fore delivered unto him that was distrain'd, upon Security given to prosecute the Action, shall now be *returned* to him that distrained them. See DISTRESS, REPLEVY, *&c.*

RETURNS are also certain Days in each Term, peculiarly set a-part for the several Kinds of Proceedings, in any Cause to be determined. See TERM, *&c.*

They are also call'd *Days in Bank*. See DAY.

Hillary Term has four such *Returns*.—viz. *Octabis Hillarii*, eight Days after *Hillary* Day; 2. *Undena Hillarii*, fifteen Days; *Crastina Purificationis*, the Day after the Purification; and *Octabis Purificationis*, eight Days after, inclusive.

Easter Term has five *Returns*; viz. *Quindena Paschæ*, fifteen Days after *Easter*; *Tres Paschæ*, three Weeks after; *Mense Paschæ*, the Day-Month after *Easter*; *Quinque Paschæ*, the Day five Weeks from *Easter*; and *Crastino Ascensionis Domini*, the Day after *Ascension-Day*.

Trinity Term has four *Returns*; viz. *Crastino Trinitatis*, the Day after *Trinity*; *Octabis Trinitatis*, eight Days after, inclusive; *Quindena Trinitatis*, fifteen Days after; and *Tres Trinitatis*, three Weeks after.

Michaelmas Term has six *Returns*; viz. *Tres Michaelis*, three Weeks after *Michaelmas*; *Mense Michaelis*, the Day-Month after *Michaelmas*; *Crastino Animarum*, the Day after *All-Souls*; *Crastino Martini*, the Day after *Martinmas* Day; *Octabis Martini*, eight Days after, inclusive; and *Quindena Martini*, fifteen Days. See TERM.

RETURN, in Building. A Side or Part that falls away from the Foreside of any straight Work, is call'd the *Return*.

RETURNS of a Trench, in Fortification, are the turnings and windings which run from the Lines of a Trench. See TRENCH.

RETURNO *habendo*, or RETURNUM *Averiorum*, a Writ which lies for him who has avow'd a Distress made of Cattle, and proved his Distress to be lawfully taken; for the *Return* of the Cattle distrain'd unto him, which before were replevied by the Party distrain'd, upon Surety given to pursue the Action. See DISTRESS, *&c.*

The same Writ is granted when the Plaint or Action is removed by *Recordare*, or *Accedas ad Curiam*, into the Court of Common-Pleas; and he whose Cattle were distrain'd, makes Default, and does not prosecute his Action. See

RETURNUM *Irreplegiabile*, a Writ Judicial, sent out of the Common-Pleas to the Sheriff, for the final Restitution or Return of Cattle to the Owner, unjustly distrain'd as Damage-feazant, and so found by the Jury before Justices of Assize in the County, or otherwise, through Default of Prosecution. See RETURN, DISTRESS, REPLEVY, *&c.*

REVE, or GREVE, in antient Customs, the Bailiff of a Franchise or Manor; thus call'd, especially in the Western Parts. See GREVE.

Hence *Shir-reve*, Sheriff, *Port-greve*, *Church-reve*, &c. See SHERIFF, PORTGREVE, *&c.*

REVE is also used in antient Customs for a Duty or Imposition on Merchandices imported or exported. See DUTY and CUSTOM.

M. *du Cange* derives the Word from the *Latin*, *rogare*, to ask; as being a Tribute antiently granted Princes at their Request, as a Free-Gift.

REVEILLE, a Beat of the Drum, intended to give Notice that it is Day-break; and that the Soldiers are to rise, and the Centries forbear challenging. See DRUM.

The Word is *French*, form'd of the Verb *reveiller*, to awake.

REVELATION, the Act of revealing, or making a thing publick which before was a secret, or unknown.

The *Revelation* of a Confession made by the Confessor, is adjudg'd in the *Romish* Church, to deserve the most exemplary Punishment. See CONFESSION.

The Word *Revelation* is used, by way of Eminence, for the Discoveries made by God to his Prophets, *&c.* and by them to the World. See PROPHECY.

The *Romanists* have two huge Volumes of the *Revelations* of St. *Bridget*. See LEGEND, VISION, *&c.*

The Word is form'd from the *Latin*, *revelo*, of *re* and *velum*, q. d. unvail.

REVELATION, in Religion, is the Discovery which God has made to the World by the Mouths of his Prophets; of certain Points of Faith and Duty, which they could not learn from natural Reason See NATURE, REASON, FAITH, *&c.*

Religion is divided into natural Religion; and *Revelation*, or *revealed Religion*. See RELIGION.

The Christian *Revelation* is that made by Christ, and his Apostles, in the New Testament. See TESTAMENT.

The *Jewish Revelation* is that made by *Moses* and the Prophets, in the Old Testament. See BIBLE, PROPHET, *&c.*

A late Author observes, somewhat invidiously, that 'tis the common Method of all new *Revelations*, to be built on Precedent ones.—Thus, the Mission of *Moses* to the *Israelites*, supposes a former *Revelation* to *Abraham*, &c. The Mission of Christ supposes that of *Moses*; and the pretended Mission of *Mahomet*, supposes the Mission of Christ. The Mission of *Zoroaster* to the *Persians*, supposes the Religion of the *Magi*, &c.

The general Foundation of all *Revelation* is this, That God is pleased Man should know something relating to himself, his own Nature, Dispensation, *&c.* which the natural Faculties he was pleased to create him withal, could not attain to; and that he requires some Duty or Service at our Hands, more than what necessarily follows from the Relation we are under to him as our Creator, Preserver, *&c.*

Particular or occasional *Revelations* have their particular Genius's, Characteristicks, and Designs.—That made by *Moses* and the Prophets, chiefly related to the Nation of the *Jews*, considered as the Descendants of *Abraham*: Its Design seems to have been to rescue that People from their Slavery; to settle them n a new Plantation; to give them a set of Laws; to new form their Manners; to support them under Difficulties and Dangers of their Enemies, from an Opinion of their being under the immediate Direction and Appointment of God; to keep them from intermixing again with their Neighbours, from an Opinion of their being a *chosen People*, and of a Messiah to be born among them; and to lay a Foundation of a Restoration, in case of their being oppress'd, from the Opinion of a Deliverer.—To some or other of these Ends do all the Old Testament Prophesies seem to tend.

The Christian *Revelation* is founded on a Part of the *Jewish*.—The Messiah promis'd in the one, is *reveal'd* in the other. All the rest of the *Jewish Revelation*, which related peculiarly to the *Jewish* People, is here set a-side; and only that Part of it which was to affect the World in general, we mean that relating to the coming of the Messiah, is here built upon. See MESSIAH.

Indeed it must be own'd the *Jews* ever look'd on this Part as peculiar to themselves, as any of the rest: The Messiah was promised to *them*; he was to be *their* Deliverer, *their* Restorer, *&c.*—But upon the taking Place of this new *Revelation*, a new Scene was opened—This Part of the old *Revelation*, it was shewn, was all Typical, or Allegorical; and the Prophesies relating hereto, not to be understood in their primary or litteral Sense. The Messiah was not to be the Restorer of the *Jewish* Sovereignty and Liberties, which were now fallen into the Hands of the *Romans*, but to restore and re-establish the World, who had lost their original Righteousness, and were become Slaves of Sin; to preach Repentance and Remission, and at last to suffer Death, that all who believ'd in him, might not die, but have everlasting Life.

Such is the Tenor and Design of the Christian *Revelation*, which in the Event, was so far from being what it had been apprehended to be, by the People to whom it was first promis'd; that it proved the very Reverse; and instead of re-establishing and confirming the other Branches of their *Revelation*, superseded, and set them all aside.—The Pale was now broken down, and the being of the Seed of *Abraham*, ceas'd to be a Privilege; all the World being invited on the same Terms with the *Jews*.

The Consequence was, that the *Jews* denying this to be the Messiah that had been promised to them, as not able to see the Prophecies fulfilled in him, for want of the typical Meanings thereof, were generally excluded from the Priviledges of that Mission which had been supposed wholly intended for them; And had their Ruin compleated from the very means whence they expected their Redemption. See TYPE, PROPHESY, *&c.*

REVELS, Entertainments of Dancing, Masking, Gaming, Acting of Comedies, Farces, *&c.* antiently very frequent in Inns of Courts, at certain Seasons, and in Noblemen's, *&c.* but now much disused.

The Officer who has the Direction or ordering hereof, was called the *Master of the Revels*.

The Word is form'd from the *French*, *reveiller*, to awake.

REVENUE, the yearly Rent or Profits arising to a Man from his Lands, Possessions, *&c.* See RENT.

The *Revenue* of this Manor consists in Tiths, Rents, &c. See MANOR, *&c.*

The *Revenues* of the *English* Clergy were first fix'd by King *Ethelwolf*, Anno 855; who granted them for ever, the Tith of all Goods, and the tenth Part of all the Lands of *England*, free from all Secular Service, Taxes, Impositions, *&c.* See TITH and CLERGY.

