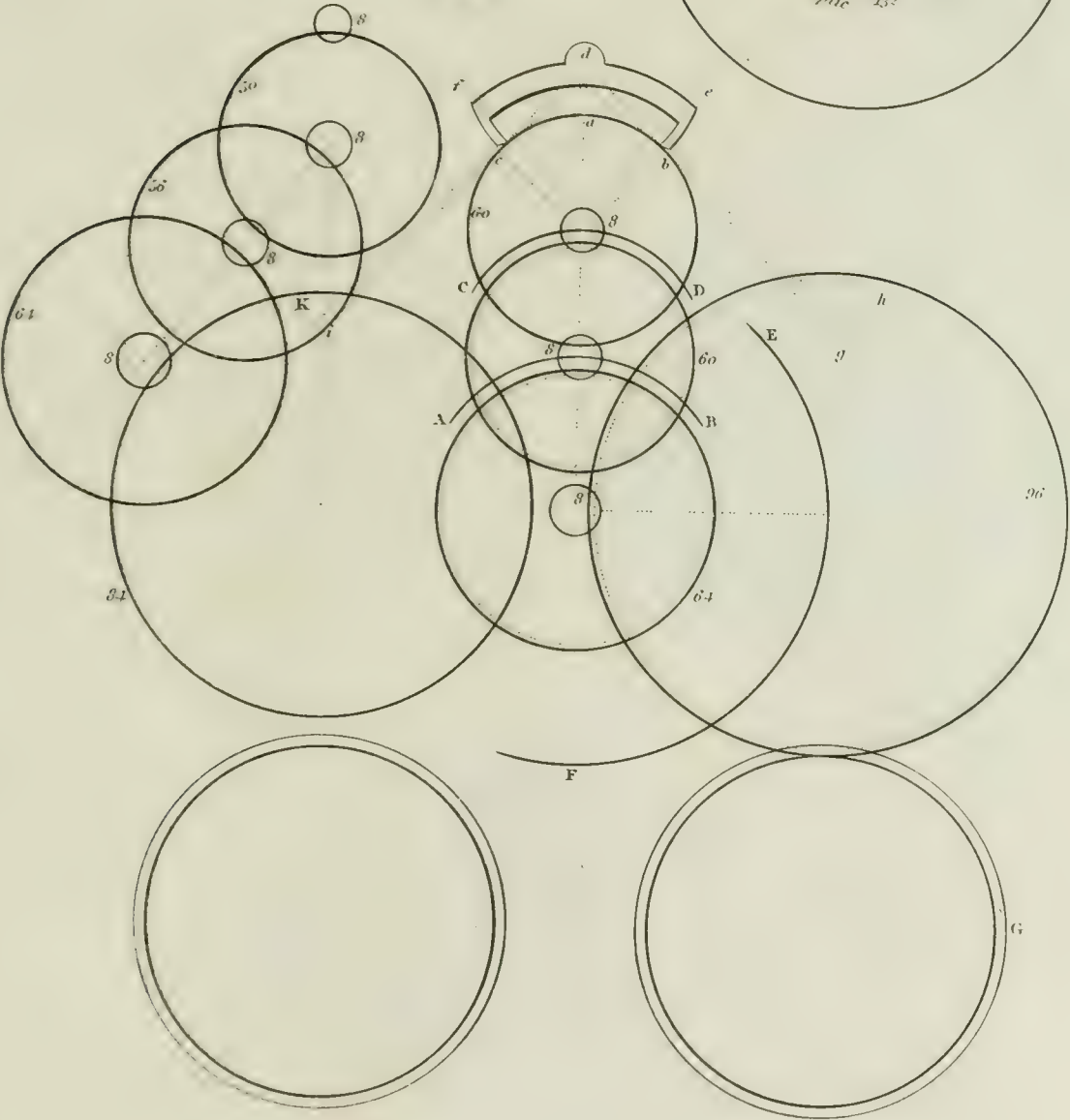
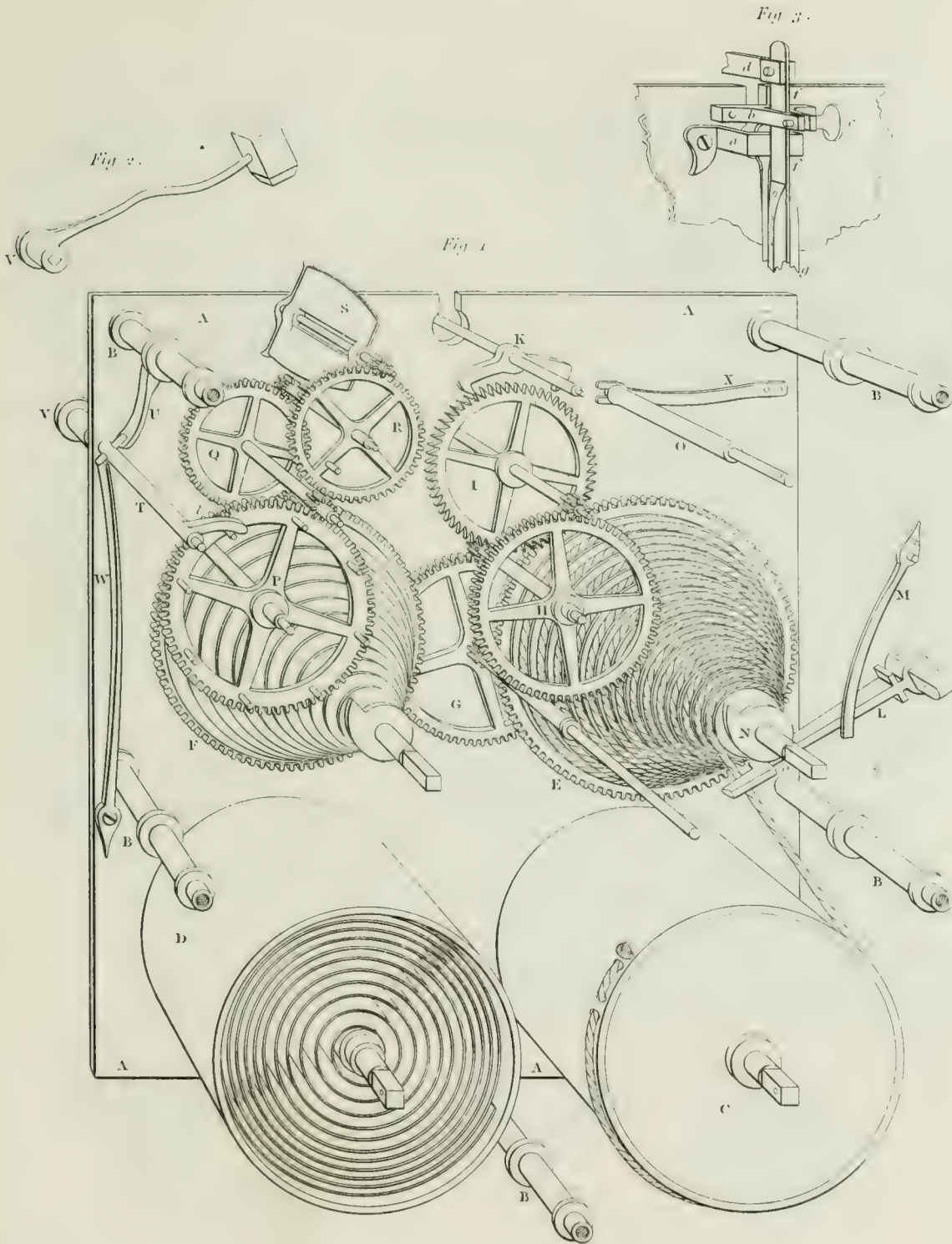


Fig. 3.



HOROLOGY.
Portable eight days Clock.



HOROLOGY.

DIAL WORK AND STRIKING PART OF AN EIGHT DAYS CLOCK.

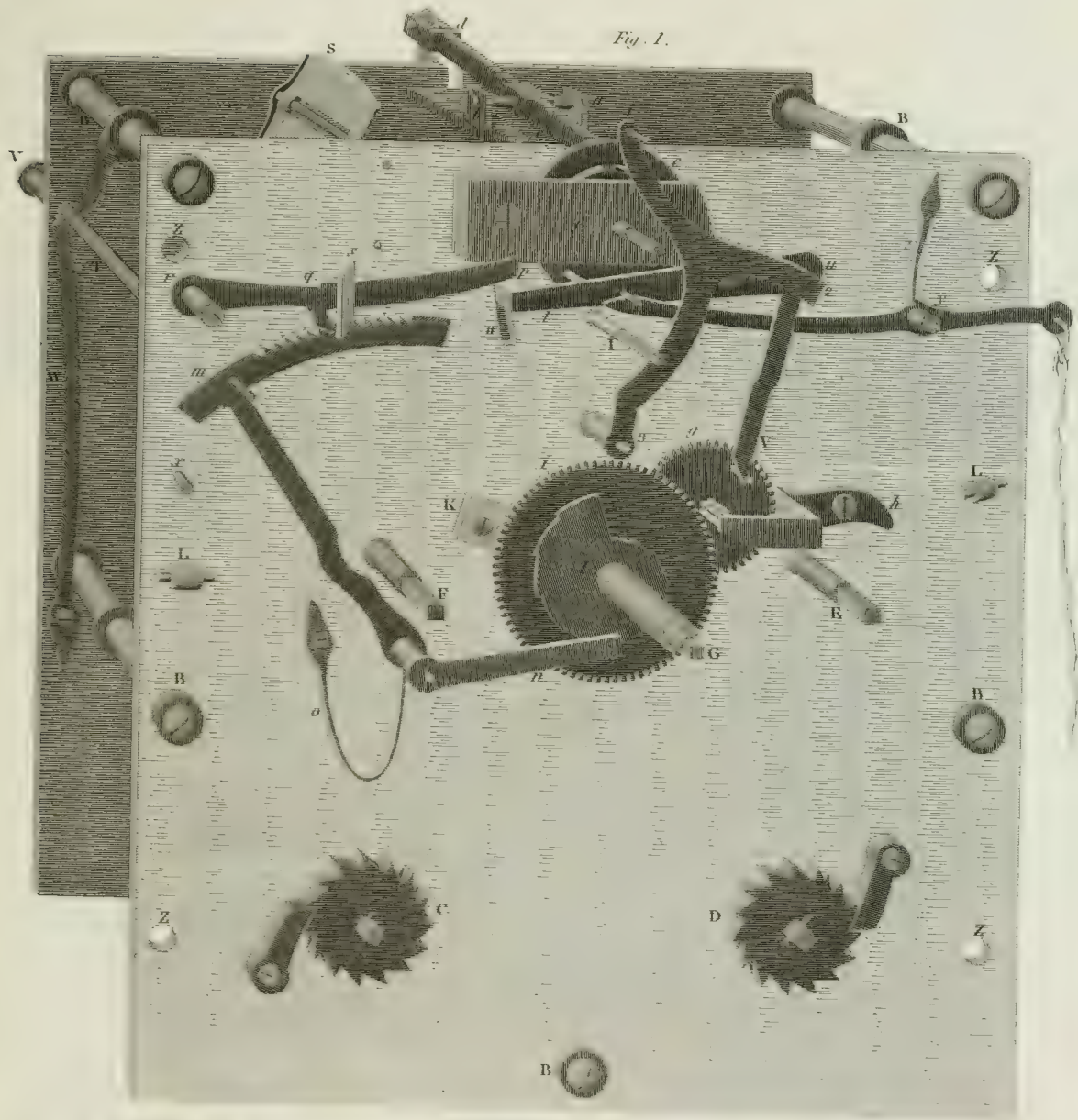


Fig. 1.

Fig. 2.



Fig. 3.

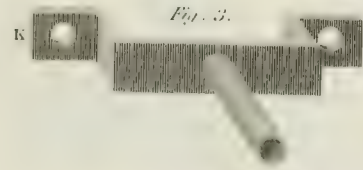
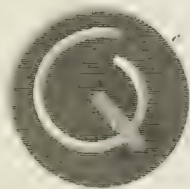


Fig. 4.



M^r Mudge's TIME KEEPER.

Fig 3.



Fig 2.

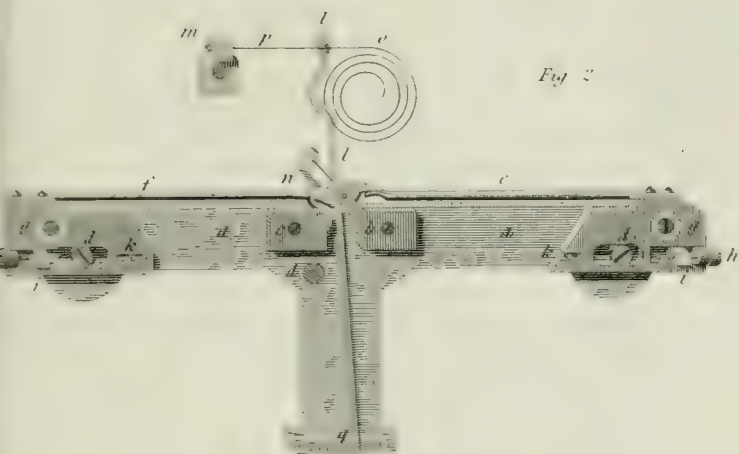


Fig 1.



Fig 5.

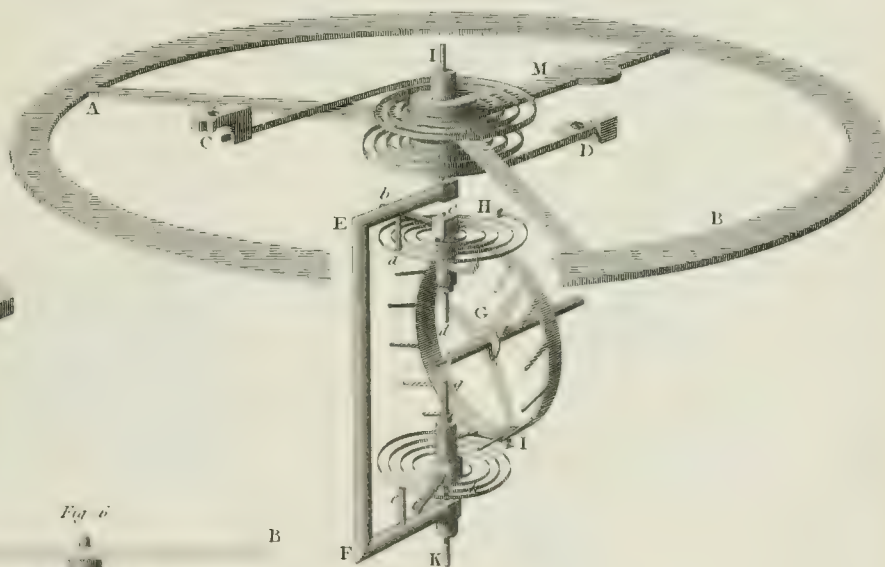


Fig 4.

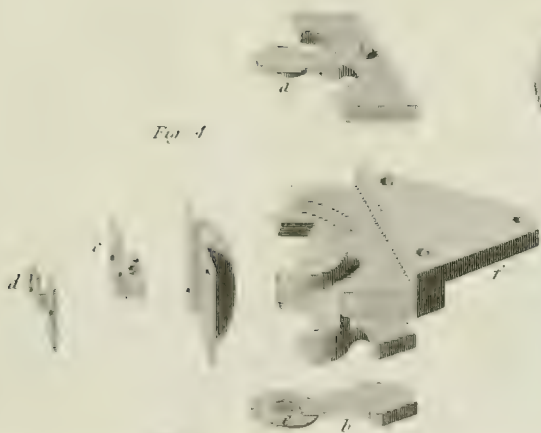


Fig 7.

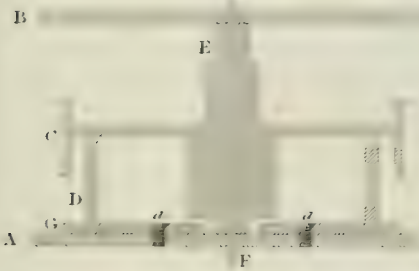
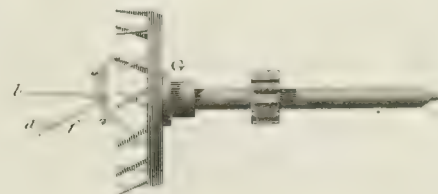
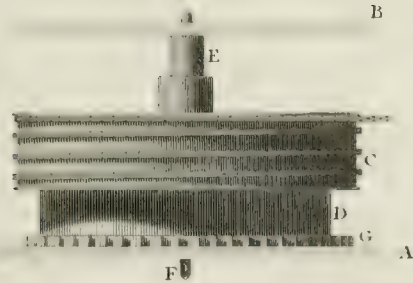


Fig 6.



ARNOLD'S AND EARNSILAW'S CHRONOMETERS.

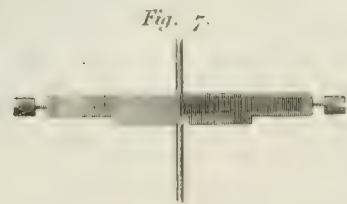
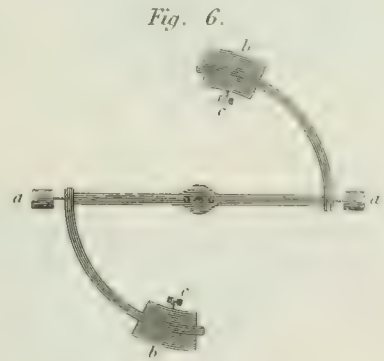
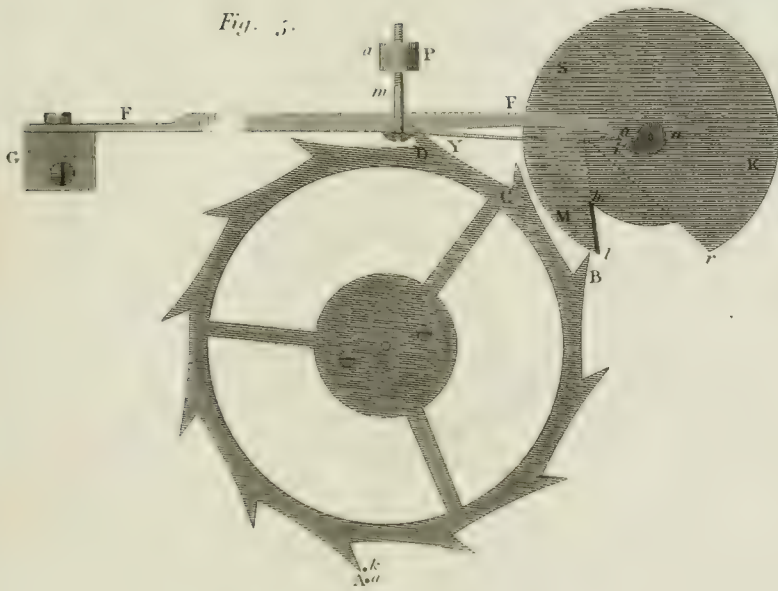
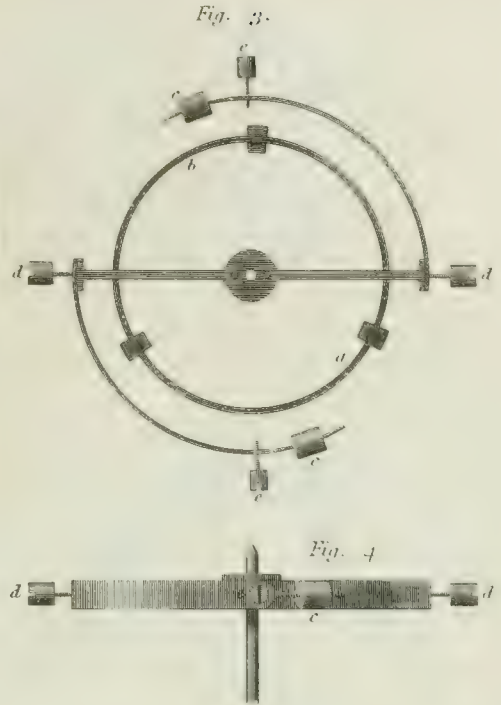
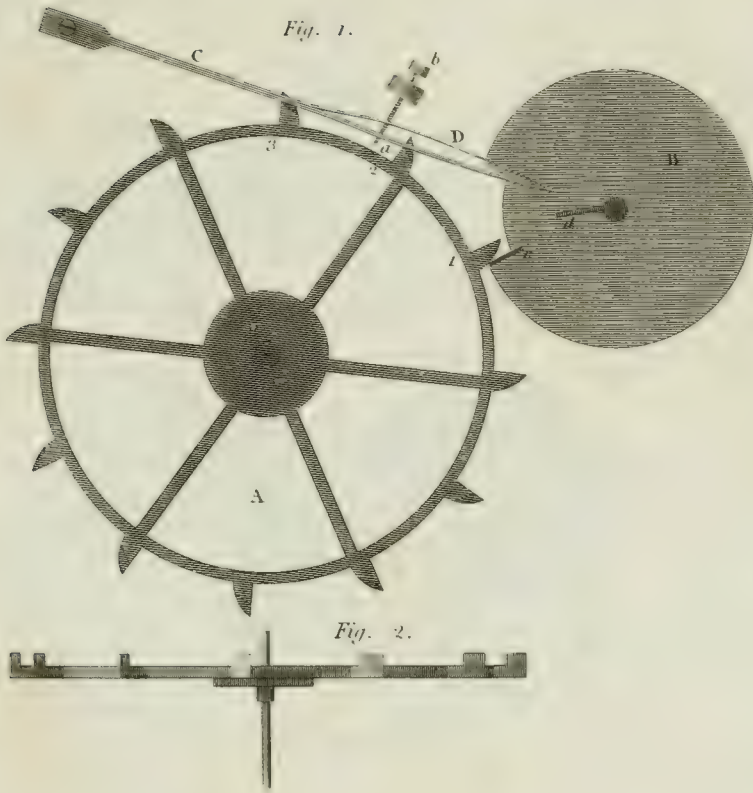


Fig. 1.

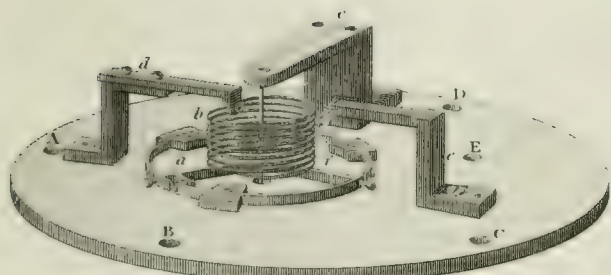


Fig. 3.

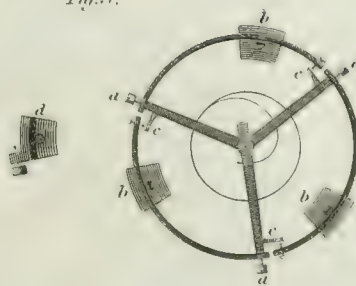


Fig. 2.

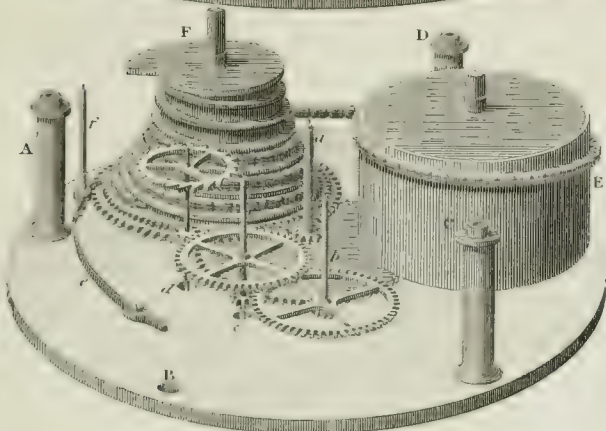


Fig. 4.

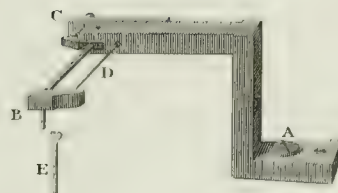


Fig. 7.

Fig. 8.

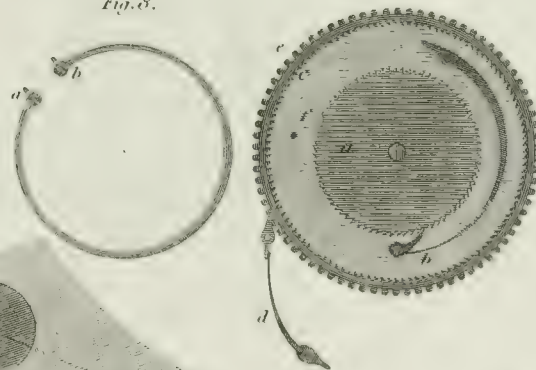


Fig. 6.

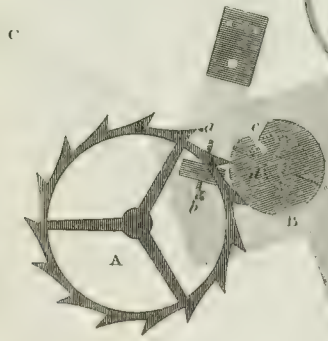
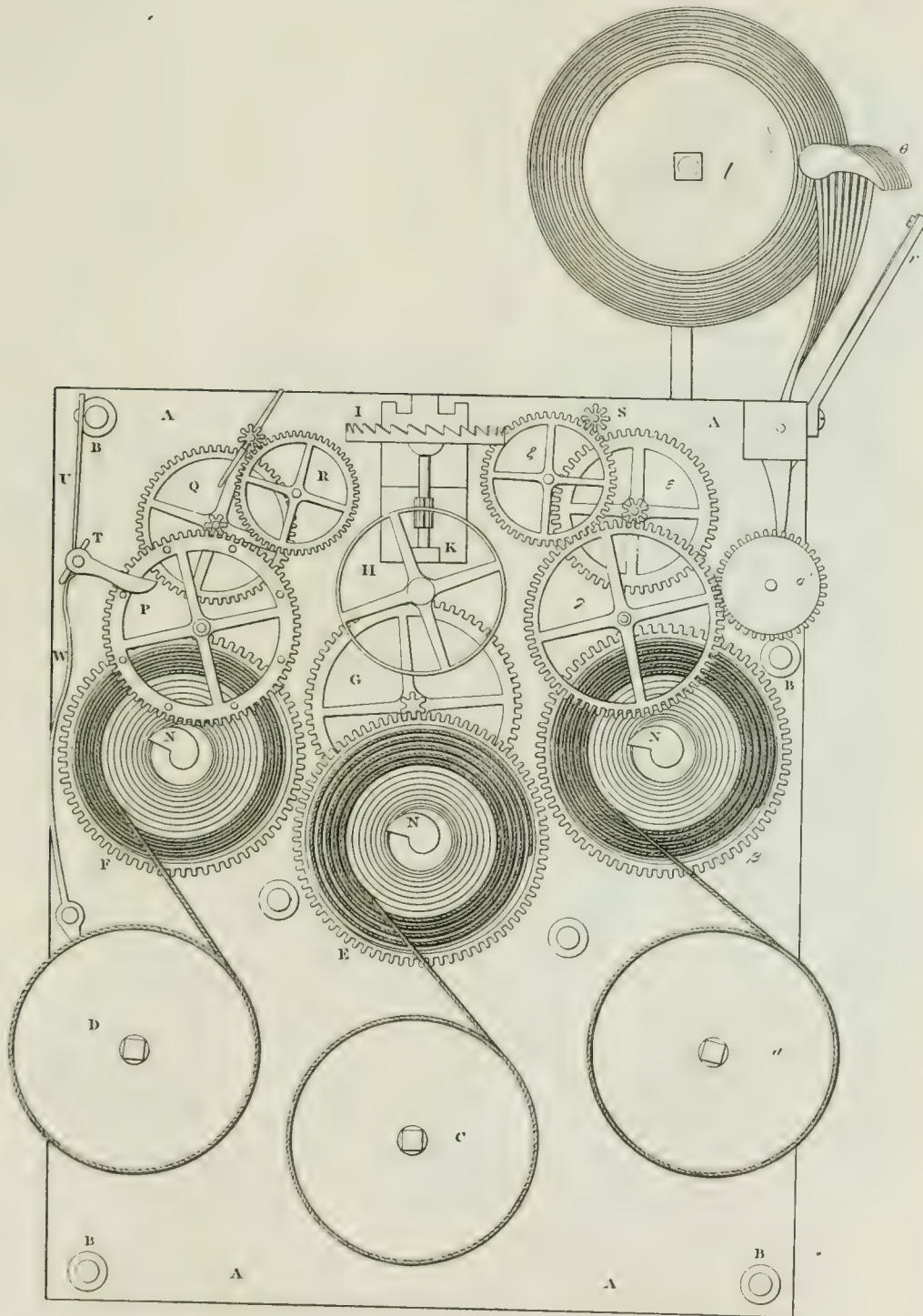


Fig. 5.



CLOCK WITH CHIMES.

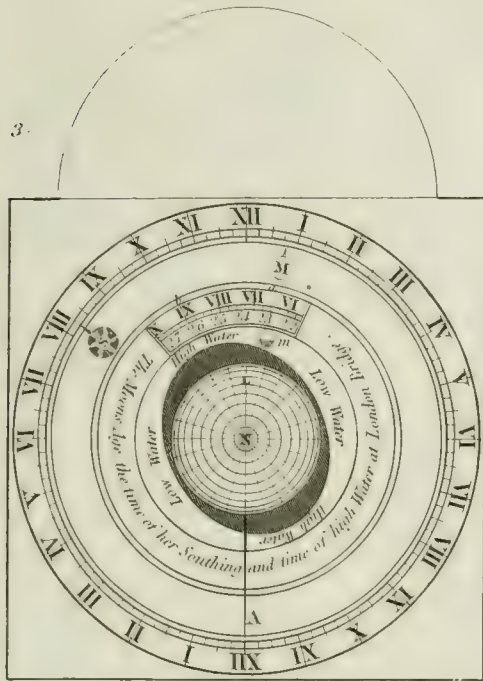


CLOCK WITH CHIMES.



2nd Clock by M^r Ferguson

Fig. 3.



Clock by D^r Franklin

Fig. 1.

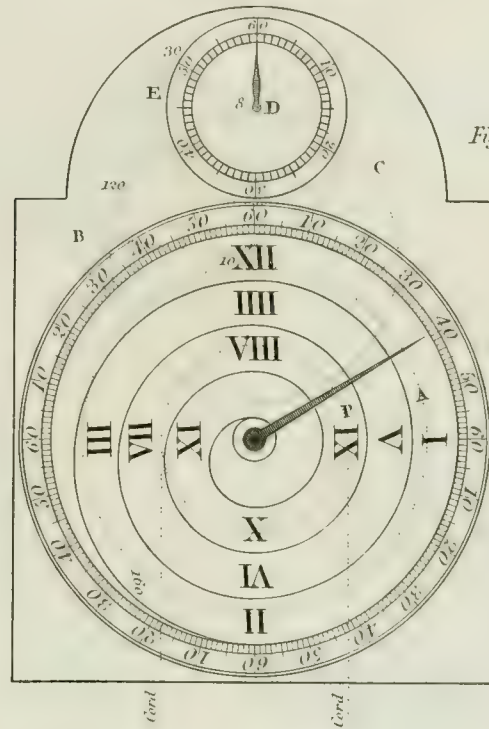


Fig. 4.

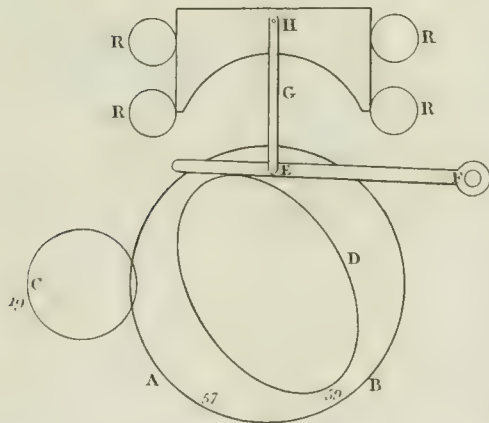
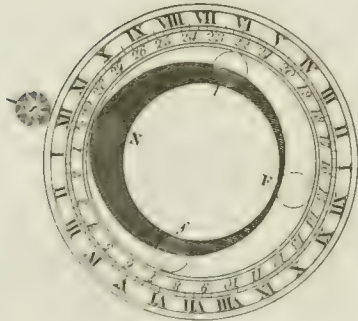
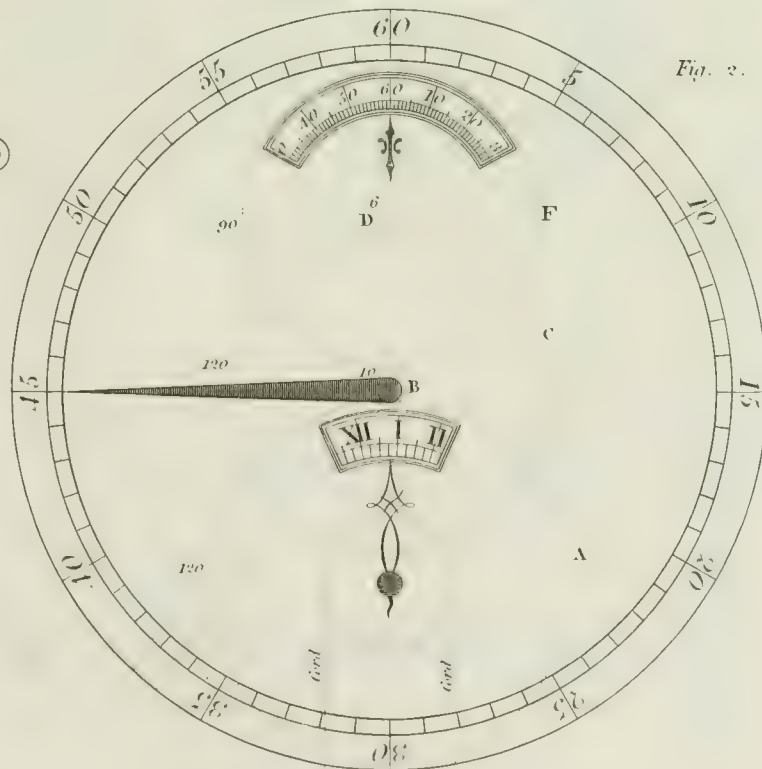


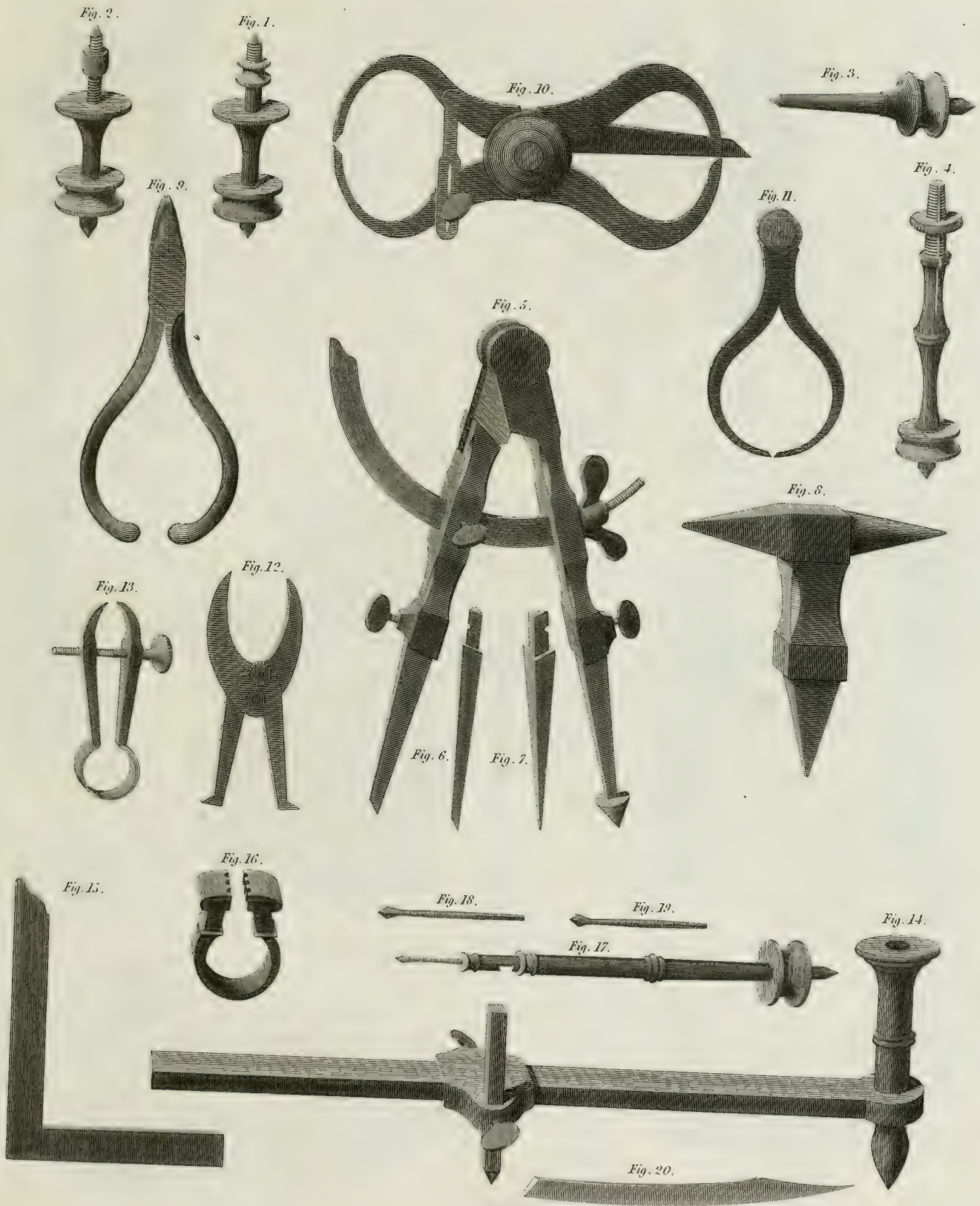
Fig. 5.



Clock by M^r J. Ferguson

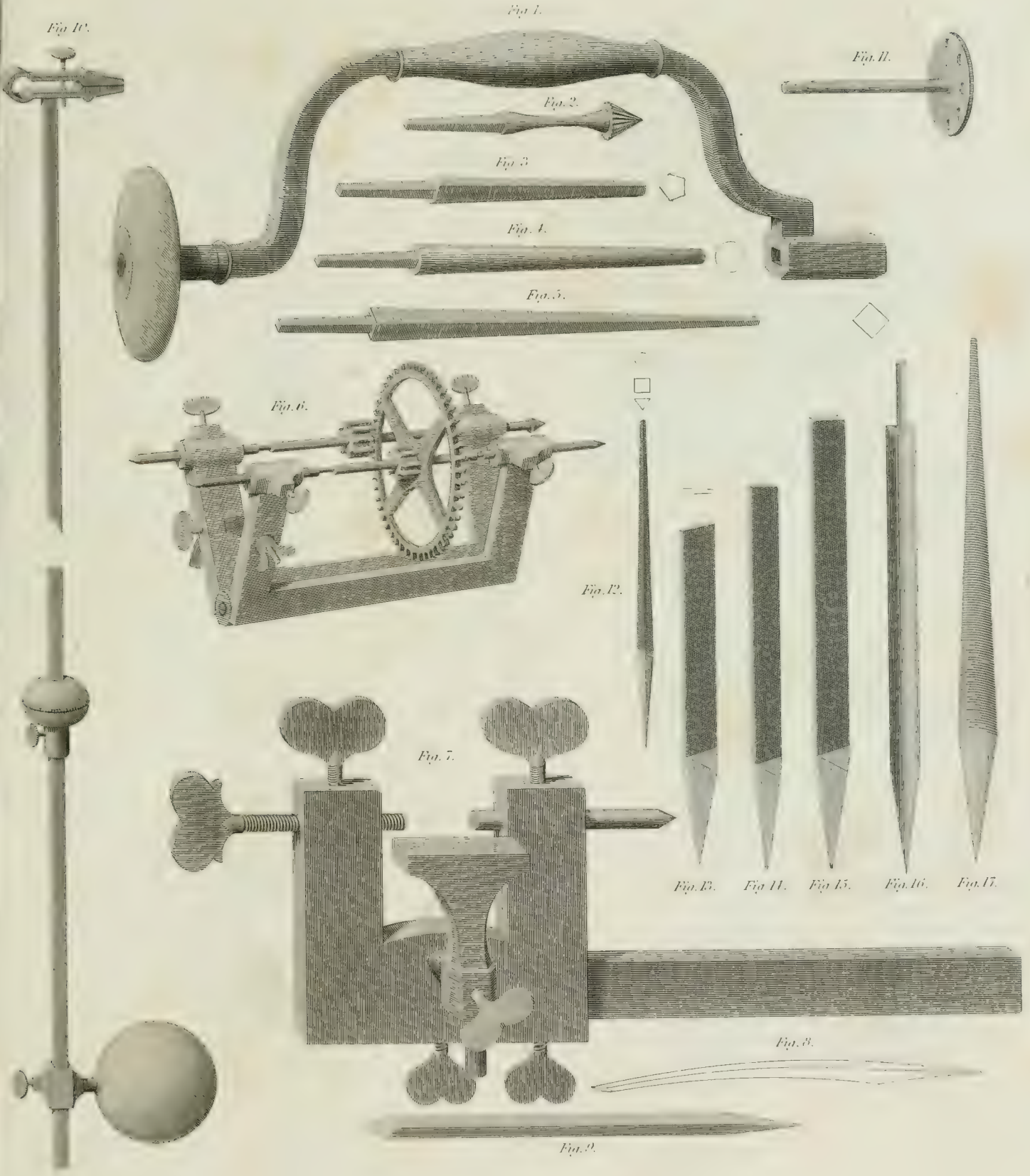
Fig. 2.



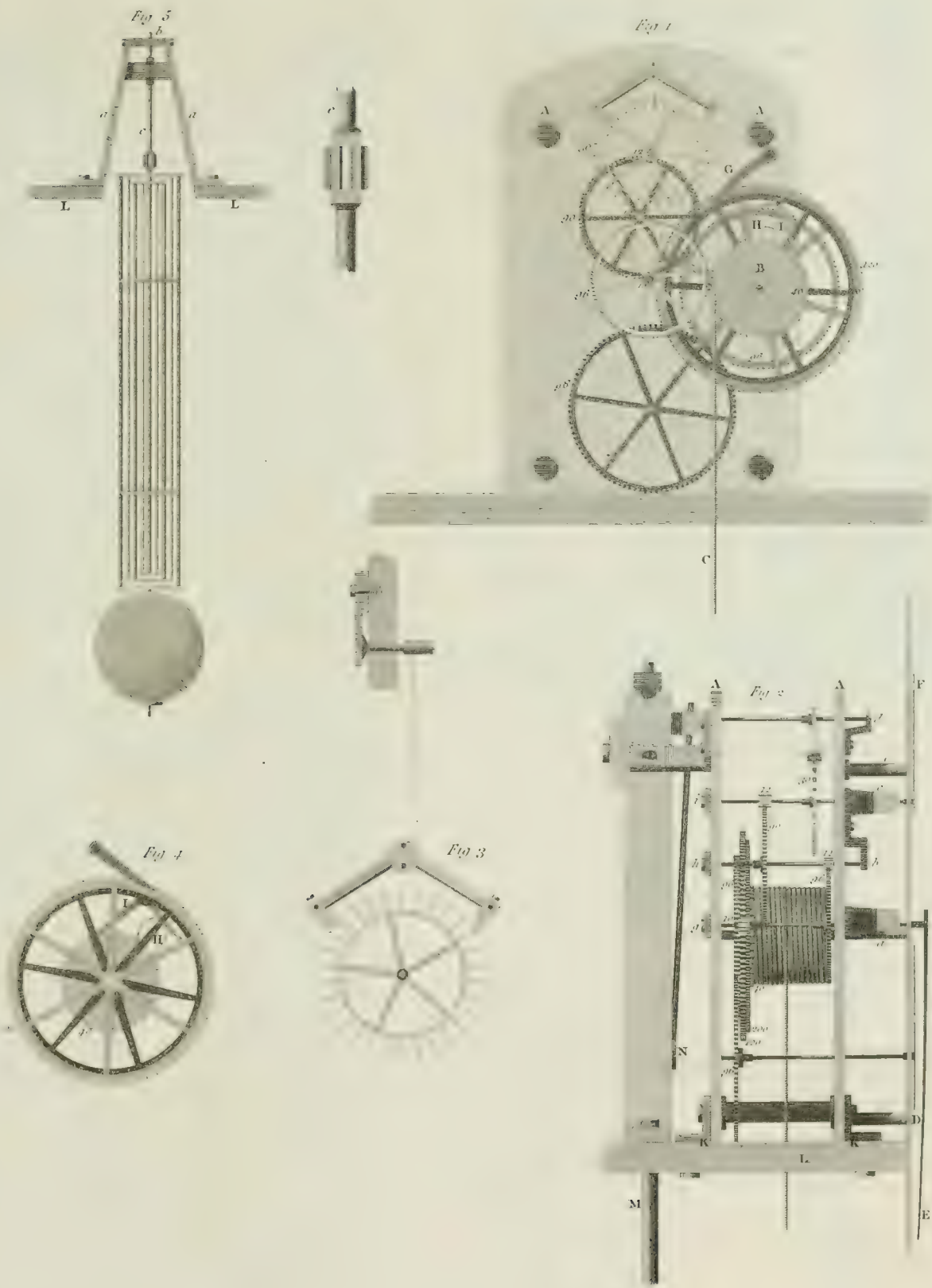




HOROLOG Y.
CLOCK TOOLS.