The certain *Revenues* of the King of *England* were antiently greater than those of any King in *Europe*; and 'till the time of the Civil Wars they enjoy'd in Domains and Fee-Farm Rents almost enough to Discharge all the ordinary Expences of the Crown, without any Tax or Imposition on the Subject.

Upon the Restauration, the Crown *Revenues* being found much alienated, and the Crown Charges increas'd; the Parliament settled a yearly Revenue of 1,200000 *l.* upon the King; so much as the former Crown *Revenues* fell short of that Sum, to be rais'd on Goods exported and imported, upon Liquors, and Fire-Hearths. See DUTY, *&c.*

At the Death of King *Charles* II. the *Revenue* amounted to 1,800,200 *l. per Ann.*—In King *James* IIds. Time, it was rais'd to 2,000,000 *l.* which was computed to be one tenth of the *Revenues* of the whole Kingdom.

At the same time the *Revenues* of the King of *France* were computed at seven Millions Sterling; and those of the States of

Holland, at three Millions.—*For more Particulars of this Kind*, see POLITICAL *Arithmetic*.

REVENUE, in Hunting, a Mess of Flesh, formed chiefly of a Cluster of whitish Worms on the Heads of Deer, and occasioning them to cast their Horns, by gnawing the Roots thereof. See HEAD, HORN, *&c.*

The *Revenue* distill'd, is said to help Women in Travel.

REVENUE is also used for a new Tail of a Partridge, growing out after the loss of a former.—The *Revenue* is measured by Fingers. Thus we say, a Partridge of two, three, four Fingers *Revenue*.

The Word *Revenue* is *French*, form'd from *revenir*, to return. —Whence *Revenue* is sometimes used in antient Authors for a Return: As the *Revenue* of *Easter*. See RETURN.

REVERBERATION, in Physicks, the Act of a Body repelling or reflecting another, after its unpinging thereon. See REFLECTION.

In the Glass-Men's Furnaces, the Flame *reverberates*, or bends back again, to scorch the Matter on all Sides.

Echo's are occasioned by the *Reverberation* of Sounds from arch'd Obstacles. See ECHO.

The Word is form'd from the *Latin*, *re* and *verbero*, I beat again.

Reverberation and *Resilition* refer to the same Action; only the one to the Agent, the other to the Patient.—A polished Body *reverberates* the Rays all around: The *Resilition* of the Rays does not arise from their striking against the solid Parts of Bodies. See RESILITION and REFLECTION.

REVERBERATION, in Chymistry, a kind of Circulation of the Flame, by means of a *Reverberatory*; or the return of the Flame from the top of the Furnace, back to the Bottom. See REVERBERATORY.

Reverberation is of two Kinds.—The first with a close Fire; that is, in a *Reverberatory* Furnace, where the Flame has no Vent a-top; being cover'd with a Dome, or Capital, which repels its Action back on the Matter, or the Vessel that contains it, with increased Vehemence.

After this Manner are Refining, the Distillation of acid Spirits, *&c.* perform'd. See DISTILLATION and REFINING.

Reverberation with an open Fire, is that performed in a Furnace or *Reverberatory* whose Registers are all open; chiefly used in Calcination. See CALCINATION, AIR, *&c.*

REVERBERATORY, or REVERBERATING *Furnace*, is a Chymical Furnace built close all around, and cover'd a-top with a Capital of Bricks or Tiles, so as not to give any Vent to the Heat or Flame, but to determine it to *Reverberate* or turn back from the Brick Work with new Force, upon the Matters placed at Bottom. See REVERBERATION.

When the Fire has no Vent or Passage a-top, 'tis a *whole Reverberatory*; when the middle of the Capital is open, and only the Sides close, so that there is only a half Circulation of the Flame, 'tis call'd a *half Reverberatory*.

The *reverberating* Furnace is chiefly used for the Fusion of Metals, and Minerals, and other Occasions where the most intense Heat is required, as in Assaying, *&c.* Whence it is also called the *Melting Furnace*, and *Assaying Furnace*. See FURNACE, FIRE, FUSION, ASSAY, *&c.*

REVEREND, a Title of Respect given to Ecclesiasticks. See TITLE and QUALITY.

The Religious Abroad are call'd *Reverend Fathers*; Abbesses, Prioresses, *&c.* are call'd *Reverend Mothers*. See ABBOT, RELIGIOUS, *&c.*

With us, Bishops are *Right Reverend*, and Archbishops *Most Reverend*.—In *France* their Bishops, Archbishops, and Abbots, are all alike *Reverendissimo's*, *most Reverends*. See BISHOP, *&c.*

REVERIE, a Term purely *French*, yet now frequently used in *English*.

It signifies, litterally, a Delirium, Raving, or Distraction. See DELIRIUM.

Thus we say, 'tis an ill Sign when the Patient falls into a *Reverie*.

Hence it comes, likewise, to be used for a ridiculous, extravagant Imagination, Action, or Proposition; a Chimera or Vision. —Thus we say, Authors obtrude abundance of their *Reveries* upon us for solid Truths.

But its most ordinary use among *English* Writers is for a deep, disorderly Musing, or Meditation; equivalent to what we popularly call a *Brown-study*.—Thus: A little Distraction I would allow; but for that continued Series of *Reveries* some People are guilty of, who are ever absent from the Place where you see them, and are never present any where, 'tis inexcusable.

REVERSE, in Law, *&c.*—To *Reverse*, *reverser*, signifies to undo, repeal, or make void. See REPEAL, ANNUL, *&c.*

The Word is formed of the *Latin*, *re*, again, and *versus*, turn'd.

REVERSE, of a Medal, Coin, *&c.* is the second, or back-side; in Opposition to the Head or principal Figure. See COIN, MEDAL, *&c.*

F. *Chamillart*, a Jesuit, has an express Dissertation on this Point, whether or no the *Reverses* of Medals have always a Regard to the Emperor's or Emperess's whose Heads are represented on the Front Side of the Medal? He says, that till of late the Antiquaries have made no doubt of it; but that there are now several Authors of another Opinion.

REVERSE, in Fencing, a Back-stroke. See GUARD, FENCING, *&c.*

REVERSED, in Heraldry, a thing turned backwards, or upside-down.

REVERSED *Talon*, in Architecture. See TALON.

REVERSING, or RENVERSING, in Music, the inverting of the Order of the Parts; that is, the placing of the higher Part or Treble, in the room of the lower Part or Bass. See PART, BASS, TREBLE, *&c.*

Reversing is frequently practiced in figurative Counterpoint, where the Bass serves as Treble; and the Treble, at the same time, as Bass; and all this, in such manner, as that the Harmony, though very different, is yet as correct as before the *reversing*, when the Parts were in their natural Order.

To know how to dispose the Parts, so as the *reversing* mayn't do any Damage, is a secret, whereon M. *Brossard* has promis'd a Treatise express.

A *revers'd Figure*, or *Counterfugue*, call'd by the *Italians*, *per contrarii movementi*, is when the Guida falls; and the other instead of imitating in falling, imitates in rising; or a Figure *per Arsin* and *Thesin*. See ARSIN.

REVERSION, in Law, is defined by *Coke*, a returning of Lands, *&c.* into the Possession of the Donor, or his Heirs; after the Expiration of the Term for which they were given or granted. See DONATION, *&c.*

The Word has a double Acceptation.—The first is, *Jus revertendi cum status Possessionis defecerit*, which is no more than an Interest in the Land, when the Occupation or Possession of it shall fall.

The second is, when the Possession and Estate, which was parted with for a time, ceaseth, and is determined in the Persons of the Alienees, Assignees, Grantees, or their Heirs; or effectually returns to the Donor, his Heirs or Assigns, whence it was derived.

This is the most proper Signification of the Word, which is derived from *Revertor*: *Et apte dici non potest Reversio Antequam revertatur in facto*. Littlet.

The Difference between a *Reversion* and a Remainder consists in this, that a Remainder is general, and may remain or belong to any Man but him that granteth or conveyeth the Land, *&c.* See REMAINDER.

Whereby a *Reversion* is to himself, from whom the Conveyance of the Land, *&c.* proceeded, and is commonly perpetual, as to his Heirs also.—And yet sometimes *Reversion* is confounded with Remainder.