Astronomical Clock by REID.



Astronomical Clock by Mefs^rs Brockbanks.

Fig. 1.

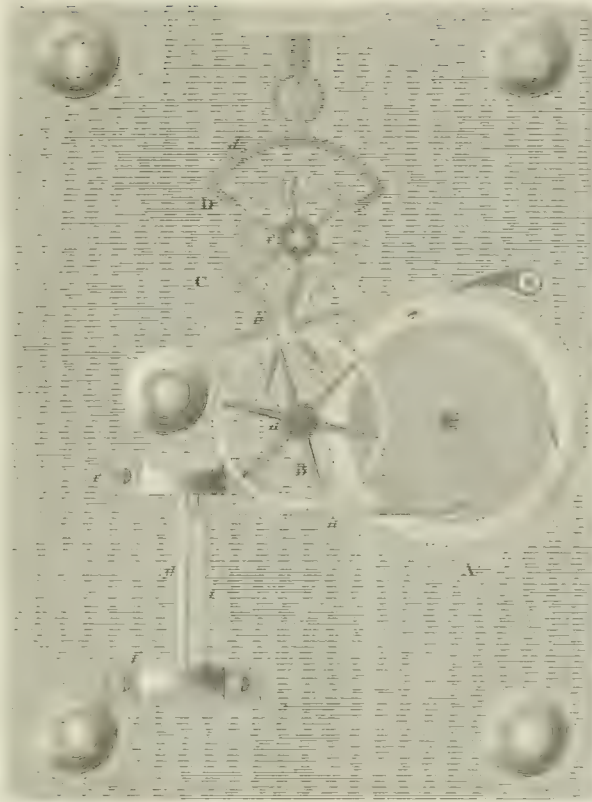


Fig. 3.

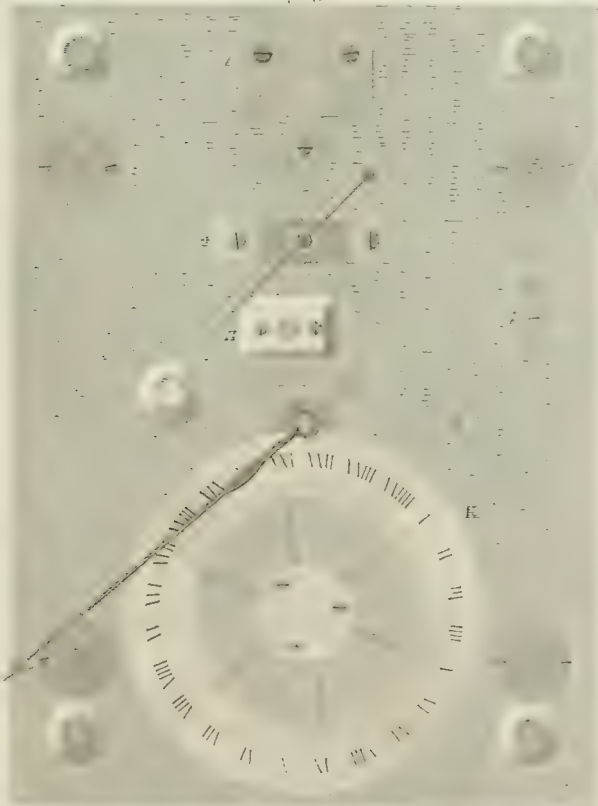


Fig. 2.

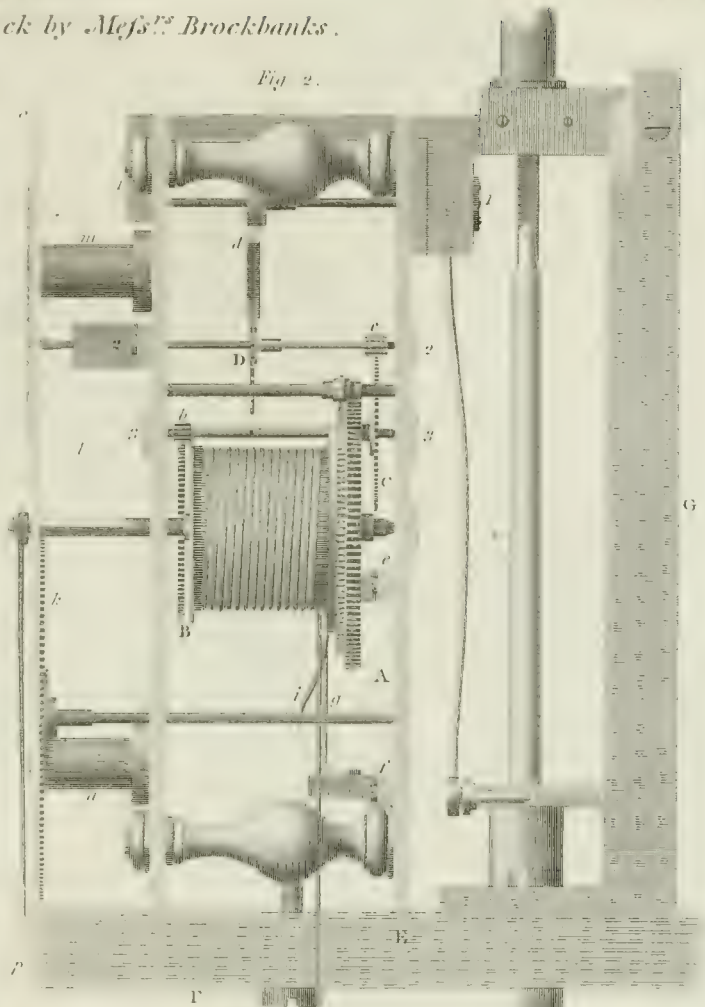
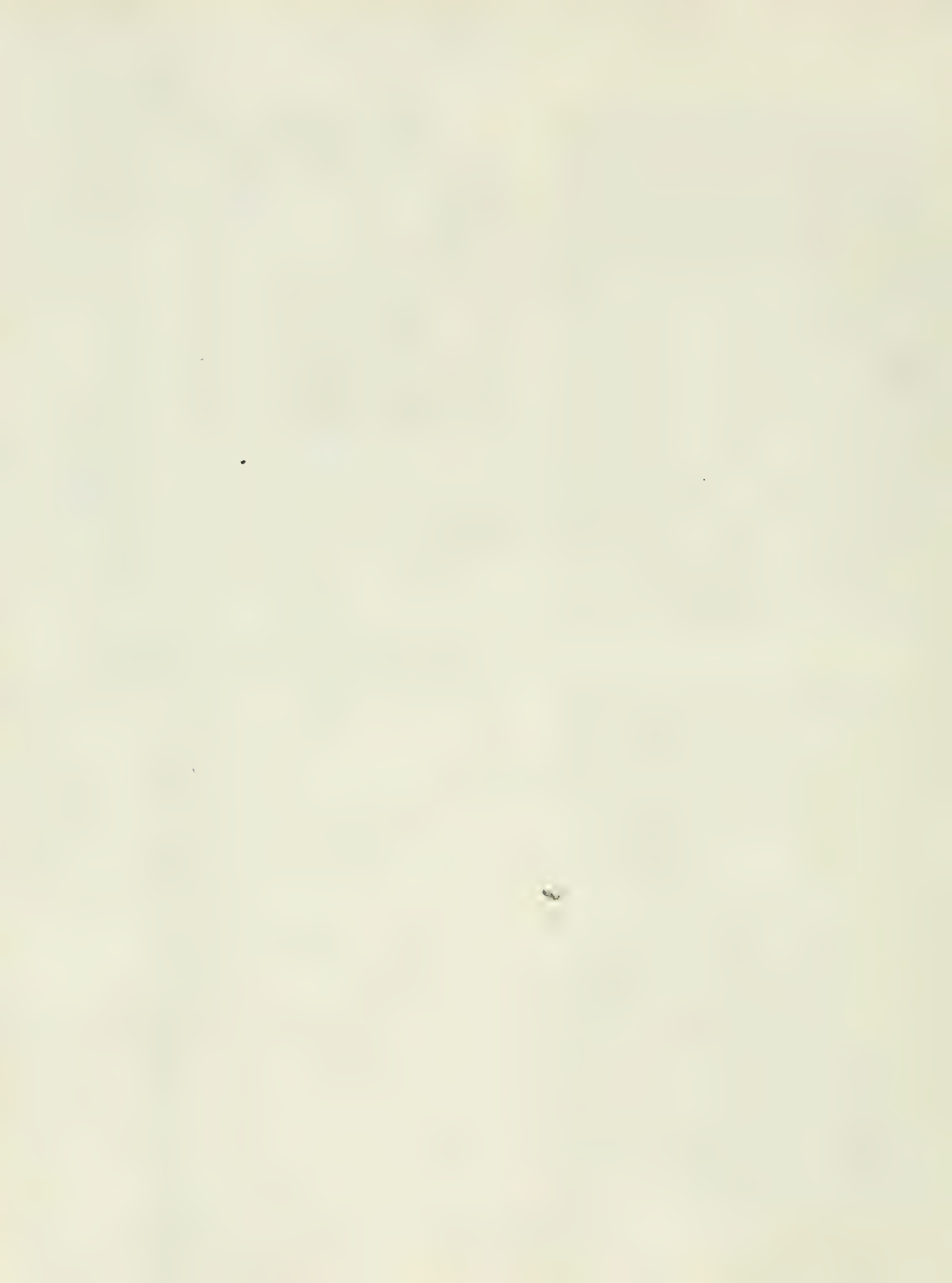
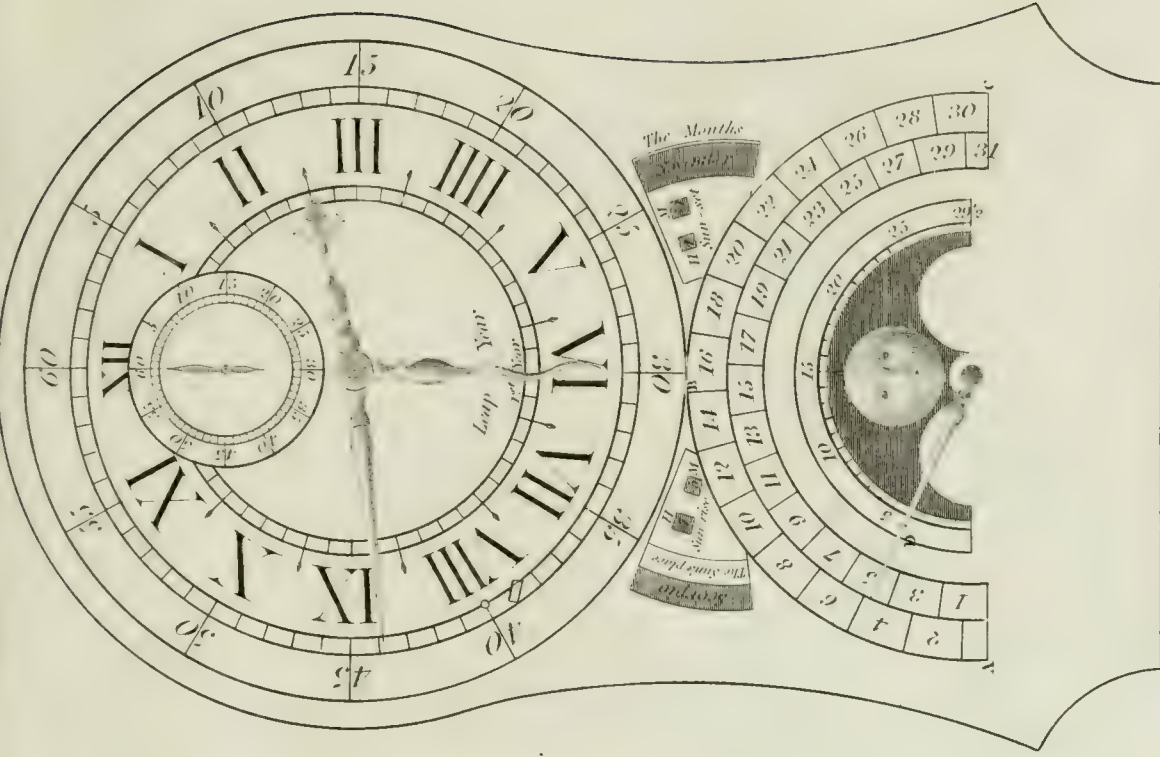
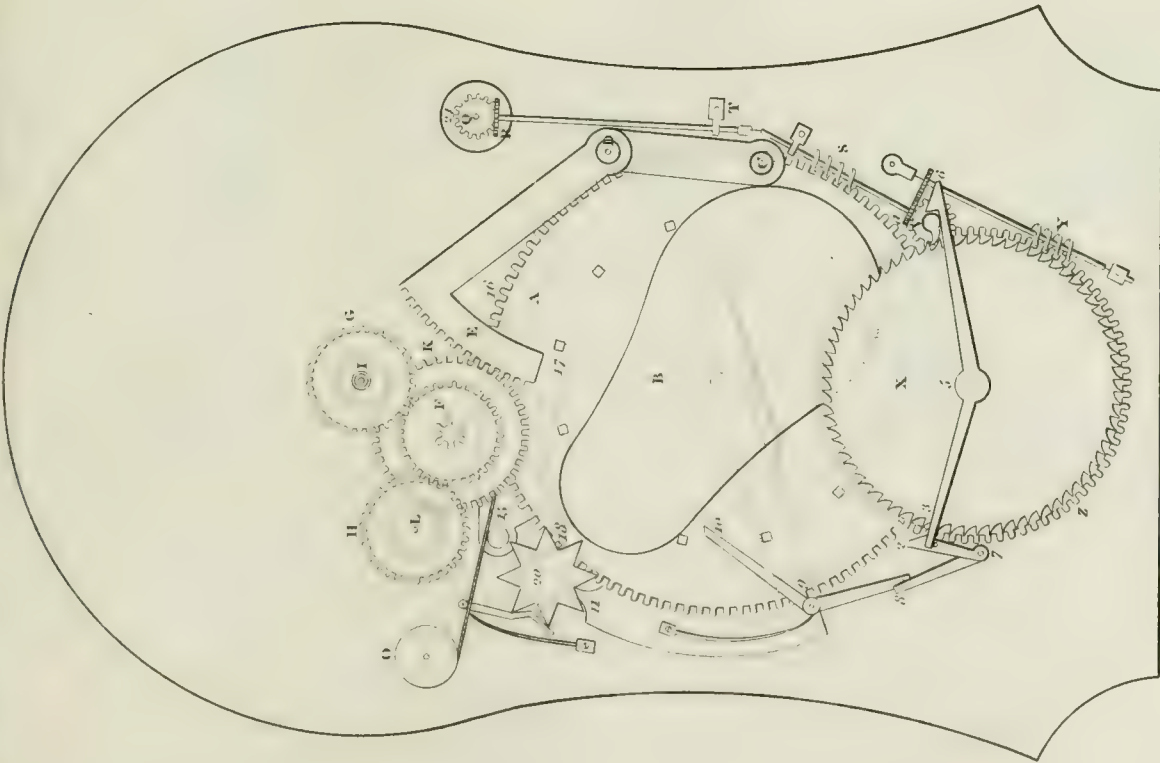


Fig. 4.







*Striking Part
with one Wheel
and one Pinion.*

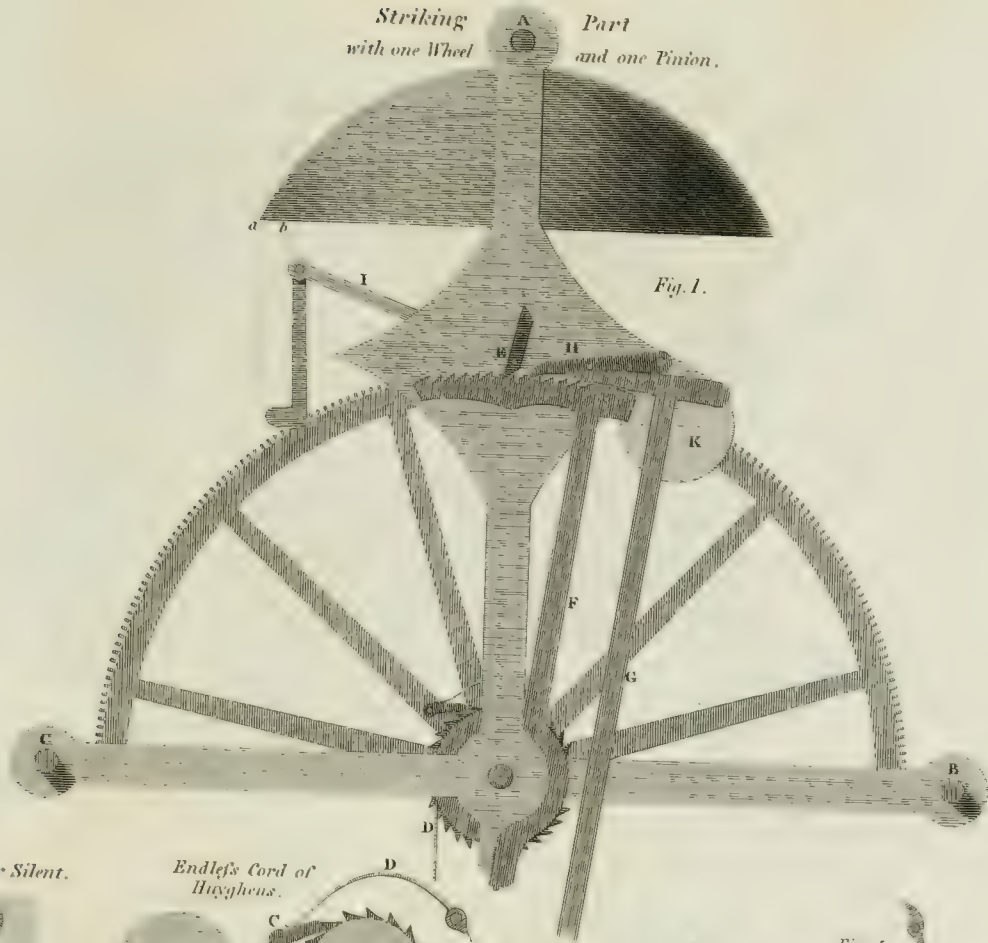


Fig. 1.

Strike or Silent.



Fig. 2.

*Endless Cord of
Huyghens.*

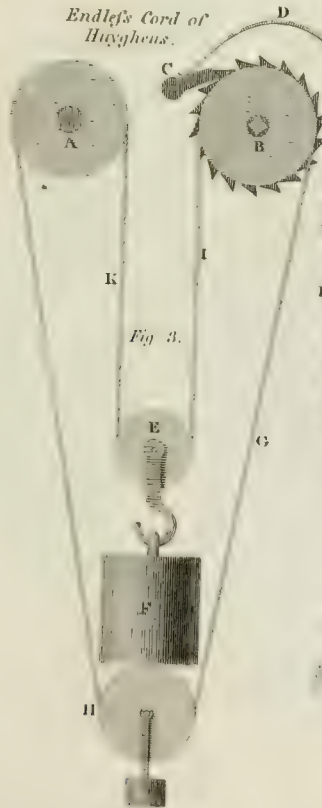


Fig. 3.

Forcing Spring.

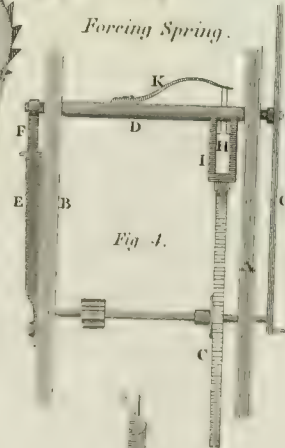


Fig. 4.

Fig. 5.

French forcing spring.

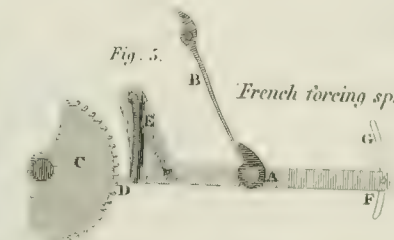


Fig. 6.

Bolt & Shutter.

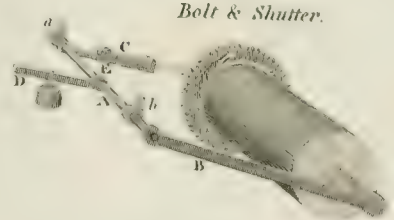


Fig. 2.
Prior's striking part.

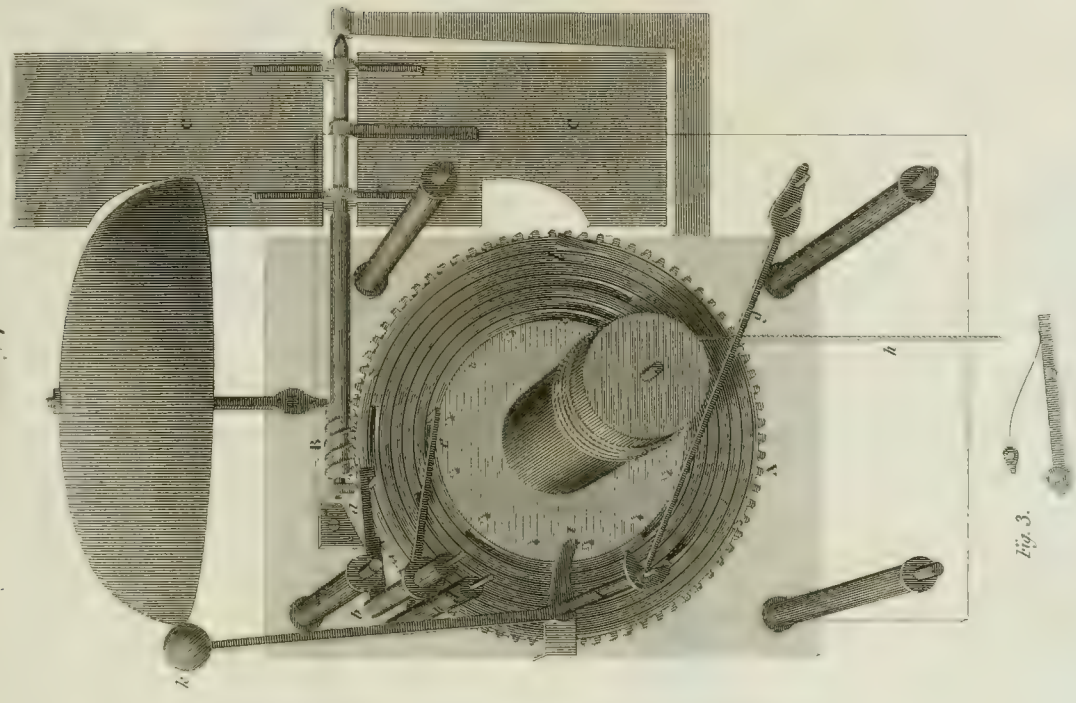
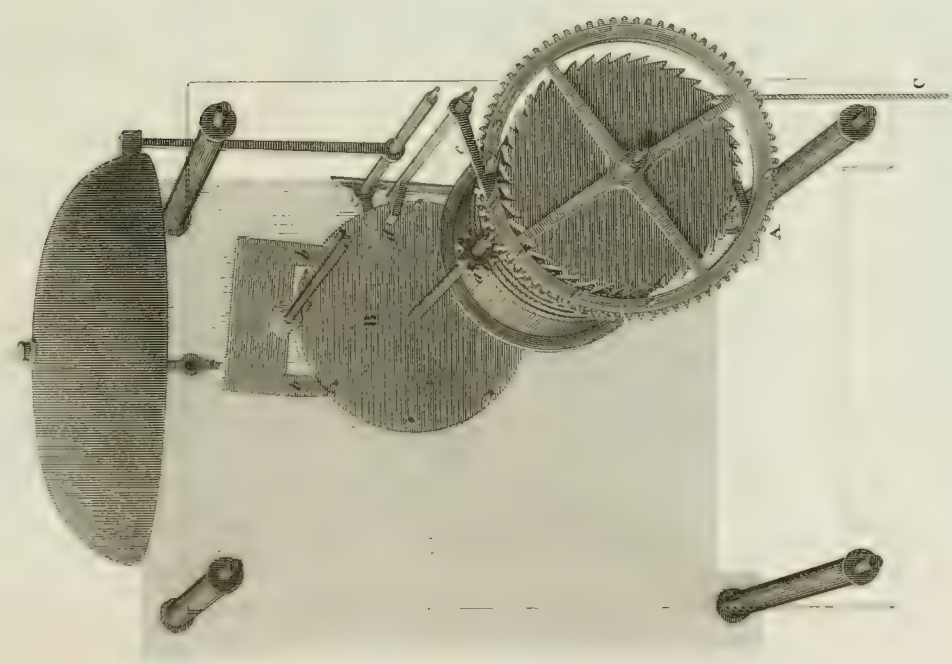
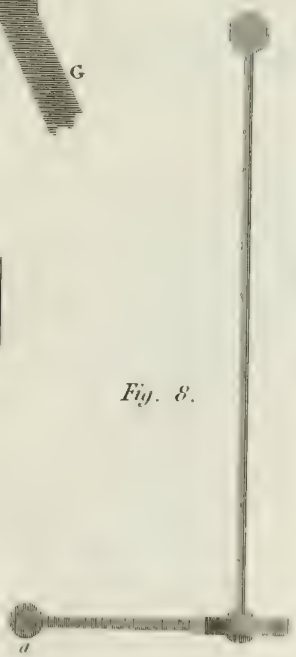
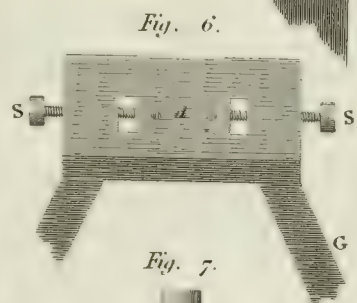
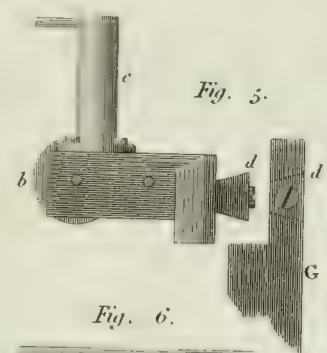
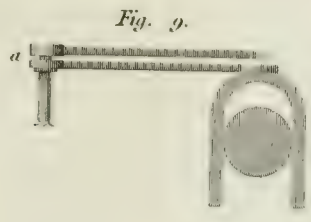
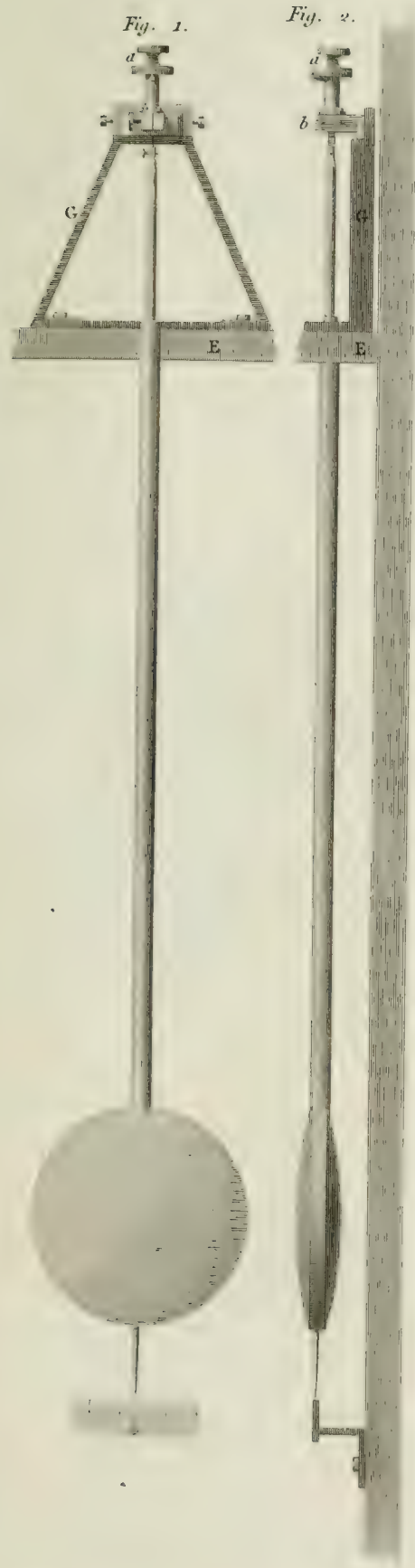


Fig. 1.
Massey's striking part.



TROUGHTON'S PENDULUM.



HOROLOGY.
 COMPENSATION CURBS.

Fig. 1.

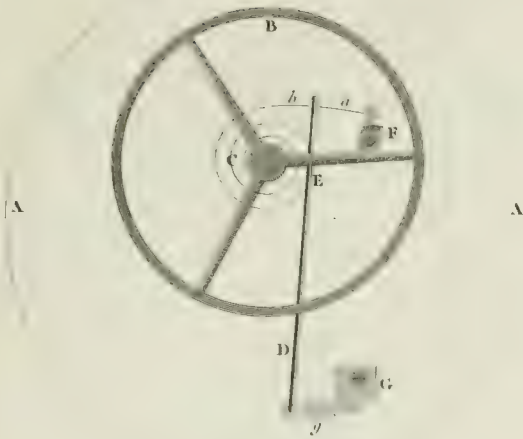


Fig. 2.

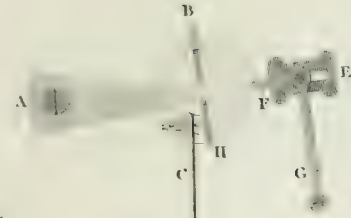


Fig. 1.



Fig. 2.

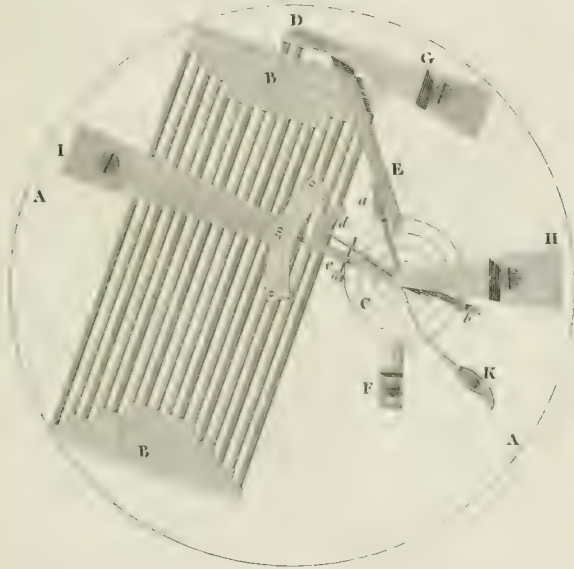


Fig. 5.

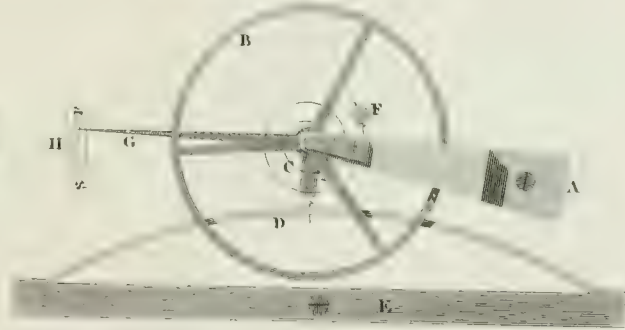
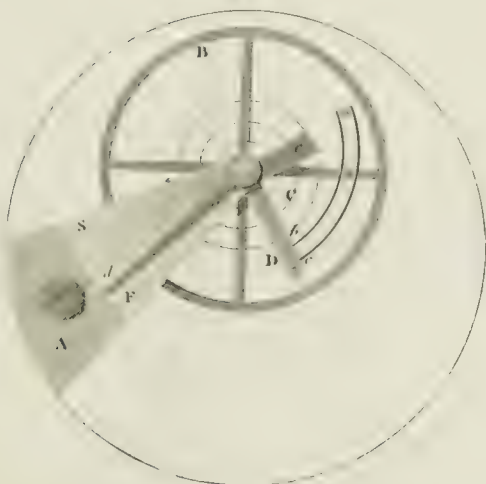


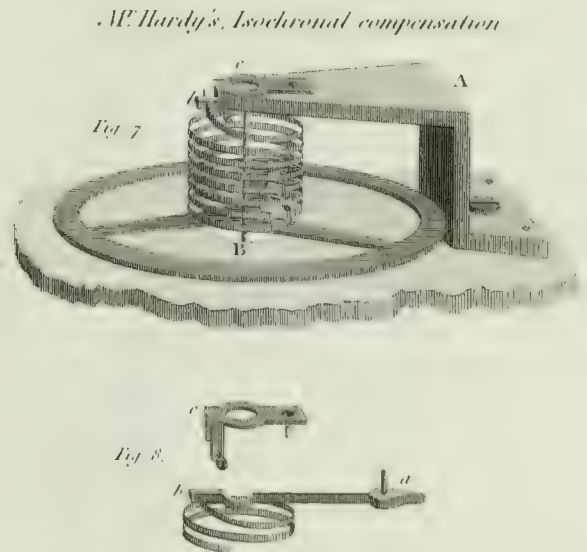
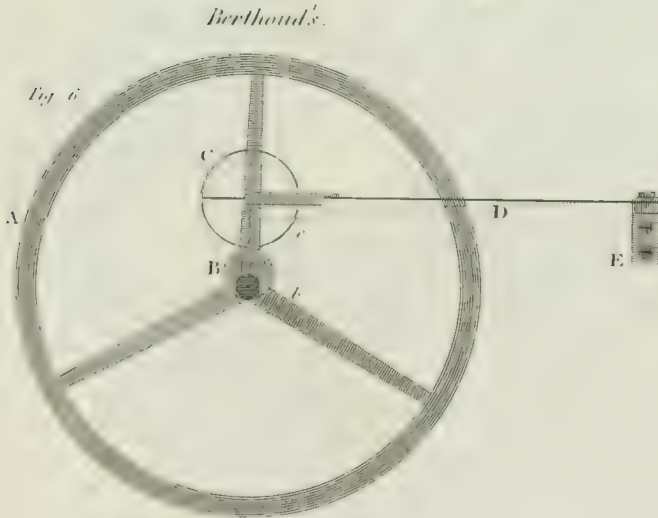
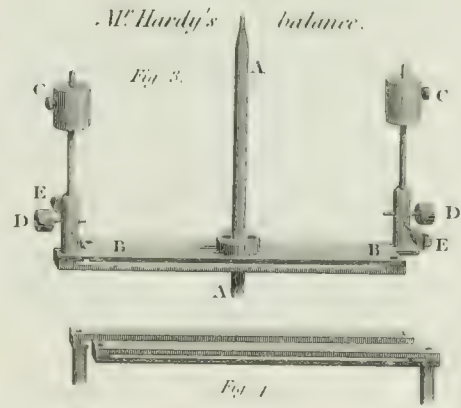
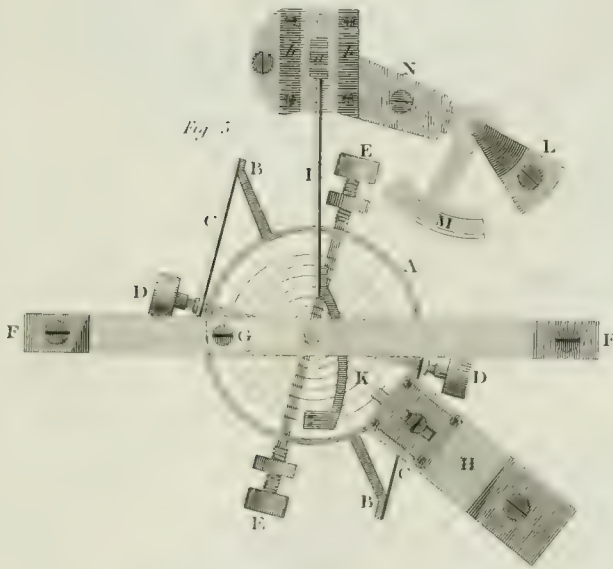
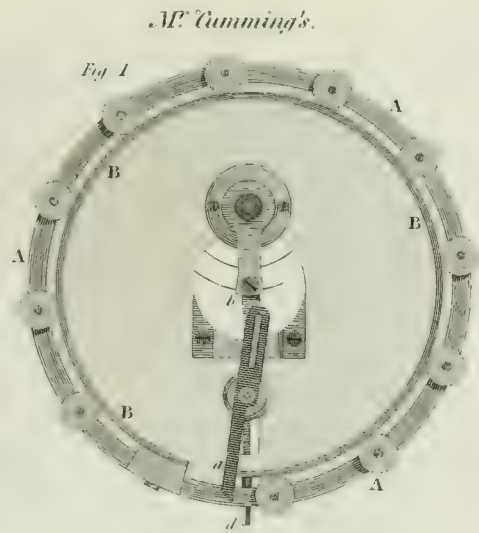
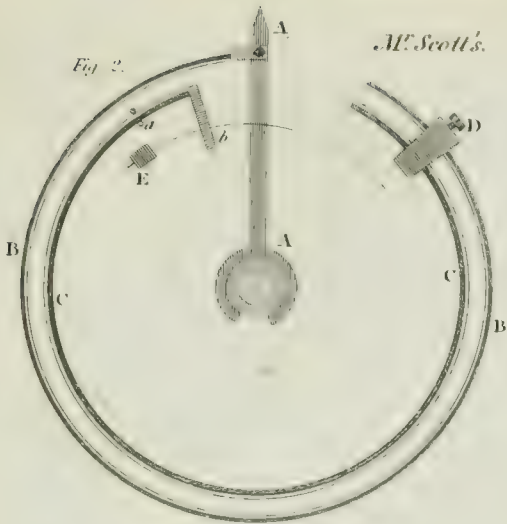
Fig. 6.



Fig. 7.



COMPENSATION CURBS AND BALANCES.



DIAL WORK OF A CLOCK SHOWING THE MOONS AGE, PHASES &c.

Fig. 1.

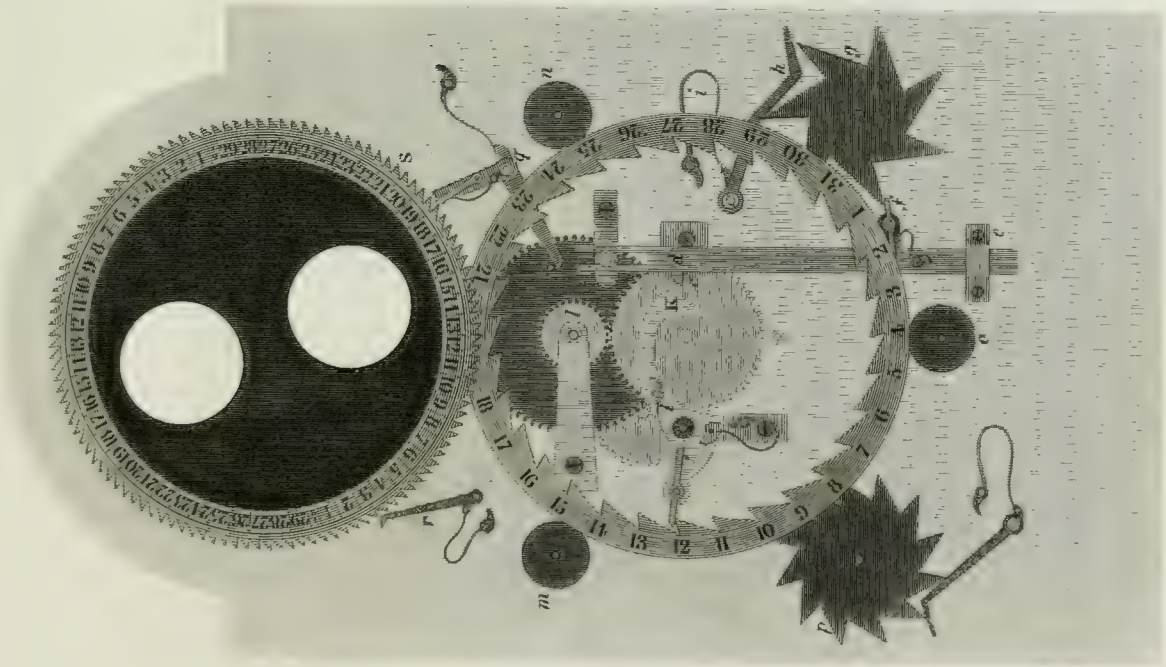
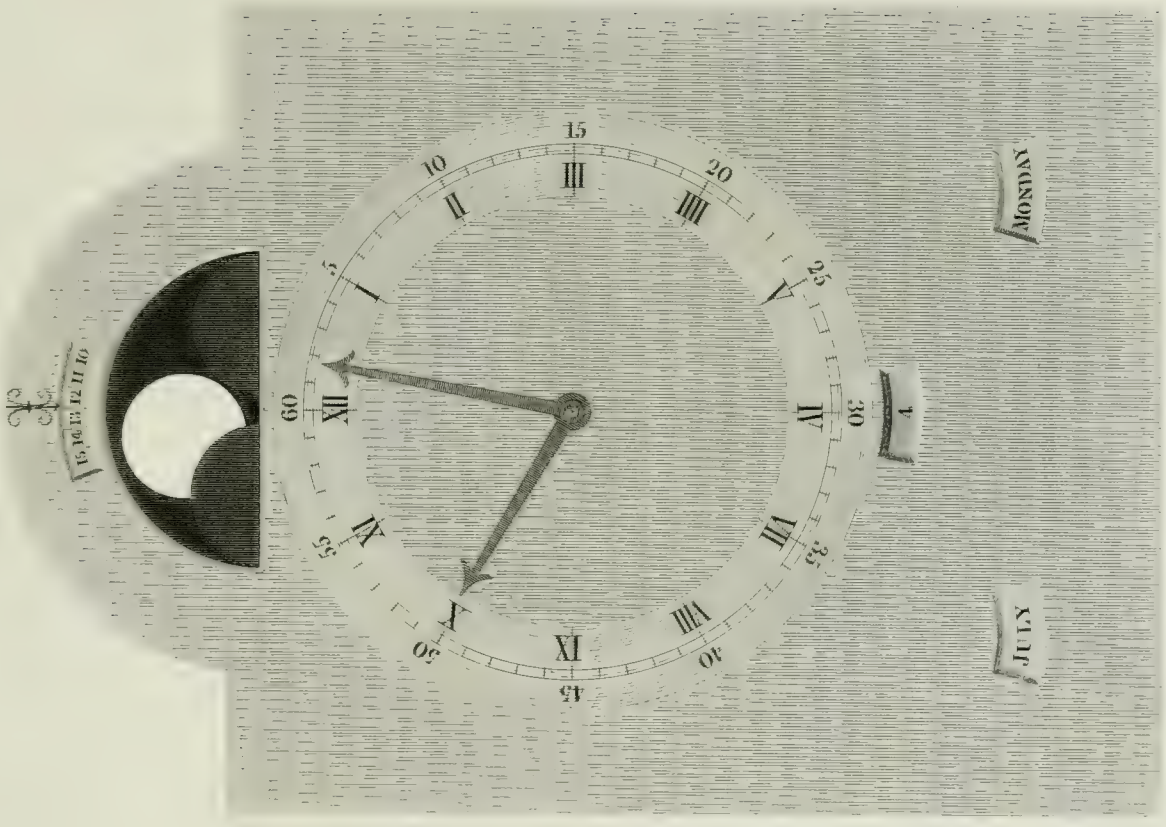


Fig. 2.