For the Values of *Reversions*, or Estates in *Reversion*, the little Book of Tables for renewing and purchasing College, and Church Leases, printed at *Cambridge* in 1700, and recommended by Sir *Isaac Newton*, furnishes us with a very useful Table, which shews what one Pound due at the end of any Number of Years to come, not exceeding 40, is worth in ready Money, at 5, 6, 7, 8, 10, and 12 *per Cent. per. Ann.*

Suppose, it required, what 1 *l.* due a Year hence, is worth in ready Money: To find this by the common Operations, the Method is this.—Let 100 *l.* with the Interest of a Year added to it, be the first Term in the Rule of Three; 100 *l.* the second, and 1 *l.* the third; (for as 100 *l.* with its Interest going on to the end of the Year, is to a bare 100 *l.* then due: So must 1 *l.* with its growing Interest, be to the Decrease of 1 *l.* at the Years end) then, at 6 *l. e. gr.* and 10 *l. per Cent.* the Work will stand thus:

As, 106 . 100 : : 1 . . 94339, or 18 *s.* 10 *d.* $\frac{1}{4}$.
110 . 100 : : 1 . . 90909, or 18 *s.* 2 *d.*

Whence it appears, that 1 *l.* due a Year hence, at 6 *l. per Cent.* is worth 18 *s.* 10 *d.* $\frac{1}{4}$; and at 10 *per Cent.* to 18 *s.* 2 *d.* So that 18 *s.* 10 *d.* $\frac{1}{4}$. ready Money, is worth 20 *s.* to be paid a Year hence at 6 *per Cent.*; and 18 *s.* 2 *d.* ready Money, is worth 20 *s.* to be paid a Year hence at 10 *per Cent.* See INTEREST.

But this Table shortens the Work.—To find by it how to renew a Lease of 21 Years, that hath but one Year lapsed, at the Rate of 10 *per Cent*; look into the same, and under the Rate of Interest mentioned, and right against 21 Years, in the common Angle of meeting, you have 2 *s.* 8 *d.* $\frac{1}{2}$. which is the Fine to be paid to renew one Year lapsed in the said Lease; supposing the Rent to be 1 *l. per Annum*. For it is 21 Years e're the Lease is compleated, in which time the Fine of 2 *s.* 8 *d.* $\frac{1}{2}$. will amount to 20 *s.* and therefore by paying that Fine, the Lease may fairly be made up again.

Suppose again, an Estate in Fee-simple, whose real Value is 100 *l.* but mortgaged, or Leased out for 20 Years; what is the *Reversion* of it now worth at 6 *l. per Cent.* Interest?—By the Table you find, that 1 *l.* to be paid 20 Years hence, is worth but 6 *s.* 2 *d.* $\frac{3}{4}$. and multiplying that by 100, you'l find 100 times 6 *s.* is 30 *l.* 00 *s.* 00 *d.* 100 times 2 *d.* or 200 *d.* makes 00 *l.* 16 *s.* 8 *d.* and 100 times $\frac{3}{4}$, or 30 makes 00 *l.* 6 *s.* 3 *d.* the Sum is 31 *l.* 2 *s.* 11 *d.* which is the present Value of 100 *l.* to be paid 20 Years hence.

A TABLE

A TABLE of *Reversions* shewing what 1 *l.* due any Number of Years hence, under 41, is worth in ready Money at 5, 6, 7, 8, 10, and 12 *l. per Cent.*

Years.	5 *per Cent.*			6 *per Cent.*			7 *per Cent.*			8 *per Cent.*			10 *p. Cent.*			12 *p. Cent.*		
	s.	d.	q.	s.	d.	q.	s.	d.	q.	s.	d.	q.	s.	d.	q.	s.	d.	q.
1	19	0	2	18	10	1	18	8	0	18	6	0	18	2	0	17	10	1
2	18	1	2	17	9	1	17	5	2	17	1	3	16	6	1	15	11	1
3	17	3	1	16	9	2	16	3	3	15	10	1	15	0	3	14	3	0
4	16	5	1	15	10	0	15	3	0	14	8	1	13	8	0	12	8	2
5	15	8	0	14	11	1	14	3	1	13	7	1	12	5	0	11	4	0
6	14	11	0	14	1	0	13	4	0	12	7	0	11	3	2	10	1	3
7	14	2	2	13	3	2	12	5	1	11	8	0	10	3	0	9	0	3
8	13	6	1	12	6	2	11	7	2	10	9	2	9	4	0	8	1	0
9	12	10	2	11	10	0	10	10	2	10	0	0	8	5	3	7	2	2
10	12	3	1	11	2	0	10	2	0	9	3	0	7	8	2	6	5	0
11	11	8	0	10	6	1	9	6	0	8	6	3	7	0	0	5	9	0
12	11	1	2	9	11	1	8	10	2	7	11	1	6	4	2	5	1	2
13	10	7	1	9	4	2	8	3	2	7	4	0	5	9	2	4	7	0
14	10	1	0	8	10	0	7	9	0	6	9	2	5	3	0	4	1	0
15	9	7	2	8	4	0	7	3	0	6	3	2	4	9	1	3	7	3
16	9	2	0	7	10	2	6	9	1	5	10	0	4	4	1	3	3	0
17	8	1	2	7	5	0	6	4	0	5	4	3	3	11	1	2	11	0
18	8	4	0	7	0	0	5	11	0	5	0	0	3	7	0	2	7	0
19	7	11	0	6	7	0	5	6	1	4	7	1	3	3	0	2	4	1
20	7	6	1	6	2	3	5	2	0	4	3	2	2	11	2	2	1	0
21	7	2	0	5	10	2	4	10	0	3	11	3	2	8	2	1	10	0
22	6	10	0	5	6	2	4	6	0	3	8	0	2	5	2	1	8	0
23	6	6	0	5	3	0	4	2	2	3	4	3	2	2	3	1	5	2
24	6	2	1	4	11	1	3	11	1	3	1	3	2	0	1	1	3	3
25	5	10	3	4	8	0	3	8	1	2	11	0	1	10	0	1	2	0
26	5	7	1	4	4	3	3	5	1	2	8	1	1	8	0	1	0	2
27	5	4	1	4	1	3	3	2	2	2	6	0	1	6	1		11	0
28	5	1	0	3	10	3	3	0	0	2	3	3	1	4	2		10	0
29	4	10	1	3	8	1	2	9	2	2	1	3	1	3	0		9	0
30	4	7	2	3	6	1	2	7	2	1	11	3	1	1	3		8	0
31	4	5	1	3	3	1	2	5	1	1	10	0	1	1	0		7	0
32	4	2	1	3	0	2	2	3	2	1	8	1		11	1		6	1
33	4	0	0	2	10	1	2	1	2	1	6	3		10	1		5	2
34	3	9	2	2	8	3	2	0	0	1	5	1		9	1		5	1
35	3	7	2	2	6	2	1	10	2	1	4	0		8	2		4	2
36	3	5	1	2	5	1	1	9	0	1	3	0		7	3		4	0
37	3	3	1	2	3	2	1	7	2	1	2	0		7	0		3	1
38	3	1	2	2	2	0	1	6	2	1	1	0		6	1		3	0
39	2	11	3	2	0	0	1	5	0	1	0	0		5	3		3	0
40	2	10	0	1	11	0	1	4	0	0	11	0		5	1		2	2

REVERSION *of Series*, in Algebra, is a Method finding of a natural Number from its Logarithm given; or the Sine from its Ark; or the ordinate of an Ellipsis from an Area given to be cut off from any Point in the Axis. See SERIES. See also LOGARITHM, SINE, ORDINATE, *&c.*

REVERT, in Law; a thing is said to *revert* when it returns or falls back to its first Owner. See REVERSION.

All Honours, and Royal Fees, alienated, *revert* to the Crown; or are *revertible*.—Apanages, or Portions of younger Sons of Kings, are granted on Condition of *Reversion*. See APANNAGE.

REVESTIARY, or REVESTRY. See VESTRY.

REVIEW, in War, the shew or Appearance of a Body of Soldiers ranged in form of Battle; and afterwards made to file off; to see if the Companies be compleat, or to receive their Pay, *&c.*

The General always *Reviews* his Troops before they go into Winter-Quarters, *&c.* See QUARTER.

REVIEW, in Chancery.—A *Bill of* REVIEW is, where the Cause has been heard, and the Decree sign'd and enroll'd; but some Error in Law appers in the Body of the Decree; or some new Matter discovered in Time after the Decree made. See DECREE.

This Bill is not exhibited but by Leave of the Court. See BILL, CHANCERY, *&c.*

REVIVOR, in Law.—A *Bill of* REVIVOR is where a Bill has been exhibited in Chancery against one who answers; but before the Cause is heard, or at least before the Decree is enrolled, one of the Parties dies.

In this Case, a Bill of *Revivor* must be brought, to the End the former Proceedings may stand *revived*; and the Cause be finally determined. See BILL.

REVISE, among Printers, a second Proof of a printed Sheet. See PRINTING.

REVIVIFICATION, or RESUSCITATION, in Chymistry, the Art of restoring a mix'd Body to its first State, after it had been alter'd and disguis'd by Dissolution, Calcination, or the like.