New DIAL work of a small spring Clock showing the Phenomena of the Moon, &c.

Fig. 2.

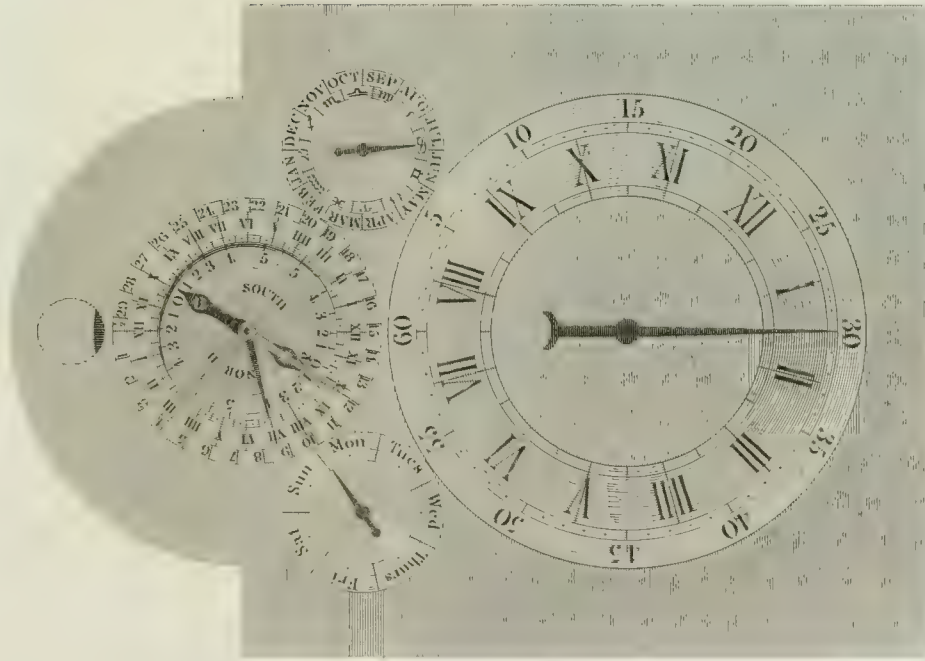
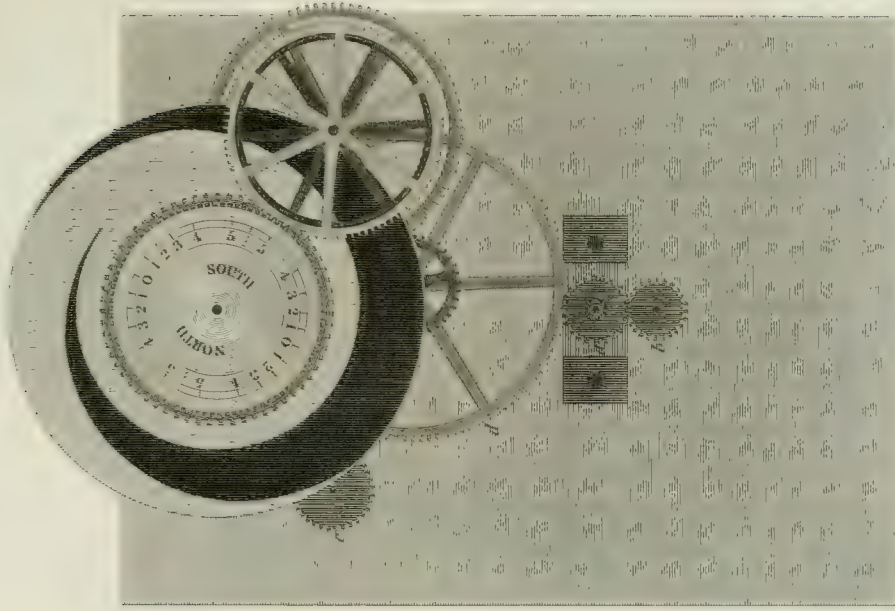


Fig. 1.



Dial Work.

Fig 1

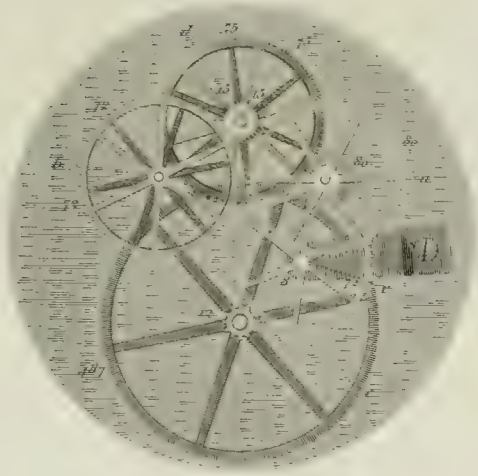


Fig 2



Fig. 3

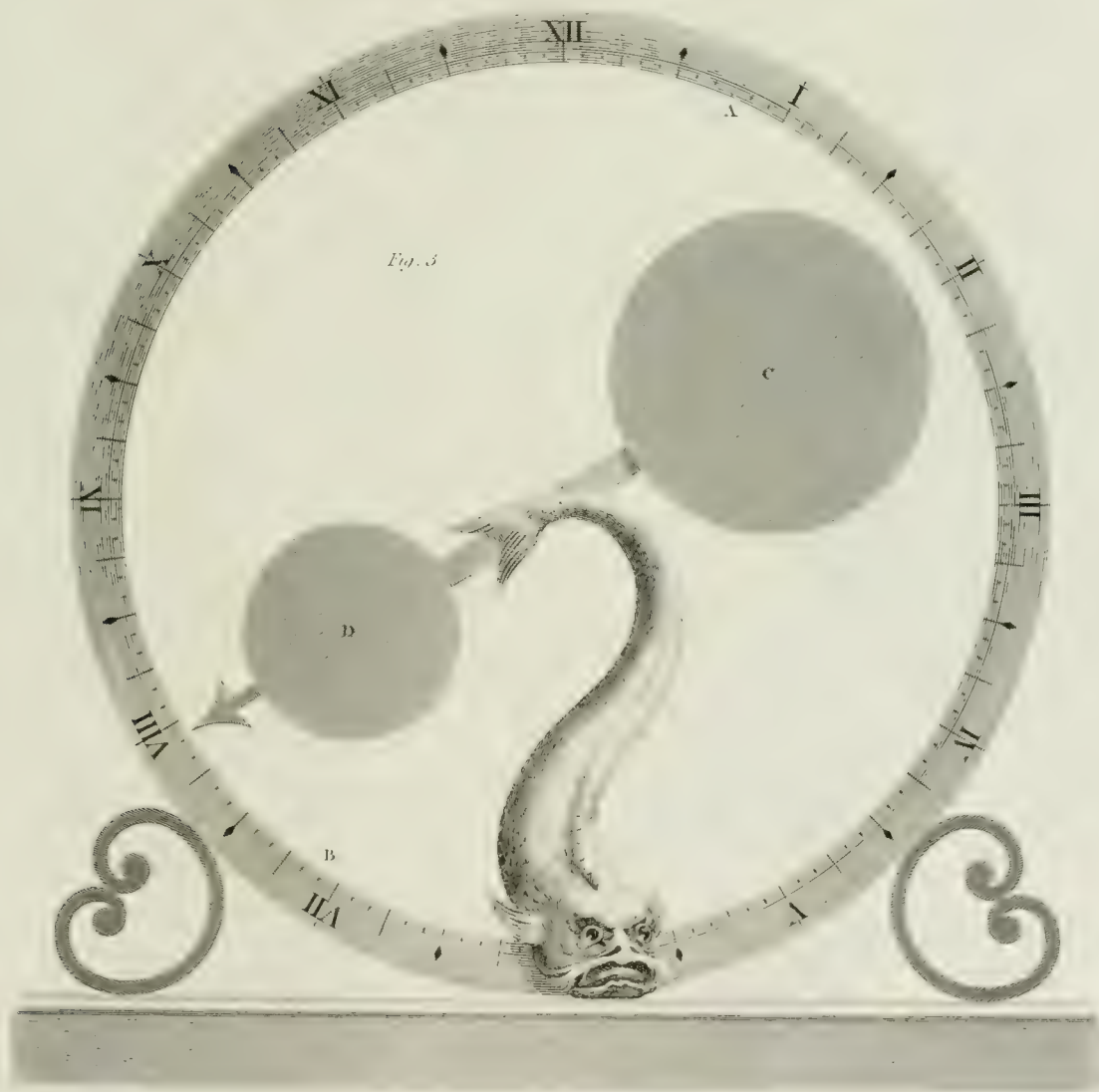


Fig. 1.

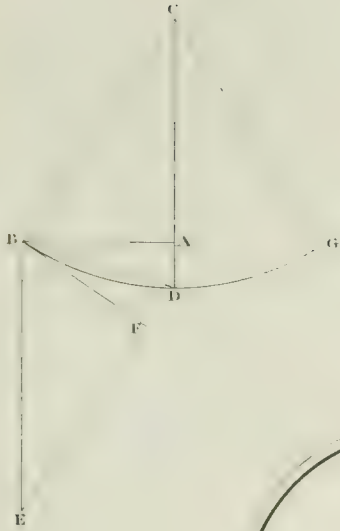


Fig. 2.

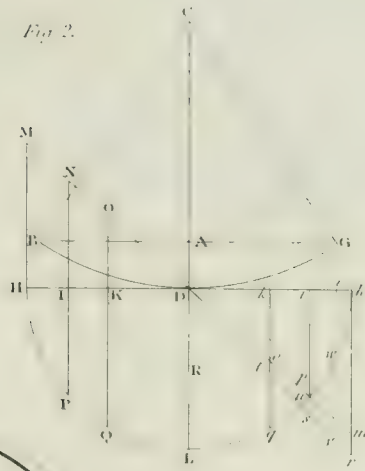


Fig. 3.

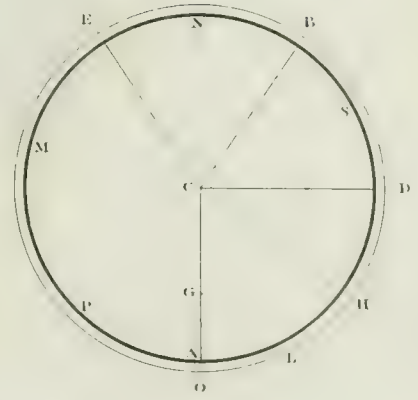
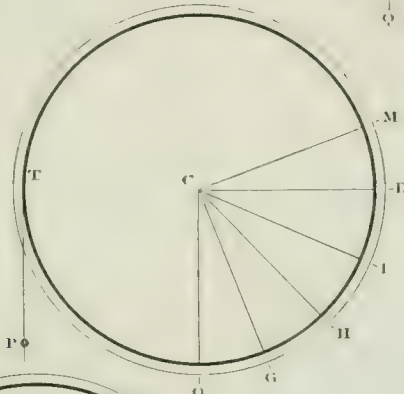
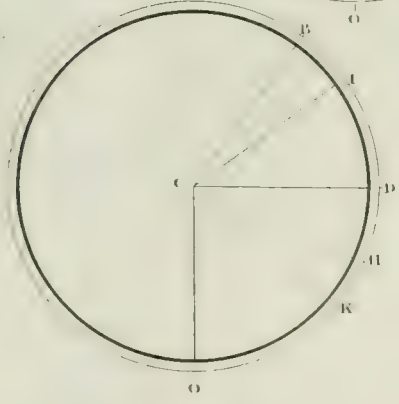


Fig. 4.

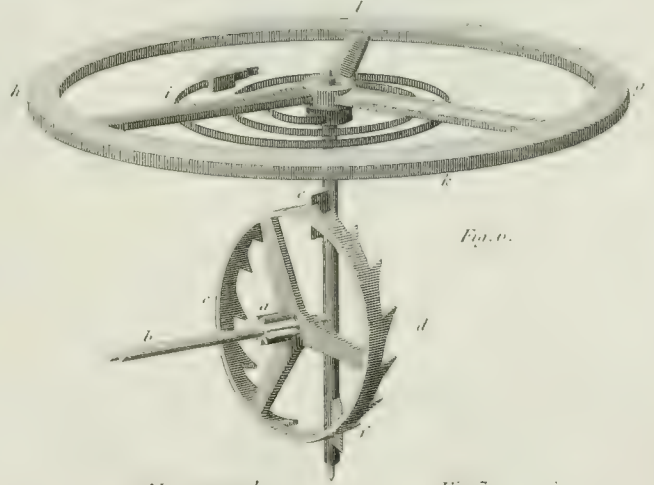


M. Atwood's Theory of the Balance.

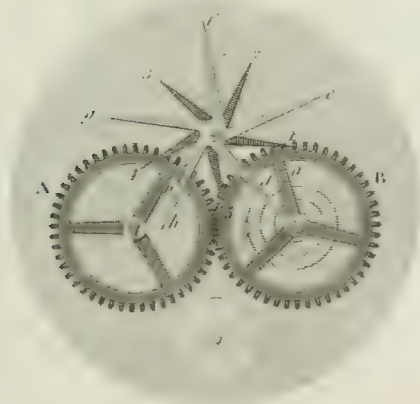
Fig. 5.



Crown Wheel.



D. Hook's & Du Tertre's, Fig. 8.



Huygen's.

Fig. 7.

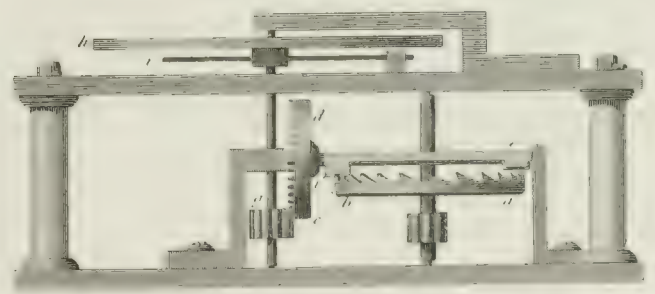


Fig. 1.
Sully's.

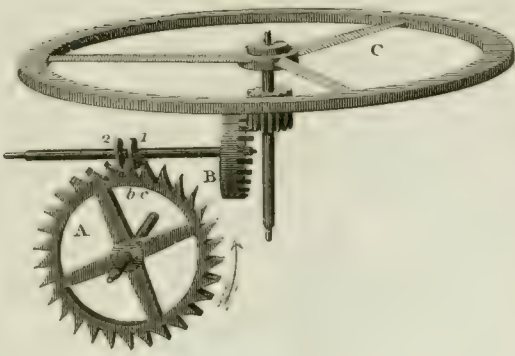


Fig. 2.
Graham's Horizontal.

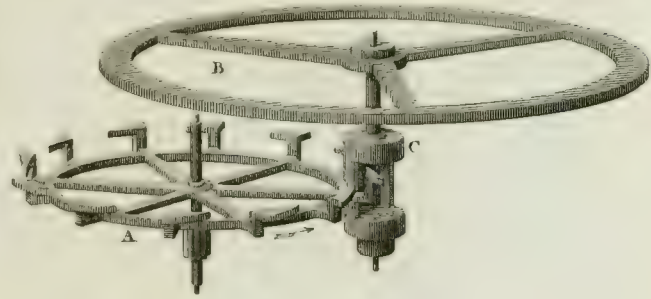


Fig. 3.
Anchor Escapement.

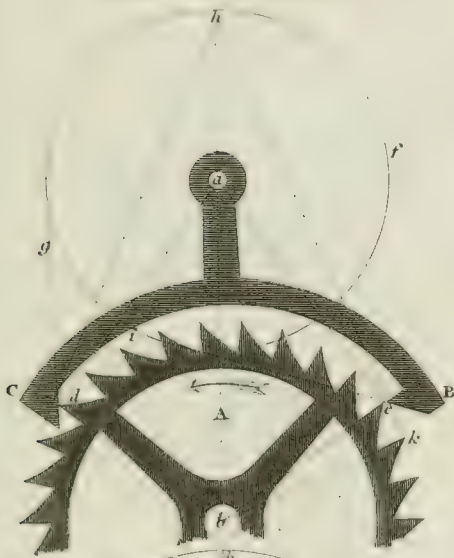


Fig. 5.

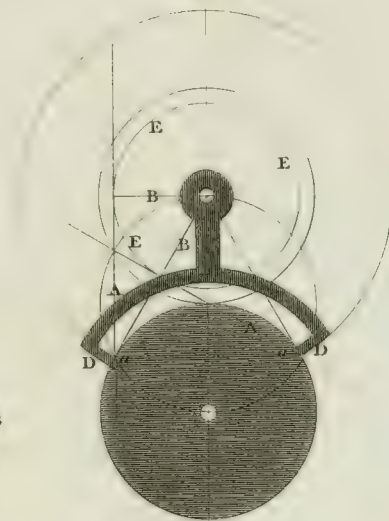


Fig. 7.
Bennet's Dead Beat.

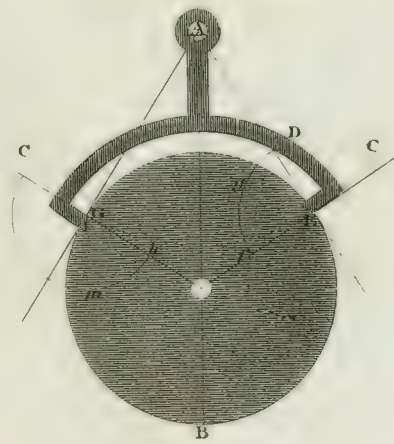


Fig. 6.

Grignon's Dead Beat.

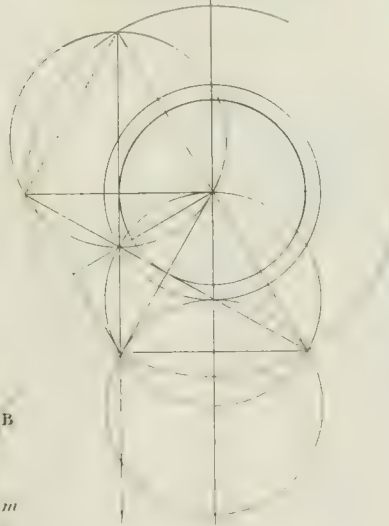


Fig. 4.
Graham's Dead Beat.

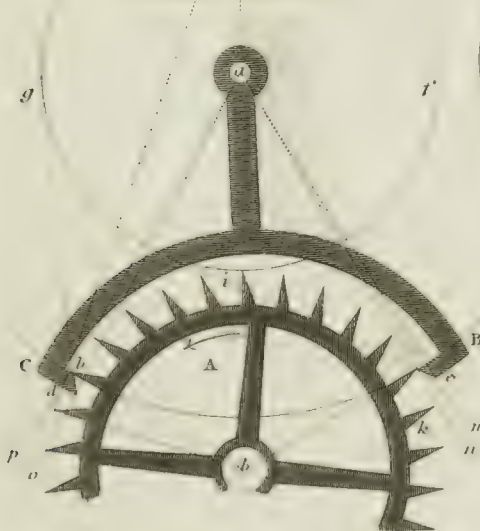


Fig. 8.
Thiout's.

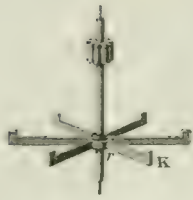




HOROLOGY.

FRENCH ESCAPEMENTS for Chronometers.

Fig. 1.



Peter le Roy's Improved

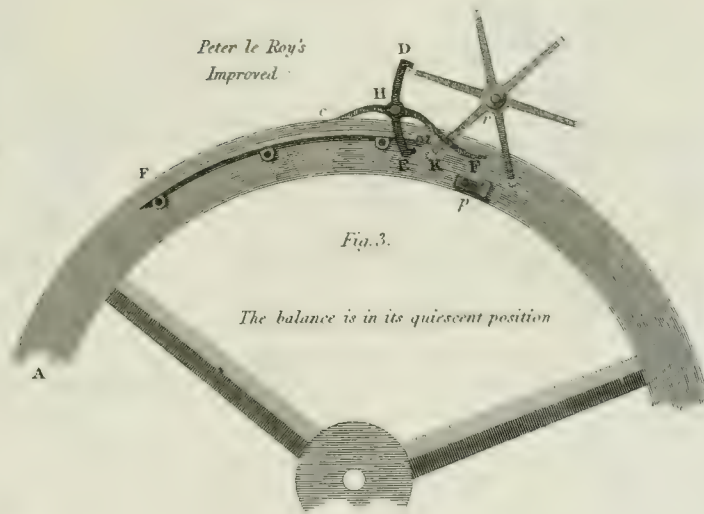


Fig. 2.



Fig. 3.

The balance is in its quiescent position

Berthoud's Detached

Fig. 4.

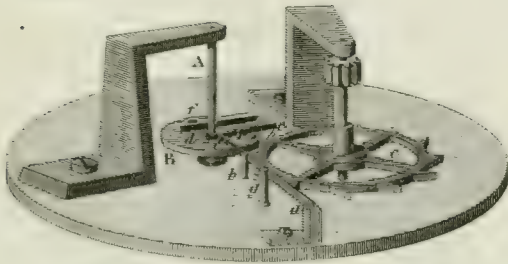


Fig. 6.

Berthoud's without a Spring

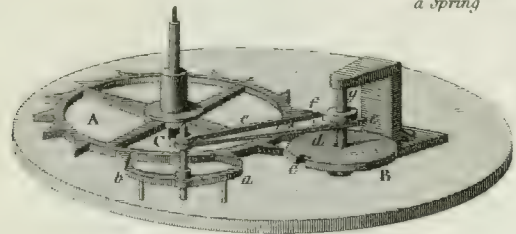


Fig. 5.

Berthoud's Improved N° 60.