Thus Cinnabar and other Preparations of Mercury, are *revived*, or *revivified* into fluid Mercury.—*Olaus Borrichius* assures us, that having tormented Mercury with several Fires, for the Space of a whole Year; having reduced it into Water, Turbith, into Ashes, *&c.* it *revivified*, and resumed its first Form in the middle of the Flames, by the Attraction of Salt of Tartar. See MERCURY.

Gold, and other Metals, 'tis said, may be recovered or *revivified* into running Mercury, by the use of certain Salts, which penetrating the Substance of the Metals, absorb the fixing Sulpher or Cement by which the Mercury was before bound into a malleable Mass. See METAL, GOLD, *&c.*

REVIVING, in Law, a renewing of Rents and Actions, after they had been extinguished. See RENT, EXTINGUISHMENT, *&c.*

REVOCATION, in Law, the Act of *revoking*, calling back, or annulling a Power, Grant, *&c.* made before.

The

The *Revocation* of an Offer after it is accepted of, is invalid.—All preceding Wills or Teſtaments are *revoked* by the laſt.—A Prior Clauſtral is *revocable* at Pleaſure.—The *Revocation* of the Edict of *Nants* was fatal to the *French* Proteſtants. See EDICT.

REVOLT. See REBELLION.

REVOLUTION, in Politicks, is a grand Turn or Change of Government.

There are no States in the World but have undergone frequent *Revolutions*.—The Abbot *de Vertot* has furniſh'd us with two or three good Hiſtories, of the *Revolutions of Sweden*, the *Revolutions of Rome*, &c.

The Revolution, is uſed by Way of Eminence, for the great Turn of Affairs in *England* in 1688; when King *James* II. abdicating, the Prince and Princeſs of *Orange* were declared King and Queen of *England*, &c. See ABDICATION.

The Word is form'd from the *Latin*, *re-volvo*, to roll backwards.

REVOLUTION, in Geometry. The Motion of any Figure quite round a fix'd Line, as an Axis, is called the *Revolution* of that Figure; and the Figure ſo moving is ſaid to *Revolve*. See AXIS.

Thus a right angled Triangle revolving round one of its Legs, as an Axis, generates by that *Revolution*, a Cone. See CONE.

REVOLUTION, in Aſtronomy, is the Period of a Star, Planet, Comet, or other Phænomenon; or its Courſe from any Point of its Orbit, till it return to the ſame. See PLANET, PERIOD, *&c.*

The Planets have a twofold *Revolution*; the one about their own Axis, uſually called their *Diurnal Rotation*, which conſtitutes what we call their *Day*. See DIURNAL and DAY.

The other about the Sun, called their *Annual Revolution*, or *Period*; conſtituting their *Year*. See ANNUAL and YEAR.

Saturn, according to *Kepler*, makes his *annual Revolution* in the Space of 29 Years, 174 Days, 4 Hours, 58′ 25″ 30‴. *Jupiter* in 11 Years, 317 Days, 14 Hours, 49′ 31″ 56‴. *Mars* 1 Year, 321 Days, 23 Hours, 31′ 56″ 49‴. *Venus* in 224 Days, 17 Hours, 41′ 55″ 14‴. *Mercury* in 87 Days, 23 Hours, 14′ 24″. See SATURN, JUPITER, MARS, *&c.*

REVULSION, in Medicine, the turning of a violent Flux of Humours, from one Part of the Body to another, either neighbouring or oppoſite, Part. See HUMOUR, DERIVATION, *&c.*

In very dangerous Wounds, where the loſs of Blood is great, and the ſtopping it ſpeedily enough, impracticable; 'tis uſual to open a Vein in ſome remote Part, to cauſe a *Revulſion*; that is, to turn the Courſe of the Blood from the former Part. See PHLEBOTOMY.

Revulſions are alſo cauſed by Cupping, Friction, *&c.* See CUPPING and FRICTION.

The Term *Revulſion* is alſo uſed for a great Turn or Revulſion of Humours in the Body.—Sudden Diſeaſes are occaſioned by great *Revulſions* of Humours, which fall all at once on certain Parts.

RHABDOIDES, in Anatomy, a Name given the ſecond true Suture of the Skull; call'd alſo the *Sagittal Suture*. See SUTURE.

The Word is form'd from the *Greek*, ῥάβδος, Rod, or Staff, and εἶδος, form.

RHABDOLOGY, in Arithmetick, a Name ſometimes given to the Method of performing the two moſt difficult and operoſe Rules, *viz.* Multiplication and Diviſion, by the two eaſieſt, *viz.* Addition and Subſtraction; by means of two little Rods or Laminæ, whereon are inſcribed the ſimple Numbers, and which are to be ſhifted according to certain Rules.

Theſe Rods are what we popularly call *Neper Bones*, from their Inventor, a *Scotiſh* Baron, who likewiſe invented Logarithms.

For their Deſcription and Uſe, ſee NEPAIRS-*Bones*.

RHABDOMANCY, an antient Method of Divination, perform'd by means of Rods, or Staves; whence its Name, from the *Greek* ῥάβδος, Rod, and μαντεία, Divination. See DIVINATION.

St. *Jerom* makes mention of this Kind of Divination, in his Commentary on *Hoſeah*, Chap. iv. 12. where the Prophet ſays in the Name of God, *My People ask Council at their Stocks; and their Staff declareth unto them:* Which Paſſage that Father underſtands of the *Grecian Rhabdomancy*.

The ſame he finds over again in *Ezekiel* xxi. 21, 22. where the Prophet ſays, *For the King of Babylon ſtood at the parting of the Way, at the Head of the two Ways, to uſe Divination; he made his Arrows bright:* Or as St. *Jerom* renders it, *he mix'd his Arrows, he conſulted with Images, he look'd in the Liver.*

If it be the ſame Kind of Divination that is mentioned in the two Paſſages; *Rhabdomancy* muſt have been the ſame Superſtition with *Belomancy*. See BELOMANCY.

In effect the two are ordinarily confounded.—The Seventy themſelves Tranſlate the חצים of *Ezekiel* by ῥάβδον, a Rod; though in ſtrictneſs it ſignify Arrows.

This, however, is certain, the Inſtruments of Divination mentioned by *Hoſeah*, are different from thoſe of *Ezekiel*. In the former, 'tis עצה, *etſo*, מקלו, *maklo*, his Wood, his Staff: In the latter חצים, *hhitſin*, Arrows. Though 'tis poſſible they might uſe Rods or Arrows indifferently; the military Men Arrows, and the reſt Rods.

It appears by the Laws of the *Friſones*, that the antient Inhabitants of *Germany* practiced *Rhabdomancy*.—The *Scythians* were likewiſe acquainted with the uſe hereof; and *Herodotus* obſerves, *lib.* iv. That the Women among the *Alani* ſought and gathered together fine ſtraight Rods or Wands, and uſed them in the like Superſtition.

RHAGADES, in Medicine, a *Greek* Term uſed for the Chaps or Clefts in the Lips. See LIPS.

RHAGADES, are alſo a ſort of little chap'd Ulcers of the Oedematous Kind; form'd of a ſharp, ſaline Humour, and occaſioning a great Contraction, and ſtreightening of the Part, which is by this means ſhrivell'd up like a wet Parchment when held to the Fire. See OEDEMATOUS.

They ariſe chiefly on the Fundament, the Neck of the Womb, the Preputium, and even the Mouth; in which laſt Caſe the Patient is not able to ſpeak, chew, or the like.

They are ſometimes moiſt, and of a cancerous Nature, eating deep, and difficult of Cure; but are more commonly of a leſs malignant tendency, being the Conſequences of a Diarrhæa, Dyſentery, or the like. See TUMOR, ULCER, *&c.*

RHAGOIDES, in Anatomy, the ſecond Coat, or Tunic of the Eye; more uſually call'd the *Uvea*. See UVEA.

It has its Name *Rhagoides* as reſembling a Grape-ſtone.

In this is the Hole call'd the *Pupil*. See PUPIL.

RHAPONTICUM, a medicinal Root, in form reſembling Rhubarb; and nearly of the ſame Virtues.—'Tis frequently mix'd with Rhubarb by thoſe who ſend that Drug into *Europe*: They are diſtinguiſh'd by this, that the Rhubarb is uſually in roundiſh Pieces, the internal Streaks or Lines whereof run tranſverſe: And *Rhaponticum* in longiſh Pieces, having its Streaks running length-wiſe.—Beſides, that *Rhaponticum* chew'd in the Mouth, leaves a Viſcidity behind it, which Rhubarb does not. See RHUBARB.

The ſcarcity of the *Rhaponticum* of the *Levaut*, occaſions the *Mountain Rhaponticum*, or *Monk's Rhubarb*, to be frequently ſubſtituted for it, which is a wild *Hypolapathum*.—They are diſtinguiſh'd by this, that the former is yellow without, and reddiſh within; but the latter blackiſh without and yellow within.