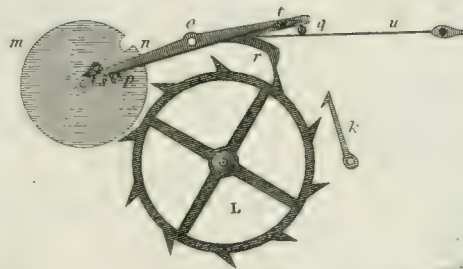


Fig. 7.

Berthoud's with a Spring and Detent in N° 9.

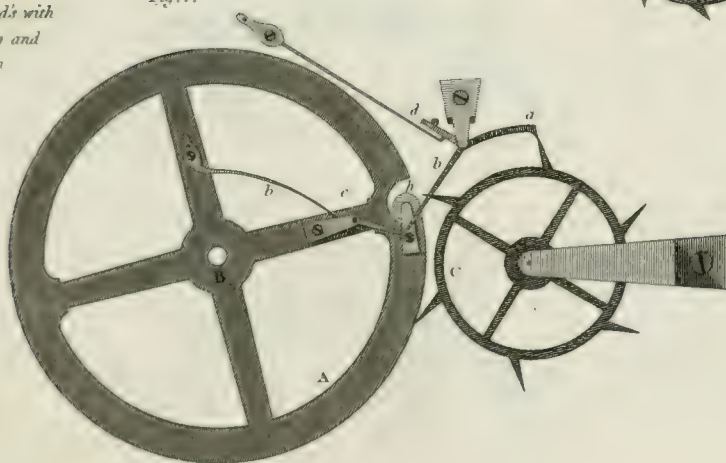
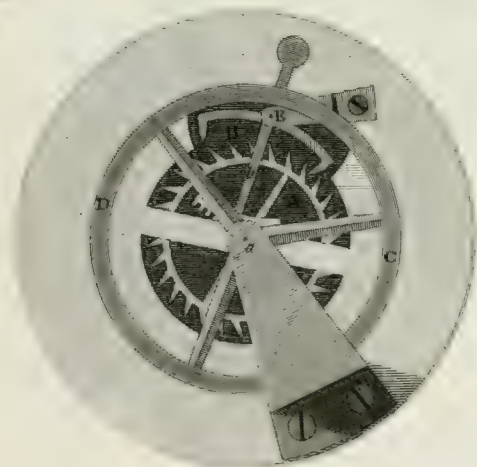
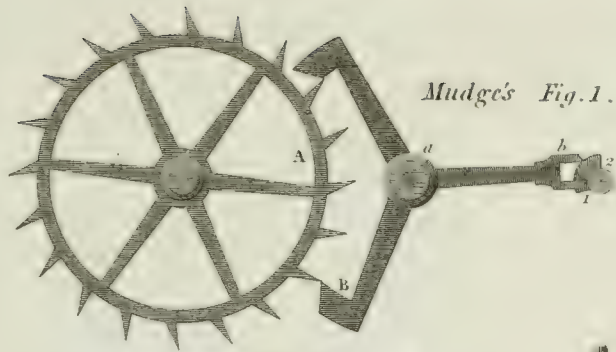


Fig. 8.

Berthoud's Isochronal



ESCAPEMENTS.



Mudge's Fig. 1.

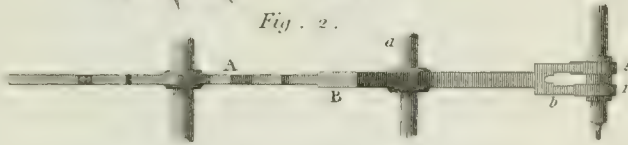
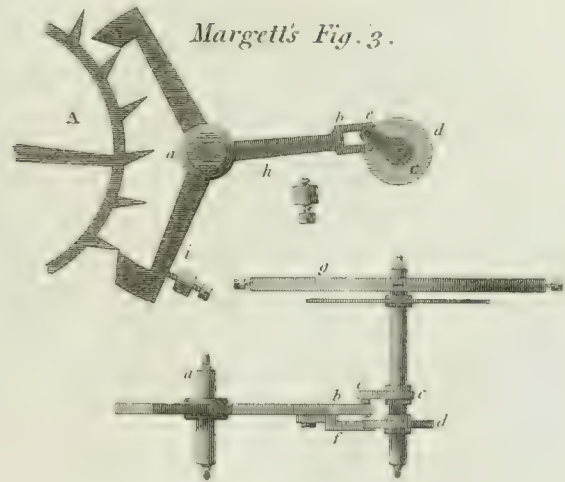
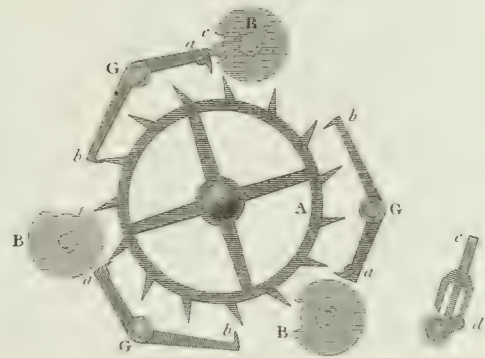


Fig. 2.

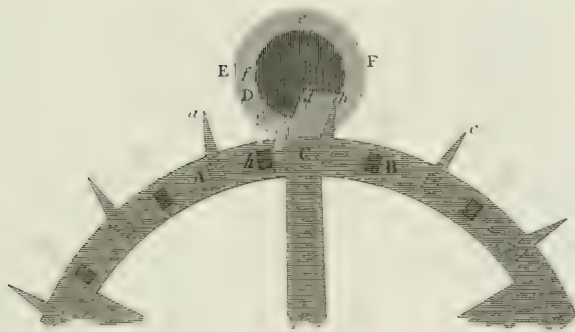


Margett's Fig. 3.

Robin's Fig. 4.



Duplex Fig. 5.



Escapement a Virgule

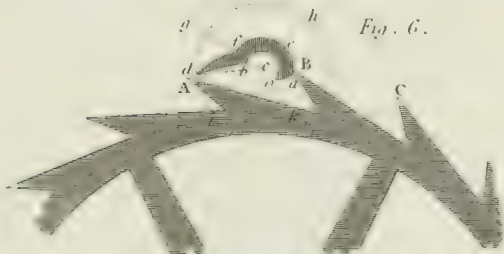


Fig. 6.

Tompion's Fig. 7.



Free for a Pendulum

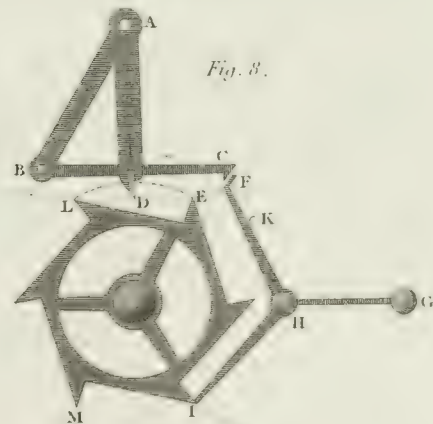


Fig. 8.

ESCAPEMENTS &c.

Fig. 1.
Berthoud's.

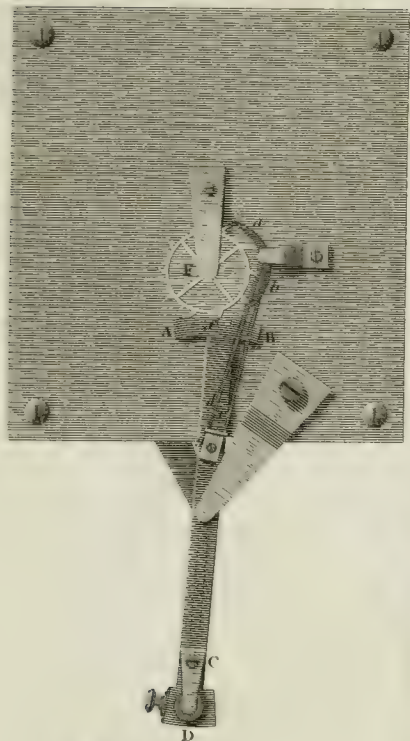


Fig. 2.

Nicholson's.

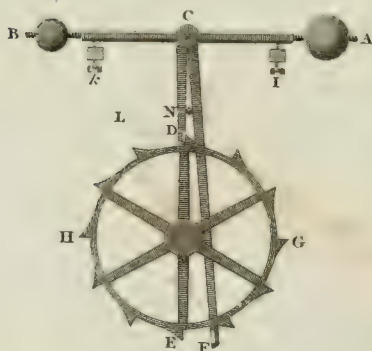


Fig. 5.

Mafsey's.

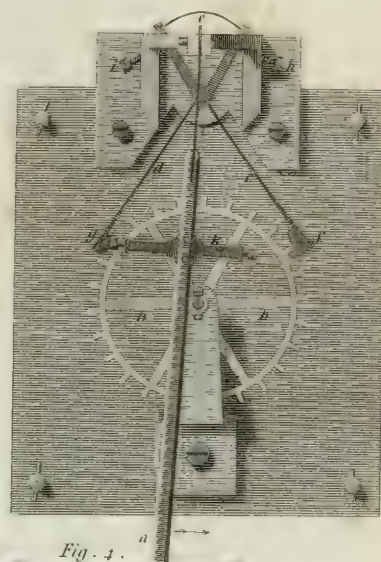


Fig. 3.

Goodriche's.

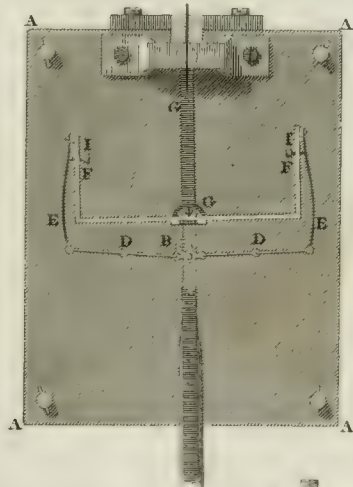


Fig. 4.

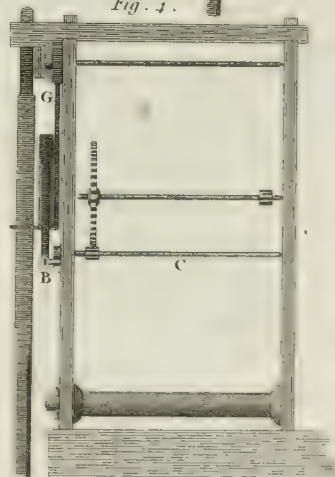
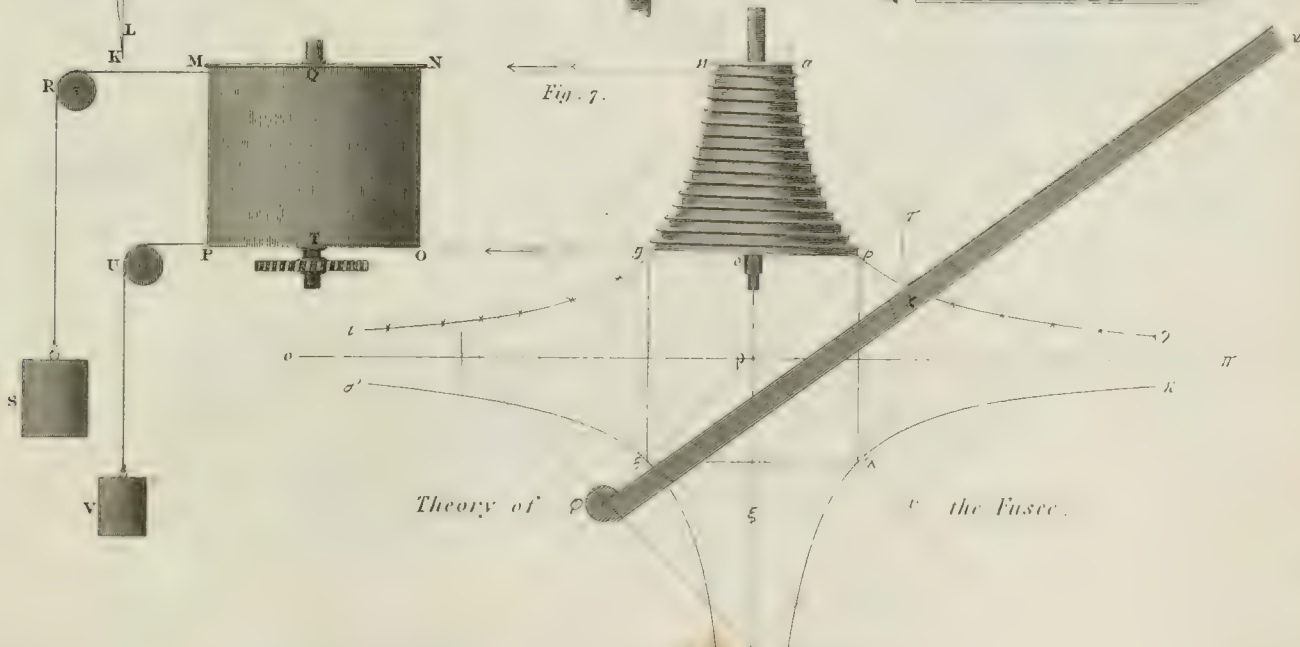


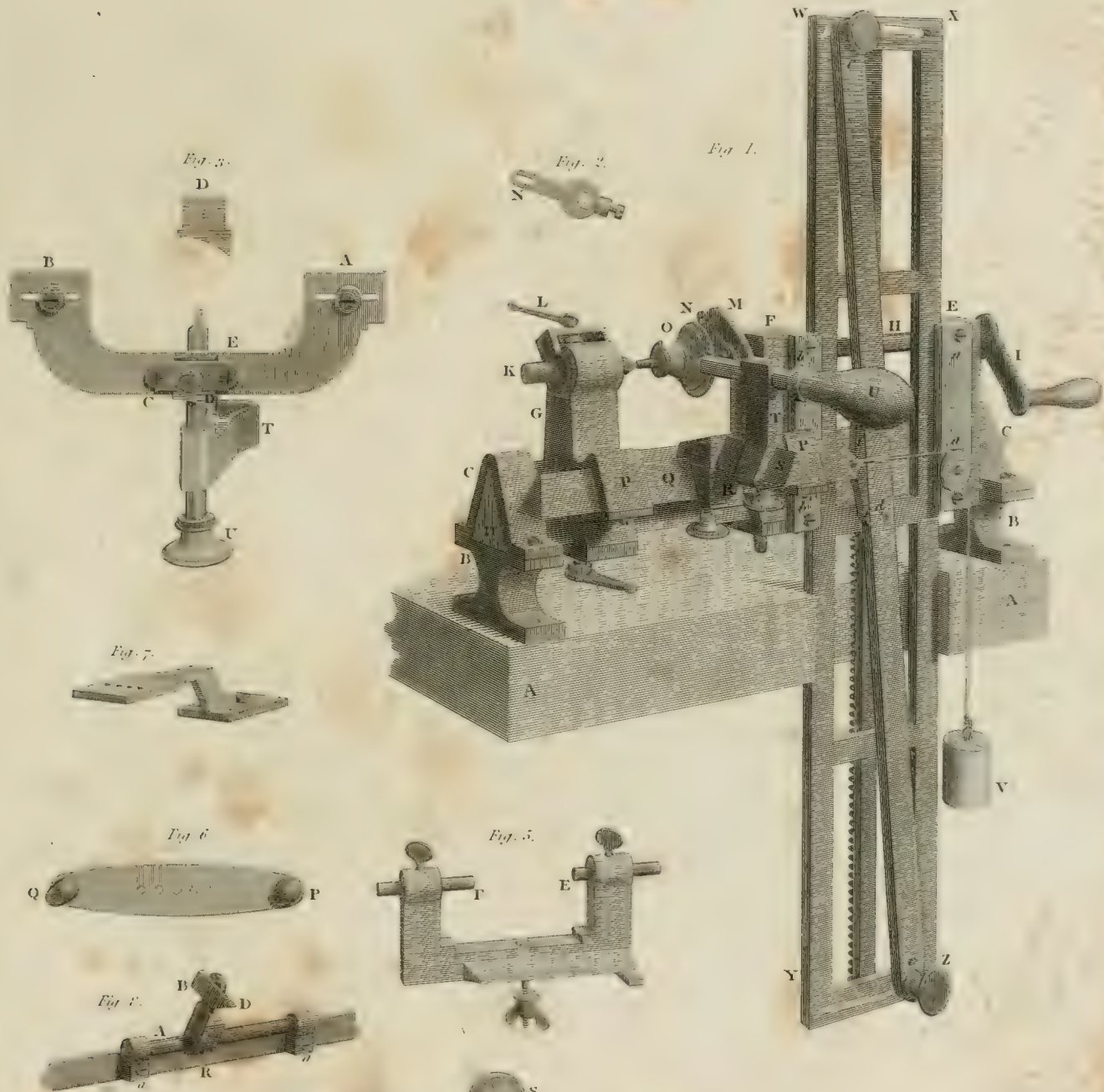
Fig. 6.



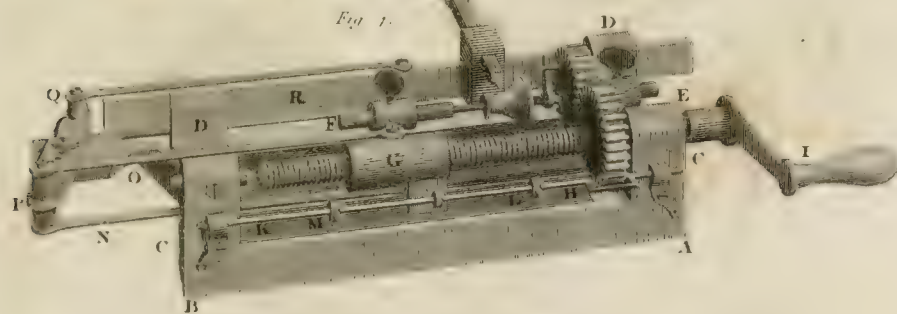
Fig. 7.



FUSEE ENGINE acting by an inclined Plane.



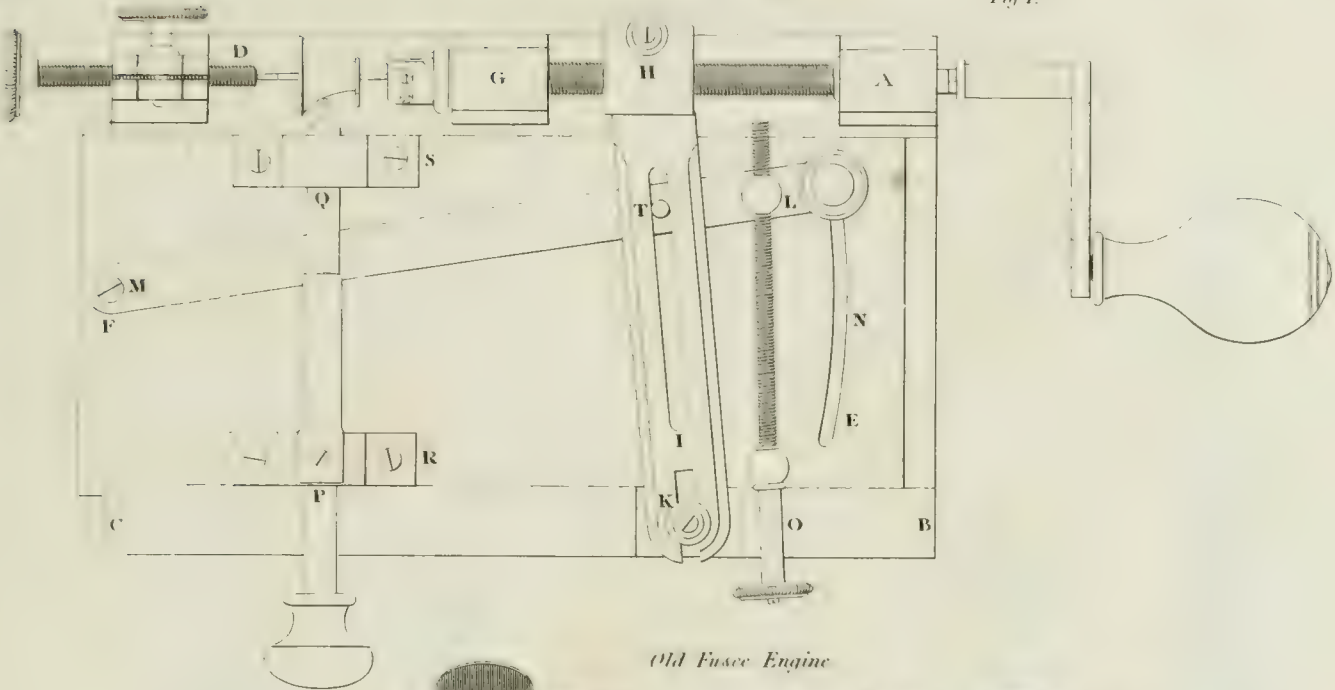
Fusee Engine with a Screw and Lever.





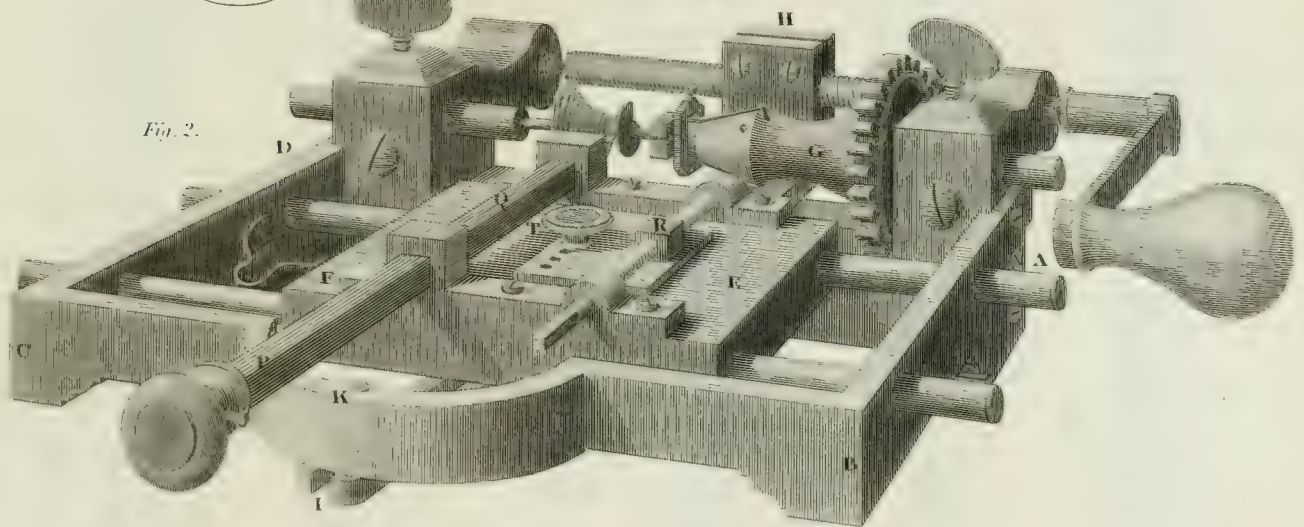
Common Fusee Engine

Fig. 1.



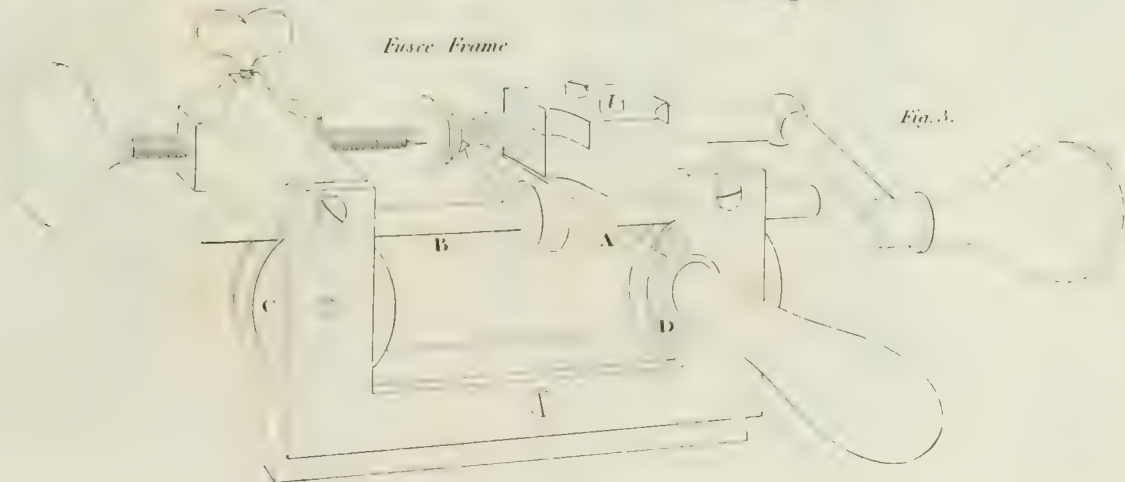
Old Fusee Engine

Fig. 2.



Fusee Frame

Fig. 3.



COMPENSATING PENDULUMS.

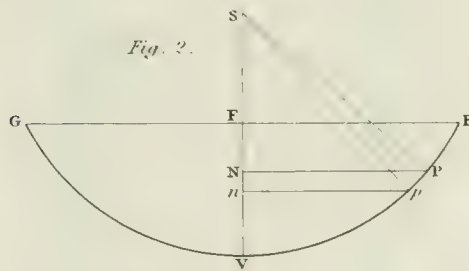
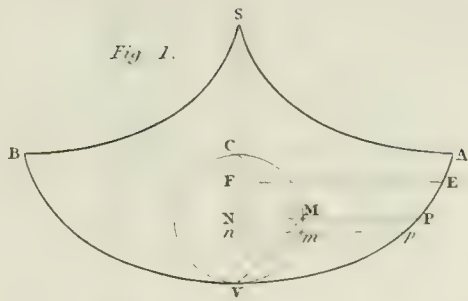


Fig. 3.



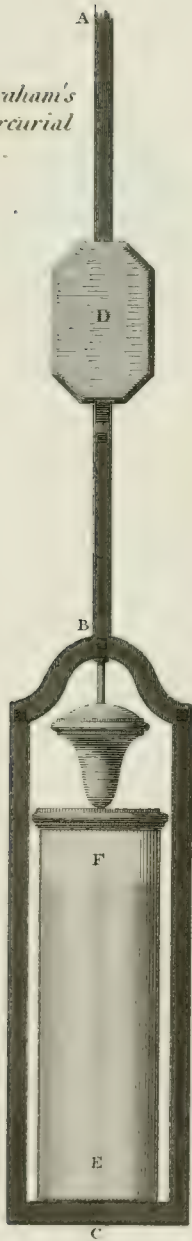
J. Le Roy's

Fig. 8.



Graham's Mercurial

Fig. 4.



Regnault's. Fig. 5.



Deparcieux's

Fig. 7.



Fig. 6.



H O R O L O G Y.
C O M P E N S A T I N G P E N D U L U M S.

Ellicott's

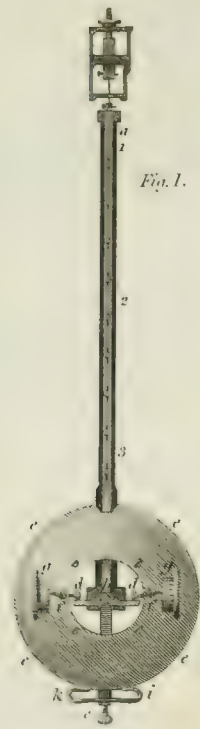


Fig. 1.

Troughton's
Rhomboidal

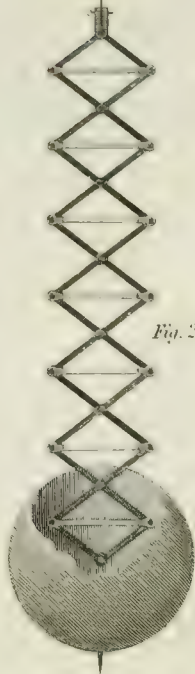


Fig. 2.

Berthoud's

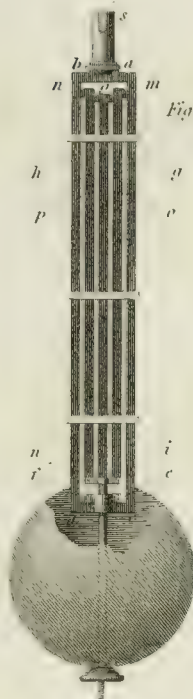


Fig. 3.

Troughton's
Mercurial

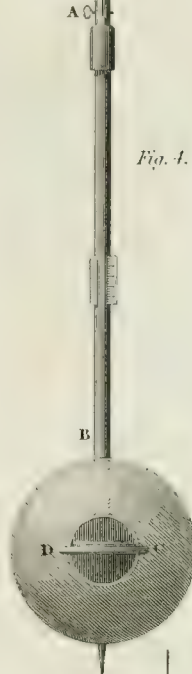


Fig. 4.

Dr Fordyce's



Fig. 5.

Ritchie's

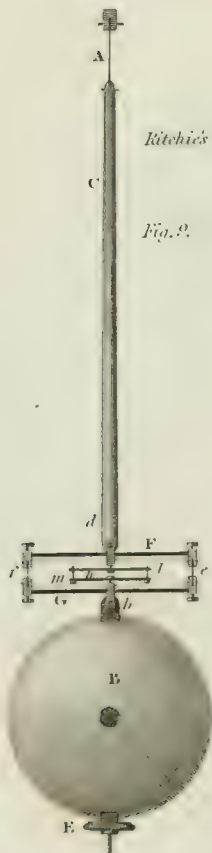


Fig. 6.

Ward's



Fig. 7.

Reid's



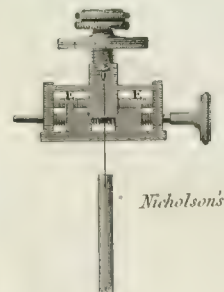
Fig. 8.

Doughty's



Fig. 9.

Fig. 10.



Nicholson's

Fig. 1. Halep's.

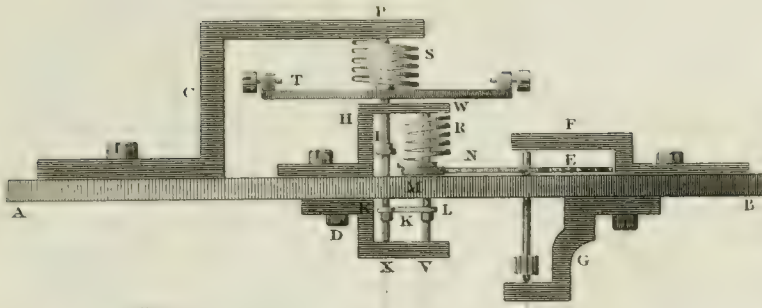


Fig. 3.



Fig. 2.

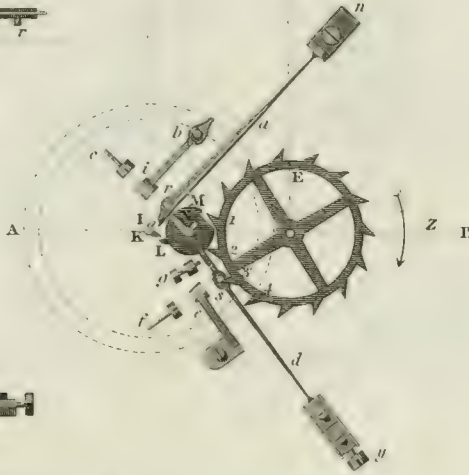


Fig. 4.

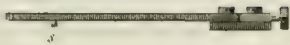


Fig. 6.

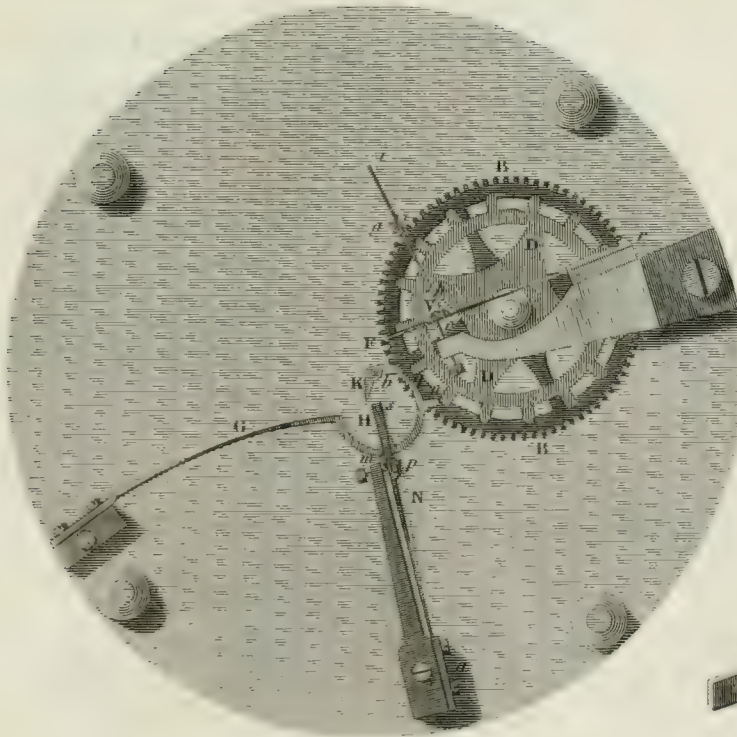


Fig. 7. Hardy's.

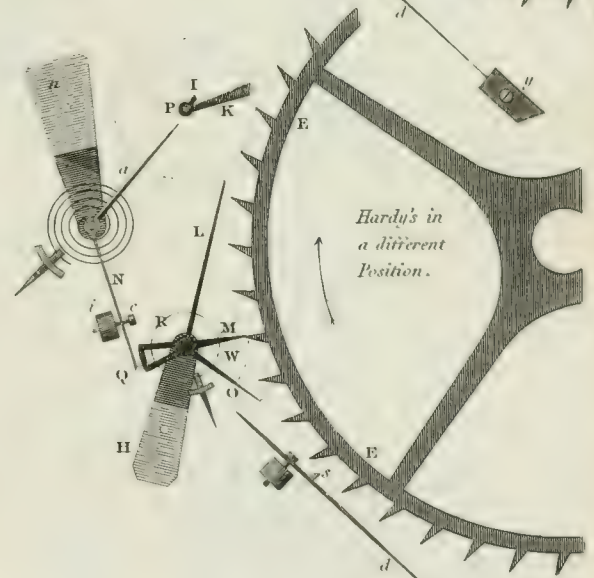
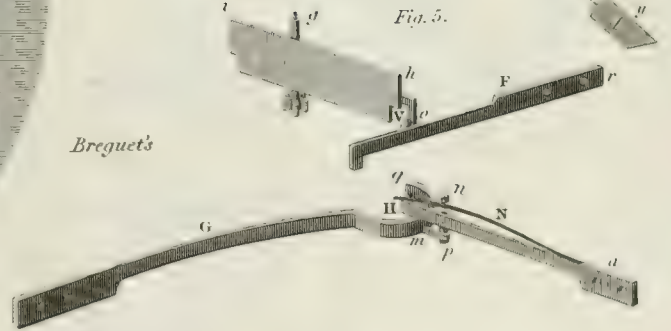


Fig. 5.

Breguet's



Remontoire Escapements

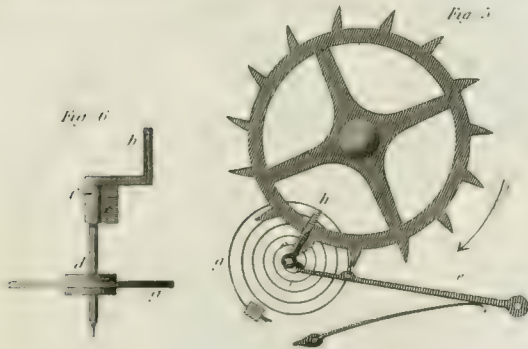
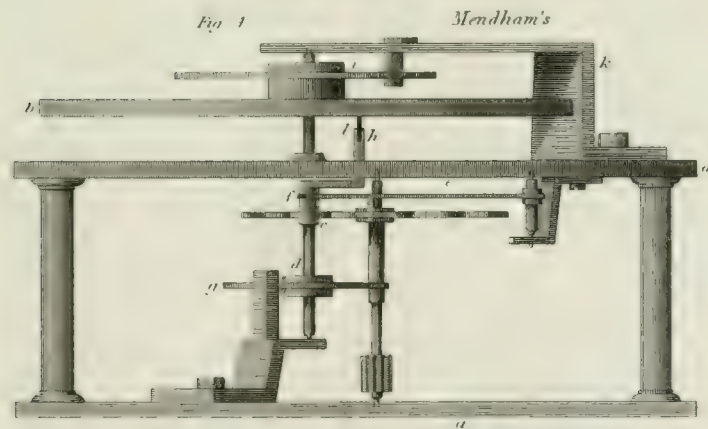
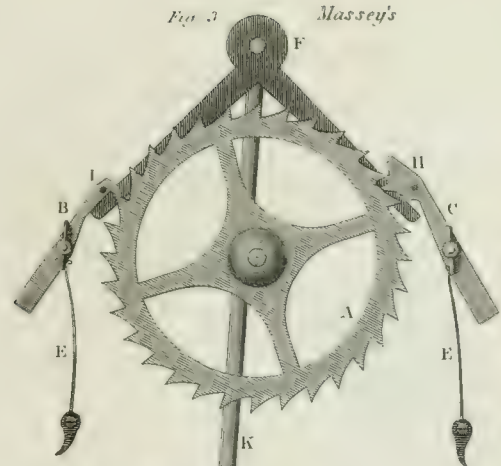
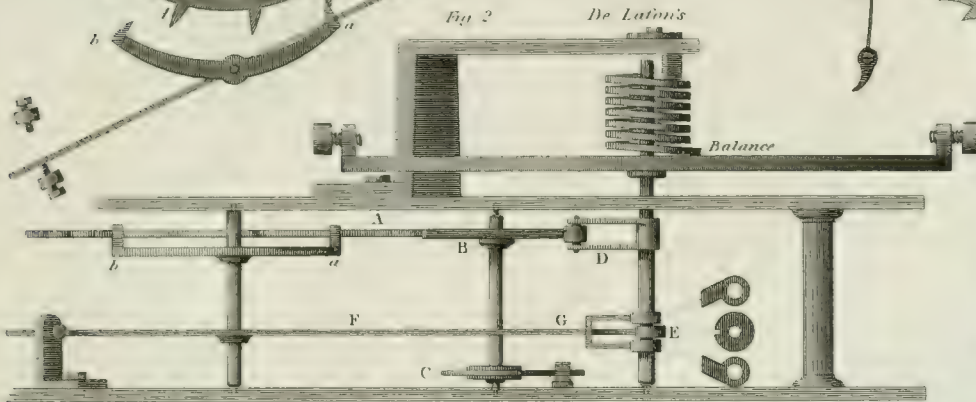
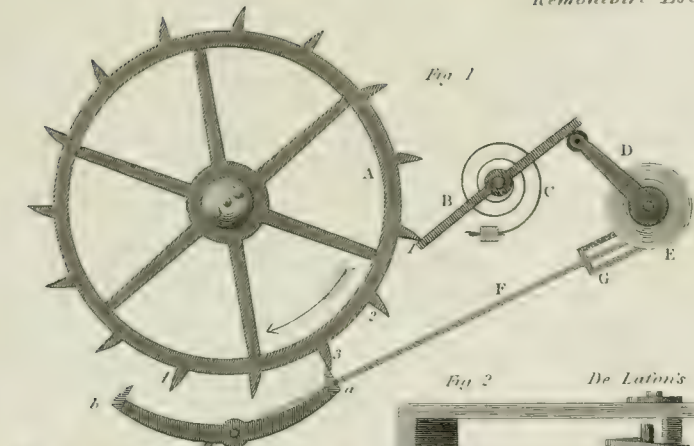


Fig 1



Recordon's Renovator.

Fig 2

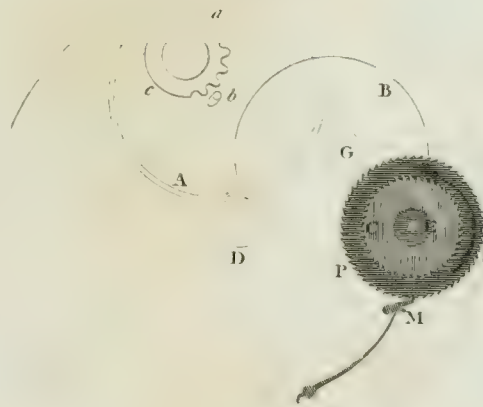


Fig 3



WATCH with MUSIC.

Fig 4

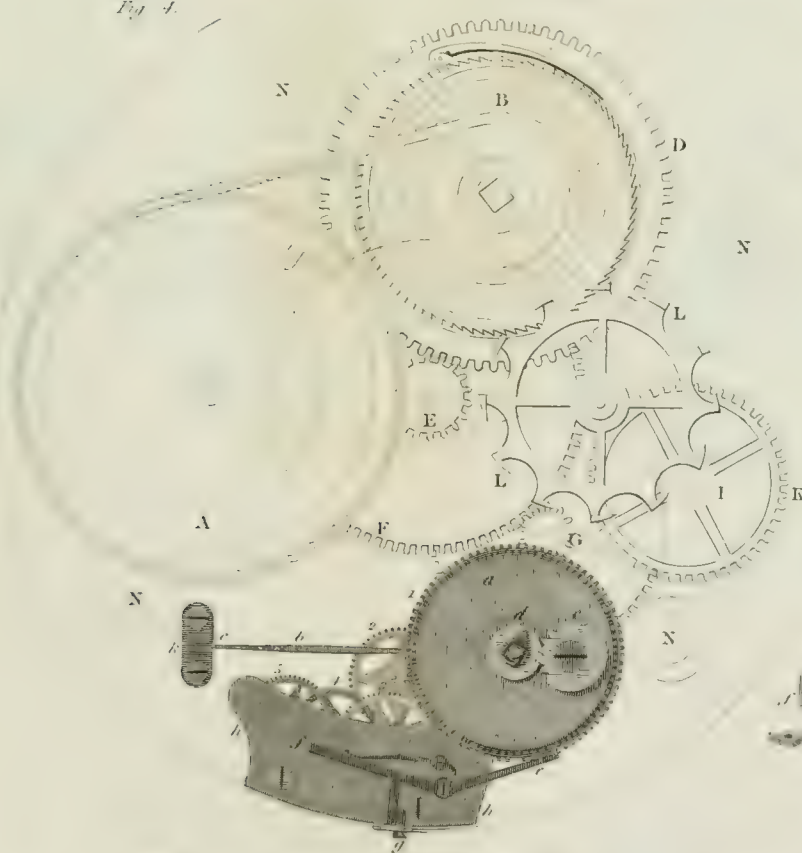


Fig 7

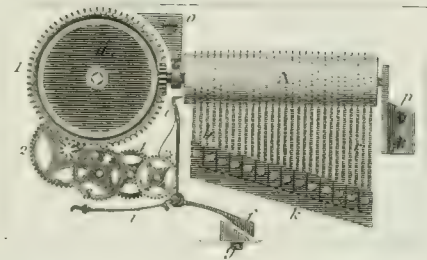


Fig 8

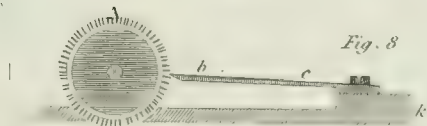


Fig 9



Fig 5

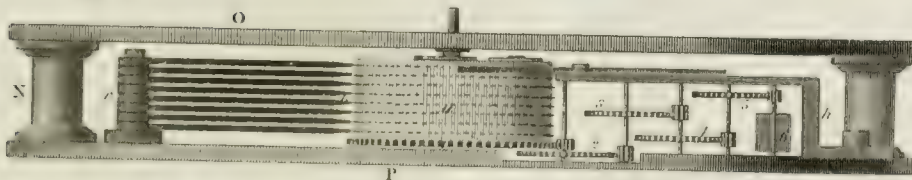


Fig 6

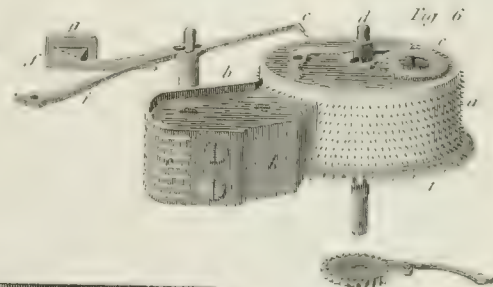


Fig. 7.