Dr. *Quincy*, however, confounds the two, when he ſays, the *Rhaponticum* grows plentifully in *England*; and that 'tis only uſed as an Alterative, and does not come up to a Cathartic.

'Tis certain, what now obtains in the Shops, under the Name of *Rhaponticum*, is no other than the Mountain *Rhapontic*, or Monk's Rhubarb; and is much inferior in Virtue to the *Rhaponticum Verum*.

The *Rhaponticum* was thus call'd, *q. d.* Root of *Pontus*; becauſe chiefly produced in the Country of *Pontus*, in *Aſia*.

RHAPSODI, RHAPSODISTS, in Antiquity, Perſons who made a Buſineſs of ſinging Pieces of *Homer*'s Poems.

Cuper informs us, that the *Rhapſodi* were cloath'd in red when they ſung the Iliad; and in blue when they ſung the Odyſſee.

They perform'd on the Theatres; and ſometimes for Prizes, in Conteſts of Poetry, Singing, *&c.*

After the two Antagoniſts had finiſhed their Parts, the two Pieces, or Papers they were wrote in, were joined together again; whence the Name, *viz.* from ῥαπτω, *ſuo*, I join together; and ᾠδὴ, Ode, Song.

But there muſt have been other *Rhapſodi* of more Antiquity than theſe; People who compoſed Heroic Poems, or Pieces in Praiſe of Heroes and Great Men, and ſung their own Compoſitions from Town to Town for a Livelihood: Of which Profeſſion was *Homer* himſelf.

Hence, ſome Criticks inſtead of the former Derivation, fetch *Rhapſodiſt* from ῥαβδῶ ᾠδὴν, *to ſing with a Lawrel Rod in the Hand*, which it ſeems was the Badge of the Primitive *Rhapſodi*.

Philochorus, again, derives the Word from ῥάπτων ᾠδὴν, *to procure Pieces of Poetry to be compoſed*, as if they were not the Authors of the Poems they ſung. This Opinion, to which *Scaliger* inclines, reduces theſe *Rhapſodi* to the firſt Kind.—In effect, 'tis probable that they were all of the ſame Claſs, whatever Diſtinction ſome Authors may Imagine; and that their Buſineſs was to ſing or rehearſe Poems, either of their own, or other People's Compoſition, as might beſt ſerve their Purpoſe, the getting of a Penny. So that we don't apprehend it any Injury to them, to ſet them on the Foot of our Ballad-ſingers; many of whom, no doubt, Pen their own Ditties. After *Homer*'s Time, 'tis no wonder they confined themſelves altogether to his Pieces, for which the People had the utmoſt Veneration: Nor is it ſurprizing they ſhould erect Stages, *&c.* and Diſpute the Point of Recitation in Fairs and Markets.

RHAPSODOMANCY, an antient Kind of Divination performed by pitching on a Paſſage of a Poet at hazard, and reckoning on it as a Prediction of what was to befall. See DIVINATION and CHANCE.

There were various Methods of practicing *Rhapſodomancy*.—Sometimes they wrote ſeveral Verſes or Sentences of a Poet, on ſo many Pieces of Wood, Paper, or the like; ſhook them together in an Urn, and drew out one, which was accounted the Lot.

Sometimes

Sometimes they cast Dice on a Table, whereon Verses were wrote; and that whereon the Dye lodg'd, contain'd the Prediction.

A third Manner was by opening a Book, and pitching on some Verse, at first Sight. This Method they particularly called the *Sortes Prænestinæ*; and, afterwards, according to the Poet thus made use of, *Sortes Homericæ*, *Sortes Virgilianæ*, &c. See SORTES.

RHAPSODY, in Antiquity, a Discourse in Verse, sung or rehearsed by a *Rhapsodist*. See RHAPSODI.

Others will have *Rhapsody* properly to signify a Collection of Verses, especially those of *Homer*; which having been a long time dispersed in Pieces and Fragments, were at length by *Pisistratus*'s Order, digested into Books, call'd *Rhapsodies*: From the *Greek* ῥάπτω, *suo*, I sew; and ᾠδὴ, Verse, Song.

Hence, among the Moderns, *Rhapsody* is used for an Assemblage of Passages, Thoughts, and Authorities, raked together from divers Authors, to compose some new Piece.—*Lipsius*'s Politicks make such a *Rhapsody*, wherein there is nothing of the Author's own, but Conjunctions and Particles.

RHETORICIANS, a Sect of Hereticks in *Egypt*, denominated from their Leader *Rhetorius*.

The distinguishing Doctrine of this Heresiarch, as represented by *Philastrius*, was, that he approved of all the Heresies before him; and taught that they were all in the right. What *Philastrius* mentions of him appears so absurd and ridiculous that St. *Augustin*, *Hæres.* 7. could not persuade himself it was true.

RHETORIC, RHETORICA, the Art of speaking copiously on any Subject, with all the Advantages of Beauty and Force. See SPEAKING.

My Lord *Bacon* defines *Rhetoric*, very Philosophically, the Art of applying and addressing the Dictates of Reason to the Fancy, and of recommending them there, so as to affect the Will and Desires.—The End of *Rhetoric*, the same Author observes, is to fill the Imagination with Ideas and Images which may assist Nature, without oppressing it.

Vossius defines *Rhetoric* the Faculty of discovering what every Subject affords of use for Persuasion.—Hence, as every Author must *invent* Arguments to make his Subject prevail; *dispose* those Arguments thus found out in their proper Places; and give them the Embellishments of Language proper to the Subject; and, if his Discourse be to be delivered in Publick, utter them with that Decency and Force which may strike the Reader: *Rhetoric* becomes divided into four Parts, *Invention*, *Disposition*, *Elocution*, and *Pronunciation*; each whereof see under its proper Head, INVENTION, DISPOSITION, ELOCUTION, and PRONUNTIATION.

The Word is form'd from the *Greek* ῥέω, *dico*, I speak; whence ῥήτωρ, Speaker, Orator, and ῥητορική.

Rhetoric and *Oratory* differ from each other as the Theory from the Practice; the *Rhetorician* being he who prescribes the Rules of Eloquence; and the Orator he who uses them to Advantage; and speaks Elegantly, *&c.*—Ordinarily, however, the two are used indifferently for each other. See ORATORY.

RHEUM, a thin serous Humour, occasionally oozing out of the Glands about the Mouth and Throat. See HUMOUR.

A Fluxion of *Rheum*, usually happening after taking Cold, occasions Excoriations and Inflamations of the Fauces, Lungs, *&c.* See FLUXION and DEFLUXION.

RHEUM is also used for a *Catarrh*, or a Defluxion of such Humours on the Trachea, and the neighbouring Parts; occasioning a Coughing, Spitting, Hoarseness, Running at the Nose. See CATARRH, COUGH, HOARSENESS, *&c.*

The *Rheum* is not caus'd by a Pituita falling from the Brain on these Parts, as the Antients imagined, there being no Passage from the Brain thither; but from a thin, sharp, serous Humour, oozing out of the Extremities of the Glands of these Parts.

The most ordinary Occasion of *Rheums*, is external Cold; especially the being exposed to it when the Body is much heated. —And hence the Disorder it self is popularly call'd a *Cold*. See COLD.

Rheums falling on the Breast, Lungs, *&c.* are dangerous; others, not very violent, serve to clear the Head, *&c.* The usual Remedies are Astringents, Agglutinants, and Absorbents. See ASTRINGENT, *&c.*

The Word is form'd from the *Greek*, ῥέω, *fluo*, I flow.

RHEUMATISM, in Medicine, a painful Disorder felt in various Parts of the external Body, accompanied with Heaviness, Difficulty of Motion, and frequently a Fever.

Or, a *Rheumatism* is a Pain usually wandering, but sometimes fix'd in the muscular and membranous Parts of the Body; happening chiefly in Autumn.

The proper Seat of the *Rheumatism* is supposed to be in the Membrana Communis of the Muscles; which it renders rigid and unfit for Motion without great Pain. See MEMBRANE.

This Disease is either universal or particular.—*Universal Rheumatism* is that which attacks all the Parts of the Body, even the internal ones.

Particular Rheumatism is that which is confined to particular Parts: In which Case the Pains are usually erratic, passing from one Side to another; but sometimes fix'd, call'd also a *windy* and *scorbutic Rheumatism*.

The *Rheumatism* bears a great Analogy to the Gout; whence some call it the *universal Gout*.—The Difference between them consists in this, that the *Rheumatism* attacks not only the Joints, as the Gout does, but also the Muscles and Membranes between the Joints. See GOUT.

A Fit of the *Rheumatism* is frequently preceded by a Fever of two or three Days; and sometimes by a Shivering.—The Attack happens in various Parts of the Body, as the Hands, Arms, Thighs, Legs, Feet, *&c.* a Redness, Swelling, and Lameness often succeeding.

The Pain sometimes fixing on the Loins, and reaching as far as the *Os Sacrum*; the Disorder is call'd *Lumbago*; and bears a near resemblance to the *Nephritis*; being only distinguishable therefrom by this, that the latter is attended with a Vomiting, which the former is not.

The *Rheumatism* is supposed to arise from a sharp serous Humour thrown on the sensible Parts, and occasioning a Pain by its Vesication.—Dr. *Quincy* says, it proceeds from the same Cause, as that whereby the mucilaginous Glands become stiff and gritty in the Gout. See GOUT.

Dr. *Musgrave* takes it to be occasioned by a sharp alcaline Salt, rather than an acid one; from this Consideration, that the Urine of *Rheumatic* People does not afford above a thirtieth Part of the Alcaline Salt found in that of healthful People.

Hence, he conjectures, that the Salt is retain'd in the Blood, implicated and embarrass'd in the Pituita; by which means it forms a Viscidity which occasions all the Pains and Tumours of the *Rheumatism*.

The exposing of the Body too suddenly to the cold Air, after having heated it to a great Degree; is the most usual remote Cause. —The Cure is by Evacuation, chiefly, according to *Sydenham*, by repeated Phlebotomy, with a plentiful Use of Volatiles and Diluters.

Schmitzius recommends Sudorificks; and *Musgrave*, Catharticks, and Emeticks.

It usually proves a tedious, lasting Disease; holding for several Months, sometimes Years; not continually but by Paroxisms.

In aged Persons, and those of weak Constitutions, and decay'd Viscera, it sometimes seizes the Head.

RHEXIS, or RHEGMA, among Occulists, a Rupture of the Cornea of the Eye. See CORNEA.

The Word is form'd from the *Greek* ῥῆξις, rupture, of ῥήγνυμαι, *frango*, I break.

RHIME, RIME, or RHYME, in Poetry. See RHYME.

RHINE-*Land-Rod*, in Fortification, *&c.* a Measure of ten Foot, call'd also *Decempeda*, &c. See MEASURE, FOOT, and DECEMPEDA.

RHINE-*Grave*, in *Germany*, a Count Palatine of the *Rhine*. See GRAVE and PALATINE.

RHODIUM *Lignum*, Rhodian-Wood. See ASPALATHUM.

RHODON, in Pharmacy, from ῥόδον, *Rosa*; a Name given to some Compositions wherein the Rose is the chief Ingredient; as *Diarrhodon*. See DIARRHODON, *&c.*

Hence also *Rhodosecchorum*, q. d. *Sugar of Roses*, &c. See ROSE.

RHOMBOIDES, in Geometry, a quadrilateral Figure, whose Sides and Angles are unequal; but the opposite ones equal. See FIGURE.

Or, *Rhomboides* is a quadrilateral Figure, whose opposite Sides and Angles are equal; but is neither equilateral nor equiangular.

Such is the Figure NOPQ, (*Tab. Geometry, Fig.* 24.)

For the Method of finding the Area of a *Rhomboides*, see RHOMBUS.

RHOMBOIDES, in Anatomy, a Muscle, thus called from its Figure. See MUSCLE.

It lies under the *Cucullaris*, and arises from the two inferior Spines of the Neck, and four superior of the Back; and is inserted fleshy into the whole Brain of the Scapula, which it draws backwards, and a little upwards.

RHOMBUS, in Geometry, an obliquangular Parallelogram; or a quadrilateral Figure, whose Sides are equal and parallel; but the Angles unequal, two of the opposite ones being obtuse, the other two acute. See FIGURE.

Such is the Figure ABCD, *Tab. Geometry, Fig.* 83.

To find the Area of a Rhombus, or Rhomboides.—Upon CD, which is here assumed as a Base, let fall a perpendicular AE; which will be the Altitude of the Parallelogram: Multiply the Base by the Altitude, the Product is the Area.

Thus, if CD be = 456, and ADE = 234; the Area will be found 106704.

For it is demonstrated that an oblique angular Parallelogram is equal to a Rectangle upon the same Base CD, and of the same Altitude CE. (See PARALLELOGRAM.) But the Area of a Rectangle is equal to the Factum of the Base into the Altitude. Therefore the Area of an obliquangular Triangle is equal to the same. See RECTANGLE.

The Word is form'd of the *Greek* ῥόμβος, of ῥομβεῖν, to incompass.

RHOMBUS, among Surgeons, is a sort of Bandage of a *Rhomboidal* Figure. See BANDAGE.

RHOPALIC *Verses*, among the Antients, a kind of Verses

which

which began with Monosyllables, and were continued in Words growing gradually longer and longer to the last, which was the longest of all. See VERSE.

They had their Name from the *Greek* ῥοπαλὸν, a Club, which, like them begins with a slender tip, and grows bigger and bigger to the Head.—Such is that Verse of *Homer*,

Ὦ μάκαρ' Ἀτρέιδη μοιρηγενὲς, ὀλβιοδαίμων.

And this *Latin* one,

Spes Deus æternæ est stationis Conciliator.

RHOPOGRAPHI, in Antiquity, a Name given to certain Painters, who confined themselves to low Subjects; such as Animals, Plants, Landskips, *&c.*

The Title was also given to such as cut Figures of Men, *&c.* in Box, Phileria, Yew, *&c.* in Gardens.

The Word is form'd from the *Greek* ῥοπος, Toys, or odd Ware, and γράφω, I write, I paint.

RHUBARB, a medicinal Root, large, compact, and heavy; yellow without, of a Nutmeg Colour within; an astringent, bitterish Taste; and an agreeable, aromatic Smell: Of great use in Medicine, as a Purgative. See ROOT and PURGATIVE.

Considering the mighty Use of this Drug, 'tis surprizing we should know so little of the Place where the Plant grows that produces it.—Some say it comes from the Kingdom of *Boutan*, in the Extremities of *India*; others, that 'tis found in the Provinces of *Xensi* and *Suchen* in *China*. Others will have it only grow in *Persia*; and others on the Confines of *Muscovy*; deriving its Name from *Rha*, the River among us call'd *Volga*, and *Barbarum*, q. d. Root found by the Barbarians on the River *Rha*.

Rhubarb, in *Latin*, *Rhabarbarum Officinarum*, was not known of the Antients; and their *Rhaponticum*, which indeed resembles it, is not the real *Rhubarb*. See RHAPONTICUM.

Good *Rhubarb* steep'd in Water gives it a Saffron Colour; and when broke, looks bright, with somewhat of a Vermillion Cast.—Some Druggists have the Art of renewing their old Roots, by giving them a yellow hue; but the Cheat is easily known by handling them; the Powder wherewith they colour them sticking to the Fingers.

Rhubarb is esteemed an excellent Cathartic; proper for a Diarrhœa, to fortify the Stomach, and to create an Appetite.

M. *Boulduc* informs us, in the Memoirs of the *French* Academy, that he drew Extracts from *Rhubarb* both with Water and Spirit of Wine; but the purgative Virtue, he says, was much more visible in the former than the latter; which shews that it consists more in a Salt than an Oil.—He observes, however, that *Rhubarb* taken in Substance, has a still better effect; and adds, that of all the Operations he could make with it, none gave any Credit to the common Opinion, which ascribes an astringent Quality to it.

Monks RHUBARB. See RHAPONTICUM.

White RHUBARB. See MECHOACAN.

RHUMB, or RUMB, or RUM, RHOMBUS, in Navigation, a vertical Circle, of any given Place; or the Intersection of a Part of such a Circle with the Horizon. See VERTICAL.

Rhumbs therefore coincide with *Points* of the World, or of the Horizon. See POINT and HORIZON.

And hence the Mariners distinguish the *Rhumbs* by the same Names as the Points, and Winds. See WIND.

They usually reckon 32 *Rhumbs*; which are represented by the 32 Lines in the Rose, or Card of the Compass. See COMPASS.

Aubin defines a *Rhumb* by a Line on the terrestrial Globe, Sea-Compass, or Sea-Chart, representing one of the 32 Winds which serve to conduct a Vessel.—So that the *Rhumb* a Vessel pursues is conceiv'd as its *Route* or *Course*. See COURSE.

Rhumbs are divided, and subdivided like Points.—Thus, the *whole Rhumb* answers to the Cardinal Point.—The *half Rhumb*, to a collateral Point, or makes an Angle of 45° Degrees with the former.—The *Quarter Rhumb* makes an Angle of 22° 30′ therewith.—And the *half-quarter Rhumb* makes an Angle of 11° 15′. See CARDINAL, COLLATERAL, QUARTER, *&c.*

A Table of the *Rhumbs*, or Points, and their Distances from the Meridian, see under the Article WIND.