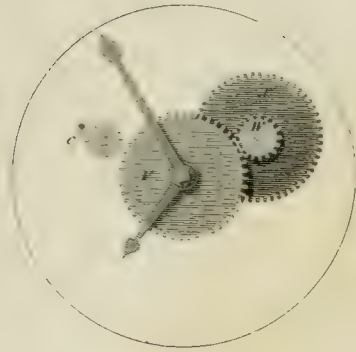
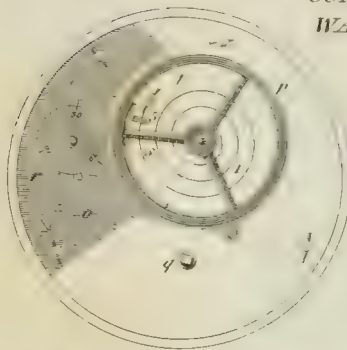


Fig. 5.



COMMON WATCH

Fig. 1.

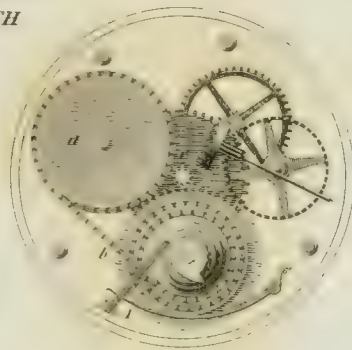


Fig. 3.



Fig. 4.



Fig. 8.

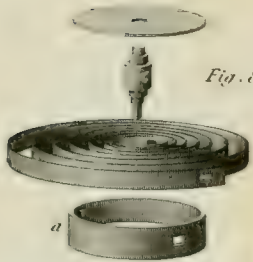


Fig. 6.



Fig. 2.

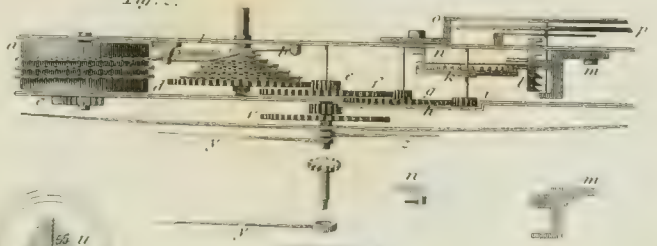
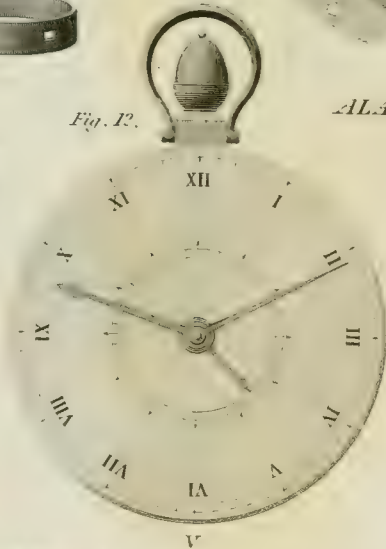


Fig. 12.



ALARM

Fig. 9.

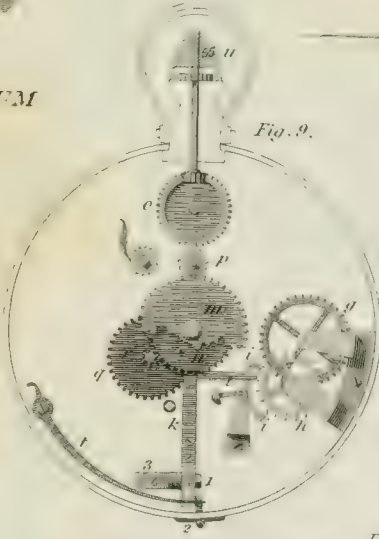


Fig. 10.



Fig. 13.

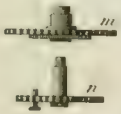


Fig. 11.

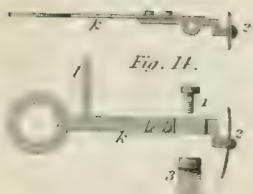


Fig. 12.

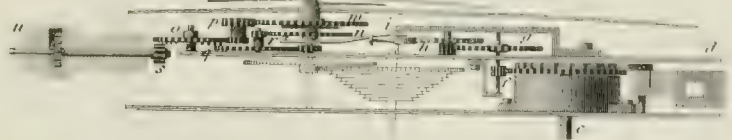


Fig. 15.

ROLLING WATCH

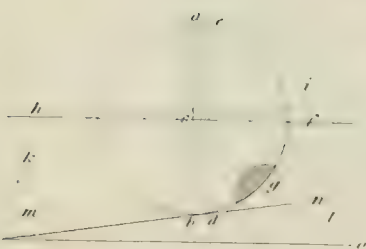


Fig. 16.



Fig. 17.

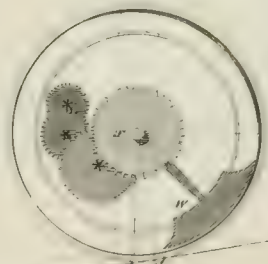
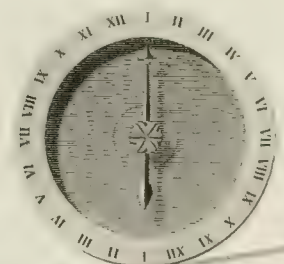


Fig. 18.



REPEATING WATCH.

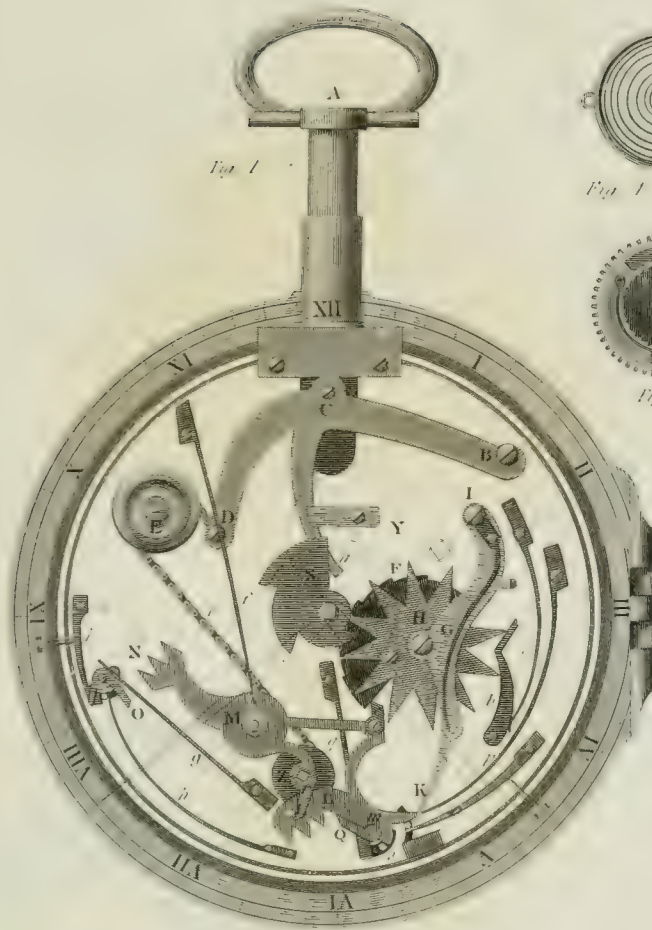


Fig. 1

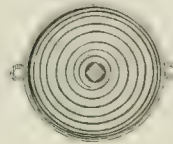


Fig. 4 Spring



Fig. 5

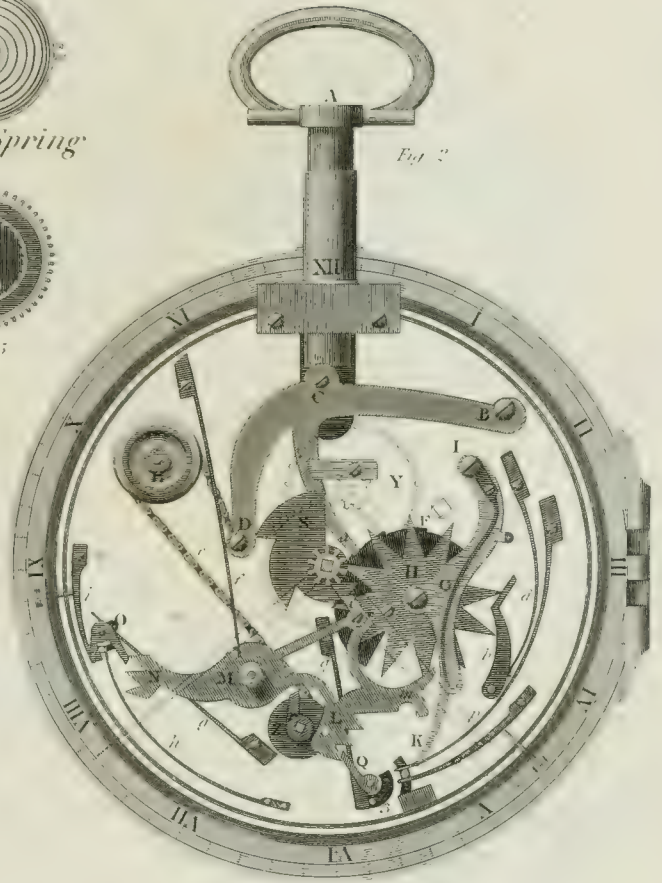


Fig. 2

Fig. 3. WHEELWORK

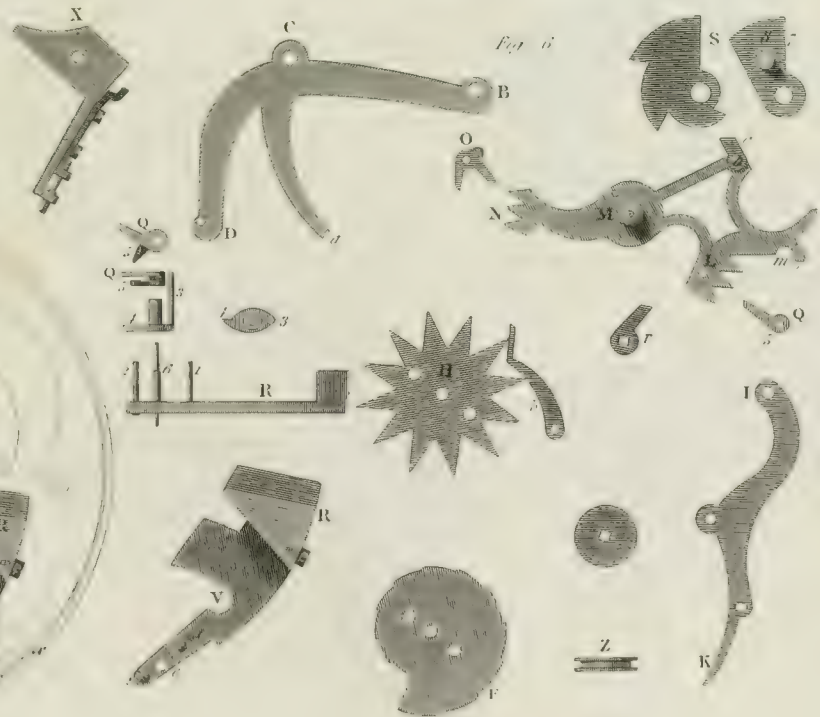


Fig. 6

REPEATING and ALARM WATCHES.

Fig. 1.

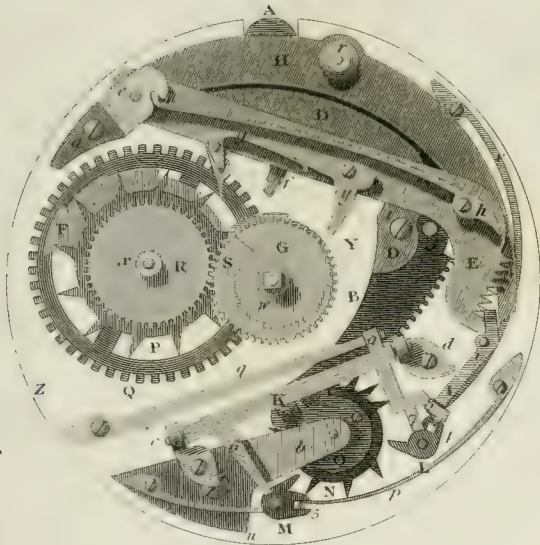


Fig. 2.

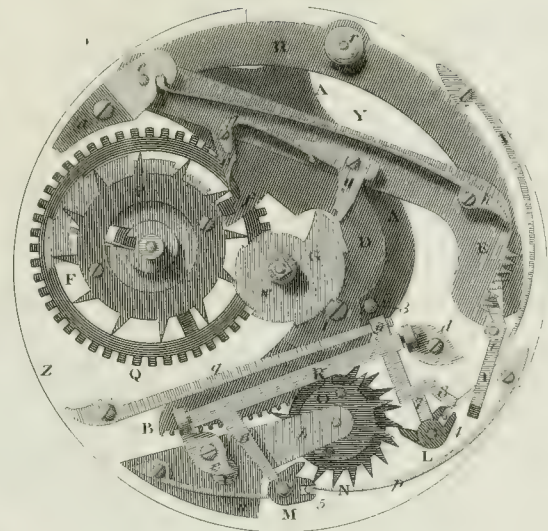


Fig. 5.



Fig. 7.

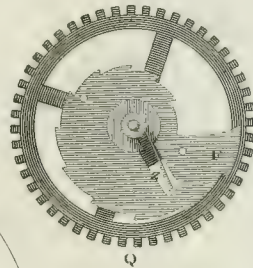


Fig. 8.



Fig. 3.

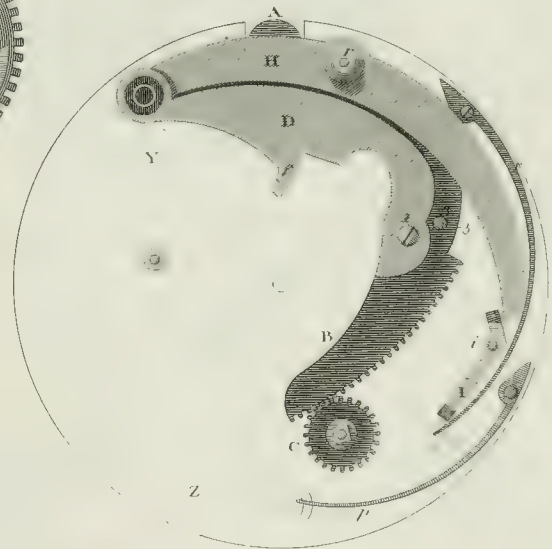


Fig. 6.

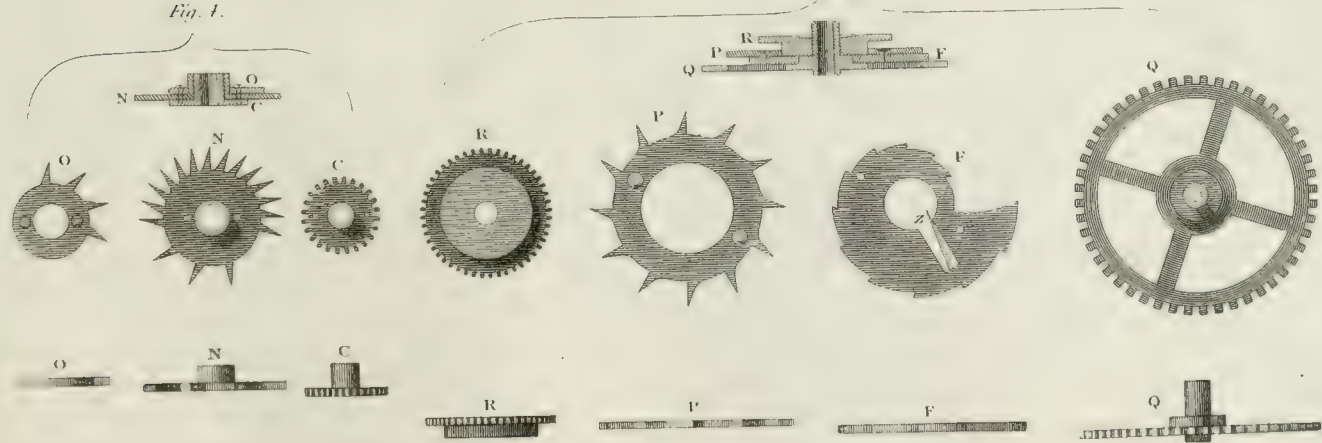
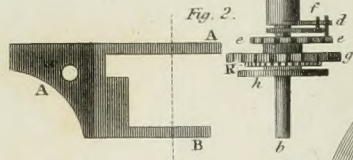
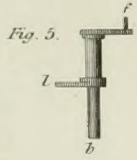
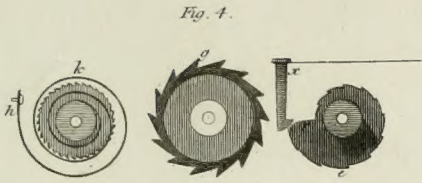
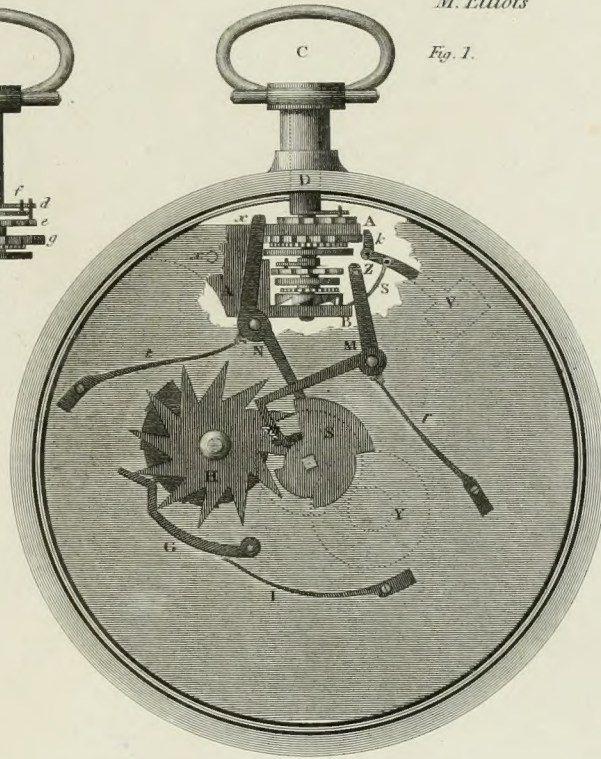


Fig. 4.

HOROLOGY. REPEATING WATCHES.

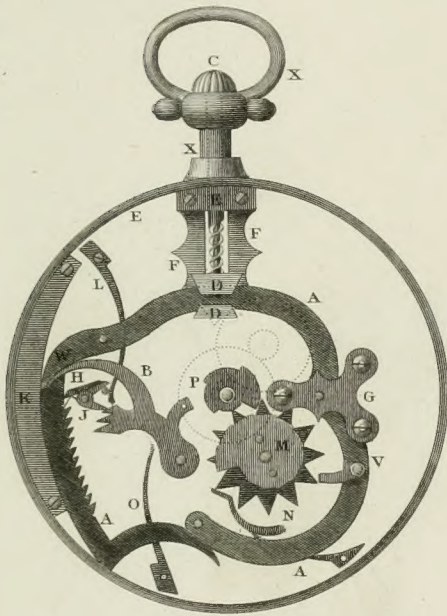


M^r Elliot's



Infallible Repeater by M. Berrollas

Fig. 6.



Detached parts

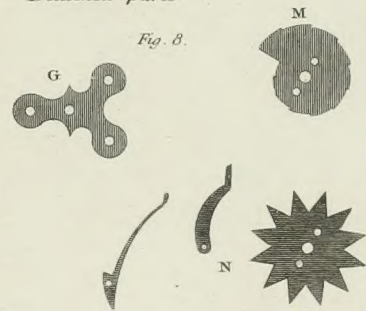
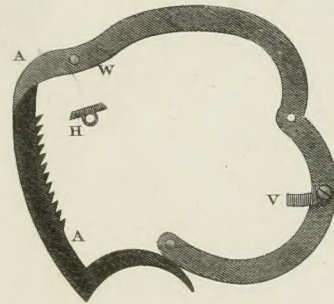
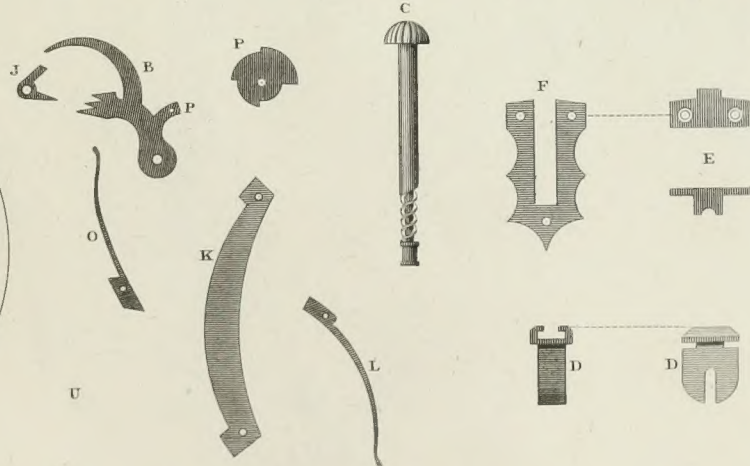
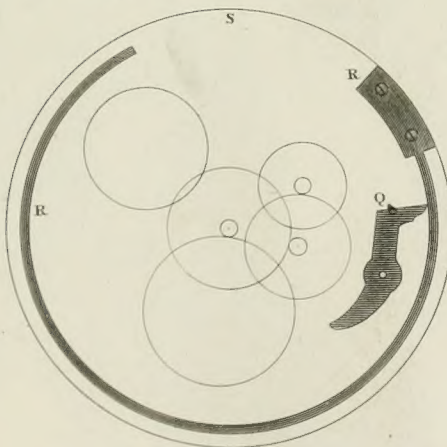


Fig. 7.

Calliper



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v.2

Rees, Abraham
The cyclopaedia



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