RHUMB-LINE, or LOXODROMIA, in Navigation, is the Line which a Ship keeping in the same collateral Point or *Rhumb*, describes, throughout its whole Course. See LOXODROMIA.

The great Property of the *Rhumb Line*, or *Loxodromia*, and that from which some Authors define it, is, that it cuts all the Meridians under the same Angle. See MERIDIAN.

This Angle is call'd the *Angle of the Rhumb*, or *Loxodromic* Angle. See ANGLE.

The Angle which the *Rhumb Line* makes with any Parallel to the Equator is call'd the *Complement of the Rhumb*. See COMPLEMENT.

Nature and Origin of the RHUMB-LINES.

An Idea of the Origin and Properties of the *Rhumb-Line*, the great Foundation of Navigation, may be conceived thus.—A Vessel beginning its Course, the Wind wherewith it is driven makes a certain Angle with the Meridian of the Place; and as 'tis supposed the Vessel runs exactly in the Direction of the Wind, it makes the same Angle with the Meridian which the Wind makes.

Supposing, then, the Wind to continue the same, as each Point or Instant of the Progress, may be esteem'd the Beginning; the Vessel always makes the same Angle with the Meridian of the Place where it is each Moment, or in each Point of its Course, which the Wind makes.

Now, a Wind, *e. gr.* that is North-East, and which of Consequence makes an Angle of 45°, with the Meridian, is equally North-East wherever it blows; and makes the same Angle of 45° with all the Meridians it meets.—A Vessel therefore driven by the same Wind, always makes the same Angle with all the Meridians it meets withal on the Surface of the Earth.

If the Vessel sail North and South, it makes an Angle infinitely acute with the Meridian, *i. e.* 'tis parallel to it, or rather sails in it.—If it run East and West, it cuts all the Meridians at right Angles.

In the first Case it describes a great Circle; in the second, either a great Circle, *viz.* the Equator, or a Parallel to it.—If its Course be between the two, it does not then describe a Circle; since a Circle drawn in such a manner would cut all the Meridians at unequal Angles, which the Vessel cannot do.

It describes, therefore, another Curve, the essential Property whereof is, that it cuts all the Meridians under the same Angle.—This Curve is what we call the *Loxodromic Curve*, *Rhumb-Line*, or *Loxodromy*. See CURVE.

'Tis a kind of Spiral, which, like the Logarithmic Spiral, makes an Infinity of Circumvolutions without ever arriving at a certain Point to which it still tends, and towards which it approaches every step. See SPIRAL.

This asymptotic Point of the *Rhumb-Line* is the Pole; to which were it possible for it to arrive, it would find all the Meridians conjoin'd, and be lost in them. See POLE.

The Course of a Vessel, then, except in the two first Cases, is always a *Rhumb-Line*; which Line is the Hypothenuse of a Rectangle-Triangle, whose two other Sides are the Ships Way or Distance run in Longitude and Latitude. Now the Latitude is usually had by Observation, (See LATITUDE); and the Angle of the *Rhumb*, with one or other of the two Sides, by the Compass. See COMPASS.

All therefore that is required by Calculation in Sailing, is the Value of the length of the *Rhumb-Line*, or Ships Course. See COURSE.

But as such Curve Line would prove very perplexing in the Calculation; it was necessary to have the Ships Way in a right Line; which right Line however must have the essential Property of the Curve Line, *viz.* to cut all the Meridians at right Angles.—*The Method of effecting which see under the Article* CHART and MERCATOR.

If PA, PF, PG, *&c.* (*Tab. Navigation, Fig.* 19.) be supposed Meridians, AI the Equator, and AE another great Circle of the Sphere: AO will represent a *Rhumb-Line*, the Angles whereof with the several Meridians, being less than those of the great Circle; it follows, that the *Rhumb* is not a great Circle of the Sphere.—If a Ship therefore be at first directed towards E, and constantly persist in the same *Rhumb*, it will never arrive at the Place E, but at the Place O which is further from the Equator.

Hence, as on the Surface of a Sphere, the shortest Way between A and O is an Arch of a great Circle between A and O; the *Rhumb-Line* is not the shortest Way, or least Distance from one Place to another. See CIRCLE, SPHERE, DISTANCE, *&c.*

Application of RHUMB-LINES *in Navigation.*

1°. If the Meridians PA, PC, PD, *&c.* be not very far apart, the *Rhumb-Line* AIHG is divided by the equidistant Parallels BI, KH, FG, *&c.* into equal Parts.

Hence, 1°. the Parts of the *Rhumb* AI, and AG, are as the Latitudes AL and AN of the Places I and G.—2°. Since the Arches AB, IK, HF, are equal in Magnitude, and therefore unequal in Number of Degrees; the Sum of the Arches, call'd the *Latus Mecodynamicum*, or *Miles of Longitude*, is not equal to the Difference of Longitude AB of the Places A and G. See MECODYNAMICUM.

2°. The Length of the *Rhumb-Line* AG is to the Change or Difference of Latitude GD, in the same Ratio, as the whole Sine to the Co-sine of the Angle of the *Rhumb*.

Hence, 1°. the *Rhumb* sail'd on being given, together with the Difference or Change of Latitude, turn'd into Miles; the length of the *Rhumb-Line*, or the Distance from the Place A to the Place G upon the same *Rhumb*, is had by the Rule of Three.—2°. The *Rhumb* being given, together with the Quantity of the Ship's Way on the same *Rhumb*, i. e. the length of the *Rhumb* AG; the Difference of Latitude DG, is had by the Rule of Three, in Miles to be converted into Degrees of a great Circle.—3°. The Difference of Latitude DG being given in Miles; as also the Length of the *Rhumb-Line* AG; the Angle of the *Rhumb*, and conse-

consequently the *Rhumb* sail'd on is had by the Rule of Three.—4°. Since the Cosine is to the whole Sine as the whole Sine to the Secant; the Difference of Latitude GD, is to the Length of the *Rhumb-Line* AG, as the whole Sine to the Secant of the Angle of the *Rhumb*.

3°. The Length of the *Rhumb-Line*, or of the Ship's Way in the same *Rhumb* AG, is to the *Latus Mecodynamicum*, or *Mecodinamic* Side AB+IK+HF, as the whole Sine to the Sine of the *Loxodromic* Angle GAP.

Hence, 1°. The *Rhumb*, or Angle of the *Rhumb*, being given, as also the Ship's Way in the same *Rhumb-Line* AG; the *Mecodynamic* Side is had by the Rule of Three, in Miles; *i. e.* in the same Measure wherein the Length of the *Rhumb* is given.—2°. In like manner, the *Mecodynamic* Side AB+IK+HF being given; as also the *Rhumb-Line*, or Ships Way AG; the *Rhumb* sail'd in is found by the Rule of Three.

4°. The Change of Latitude GD, is to the *Mecodynamic* Side AB+IK+HF; as the whole Sine, to the Tangent of the *Loxodromic* Angle PAG or AIB.

Hence, the *Rhumb*, or *Loxodromic* Angle PAG, and the change of Latitude CD, being given; the *Mecodynamic* Side is found by the Rule of Three.

5°. The *Mecodynamic* Side AB+IK+HF is a mean Proportional between the Aggregate of the *Rhumb* AG, and the Change of Latitude GD and their Difference.

Hence, the Change of Latitude GD, and the *Rhumb-Line* AG, being given in Miles; the *Mecodynamic* Side is found in the same Measure.

6°. *The Mecodynamic Side* AB+IK+HF *being given; to find the Longitude* AD.

Multiply the Change or Difference of Latitude GD by six, which reduces it into Parts, of ten Minutes each: Divide the Product by the *Mecodynamic* Side; the Quotient gives the Miles of Longitude answering to the Difference of Latitude in ten Minutes. Reduce these Miles of Longitude in each Parallel into Differences of Longitude, from a *Loxodromic* Table. The Sum of these is the Longitude required. See LONGITUDE.

7°. If a Ship sail on a North or South *Rhumb*, it describes a Meridian; if on an East or West *Rhumb*, it describes either the Equinoctial, or a Parallel thereto. See SAILING.

8° *To find the Rhumb between two Places, by Calculation, or Geometrically.* We have two Canons, or Proportions: The first, —As the Radius, is to the Co-sine of the middle Latitude; so is the Difference of Longitude to the whole Departure from the Meridian, in the Course between the two Places proposed.

The second,—As the Radius is to the half Sum of the Co-sines of both Latitudes; or (rather for Geometrical Schemes) as the Diameter, is to the Sum of the Co-sines of both Latitudes; so is the Difference of Longitude, to the Departure from the Meridian.

For an Example of the former Proportion.—Let the *Rhumb* be required between *Cape Finister*, Latitude 43°, Longitude 7° 20′; and St. *Nicholas Isle*, Latitude 38°, Longitude 352°. The middle Latitude is 40° 30′, the Complement 49° Degrees 30′; and the Difference of Longitude 15° 20′. Out of these lesser equal Parts, prick down 15° from C to L, (*Fig.* 20.) and describe the Arch BD with 60° of the Chords, and make it equal to 49° 30′, and draw CD continued farther to A.—From L take the nearest Distance to AC which is equal to LM, and make it one Leg of a Right-angled Triangle; make the other Leg the Difference of Latitude 5°, which prick from the equal Parts from L to F.—Then, the extent MF measured on the said Parts, shews the Distance to be 13° 24′; which, allowing 20 Leagues to a Degree, is almost 268 Leagues.—Then, with the Radius CB setting one Foot at M, cross the *Rhumb* Triangle at GH; which extent measured on the greater Chord is almost 22°, the Complement whereof is 68°; and so much is the *Rhumb* from the Meridian between the two Places, amounting to 6 Points, and upwards of 80 Minutes.

For an Instance of the latter Proportion.—Let it be required to find the *Rhumb* and Distance between the *Lizard* and *Bermudas*. The Latitude of the *Lizard* being 56°, and that of *Bermudas* 32°, 20′, or 32°, 41 Centesms, and their Difference of Longitude, 55° Degrees; draw the Lines AC and CD (*Fig.* 21.) at Right Angles, and with 60° of the lesser Chords describe the Quadrant HI, and prick the Radius from I to D; so is CD the Diameter; then count both Latitudes from H to F and G, the nearest Distance from F to CI, is the Co-sine of *Bermudas* Latitude, which prick from C to E: Again, the nearest Distance from G to CI, is the Co-sine of the *Lizard's* Latitude, which place from C to S, so is CS the Sum of both Co-sines; draw DS, and prick down 55 Degrees, the Difference of Longitude from C to V, out of the greatest equal Parts, and draw VB Parallel to DS, so is CB the Departure from the Meridian in the Course between both Places.—Making that, therefore, one Leg of a Right-angled Triangle, prick down 17°, 59 Centesms, the Difference of Latitude between those Places, out of the same equal Parts from C to L, and draw BL.—This represents the Course and Distance between the *Lizard* and *Bermudas*; and the extent LB measured on the same equal Parts, shews the Distance to be 44°, 31 Centesms, which allowing 20 Leagues to a Degree, is 886 Leagues.

Then, to find the Course.—With 60° of the Chords, setting one Foot in L, with the other make Marks at Y and Z; then the Extent ZY, measured on the Chords, shews the *Rhumb* to be 66°, 37′ Minutes from the Meridian. This Proportion in the present Example, holds very just, according to *Mercator's* Chart; whereas the former Proportion, by the middle Latitude, would have given the *Rhumb* 67°, 2′, from the Meridian, and the Distance 902 Leagues.

Again, making CA equal to CV, a Line joining LA would be the Course and Distance according to the same Longitudes and Latitudes laid down on the Plain Chart; whereby the Course should be 72 Degrees 17 Minutes from the Meridian, and the Distance 1155 Leagues. See SAILING, CHART, *&c.*

RHYAS, in Medicine, a Diminution or Consumption of the *Caruncula Lachrymalis*, situate in the great Canthus or Angle of the Eye. See CARUNCULA.

The *Rhyas* is used in opposition to the *Encanthis*, which is an excessive Augmentation of the same Caruncle. See ENCANTHIS.

The Cause of the *Rhyas* is a sharp Humour falling on this Part; and gnawing and consuming it by Degrees; though it is sometimes also produced by the too great Use of Cathereticks in the *Fistula Lachrymalis*.—It is cured by Incarnatives.

The Word is form'd from the *Greek* ῥέω, to flow.

RHYME, RHIME, RYME, or RIME, in Poetry, *&c.* the similar Sound, or Cadence and Termination of two Words which end two Verses, *&c.* See VERSE.

Or *Rhyme* is a Similitude of Sound between the last Syllable or Syllables of one Verse, and the last Syllable or Syllables of a Verse succeeding either immediately or at the Distance of two or three Lines.

Rhyme is a modern Invention, the Product of a *Gothick* Age: *Milton* calls it the *Modern Bondage*. Yet some Authors will have it, the *English*, *French*, &c. borrow their *Rhyme* from the *Greeks* and *Latins*.—The *Greek* Orators, say they, who endeavour'd to tickle the Ears of the People, affected a certain Cadence of Periods, ending in a Consonance, and call'd them ὁμοιοτέλευτα. The *Latins*, who imitated them, call'd these measur'd Phrases, *similiter desinentia*.

This Affectation increas'd as the *Latin* Tongue declin'd; so that in the later *Latin* Writers, scarce any thing is more common than *rhyming* Periods.

The *French*, and from them the *English*, &c. retain'd this Cadence of *Rhyme*, which seem'd to them more pretty, and even more agreeable than the measured Verses of the *Greek* and *Roman* Poets.—This kind of *Latin* Poetry in *Rhyme* was much in Vogue in the XIIth Century; and the Verses thus running were call'd *Leonine Verses*; for what Reason *Cambden* owns he does not know; (for a Lion's-Tail, says he, does not answer to the middle Parts as these Verses do) but doubtless they had their Name from a Canon call'd *Leoninus*, who first composed them with Success, and of whom we have several Pieces remaining, address'd to Pope *Adrian* IV. and *Alexander* III. See LEONINE *Verses*.

Cambden has given us a Collection of *Latin Rhymes* of our antient *English* Writers; among whom *Walter de Mapes* Archdeacon of *Oxford*, in the Time of King *Henry* II. makes a principal Figure: Especially for two Pieces, the one in Praise of Wine, beginning,

Mihi est propositum in Taberna mori,
Vinum sit appositum morientis ori;
Ut dicant, cum Venerint, Angelorum Chori,
Deus sit propitius huic potatori.

The other against the Pope, for forbidding the Clergy their Wives; beginning,

Prisciani Regula penitus cassatur,
Sacerdos per hic *&* hæc *olim declinatur;*
Sed per hic *solummodo, nunc articulatur,*
Cum per Nostrum præsulem hæc *amoveatur.*

Since the Restoration of Learning in the 16th Century, Attempts have made to banish *Rhyme* out of the modern Poetry, and to settle the *English* and *French* Verses on the footing of the antient *Greek* and *Latin* ones; by fixing the Quantities of the Syllables, and trusting wholly to those, and the Numbers or Measure. See QUANTITY, NUMBERS, *&c.*

This, *Milton* has done with great Success, in his *Paradise Lost*, and other Pieces; and after him *Philips*, *Addison*, and some others. —Verses of this Kind we call *Blank Verses*. See BLANK.

The *French* have attempted the same, but not with the same Success.—*Jodelet* made the first Essay; and after him *Pasquier*; but they fail'd. *Passerat* and *Rapin* follow'd them, and fail'd like them. Their Hexameter and Sapphic Verses were neither imitated nor approved; and the Cadence of *Rhyme* was prefer'd to Quantity, or to long and short Syllables. *Des Portes* likewise made some Essays of Verses constructed of long and short Verses without *Rhyme*, but the Attempt only serv'd to convince the World that this Kind of Measure is inconsistent with the Genius of the *French* Tongue.

To

To ſucceed in ſuch kind of Verſes there muſt be a Liberty of varying the Arrangement of the Words, or of changing their Situation as may beſt ſuit the Occaſions of the Poet; of making the Subſtantive either go before, or follow after the Verb, as the Verſe requires, *&c.* Now none of the modern Tongues admit of ſuch an arbitrary Situation of the Words, equally with the Antient; yet none more than the *Engliſh*, nor leſs than the *French*. See CONSTRUCTION.

Rhymes are either *ſingle*, or *double*, or *treble*; but the two laſt are now diſuſed.

Single Rhymes are divided into perfect or whole *Rhymes*; and imperfect or half *Rhymes*.

A *whole* or *perfect Rhyme* is where there is a Similitude of Sound, without any Difference; or where a thorough Identity of Sound appears in the Pronunciation of the two Syllables, notwithſtanding that there may be ſome Difference in the Orthography.

An *imperfect* or *half Rhyme* is where there is a Similitude with a Difference, either in reſpect of the Pronunciation or the Orthography; but chiefly the former.

In the time of S. *Louis*, the *French* began to be more exact in their Verſification; and to diſtinguiſh their *Rhymes* into *Maſculine* and *Feminine*; and to obſerve a regular Mixture of the two, in their Verſes.

The Invention of this Mixture is uſually attributed to *Marot*; however 'twas *Ronſard* who firſt practiced it with Succeſs.—The Feminine *Rhyme* is that where the laſt Syllable of the *Rhyme* ends with an *e* Mute or Quieſcent: As in *Dove, Belle*, &c.—*Maſculine Rhymes* are thoſe of all other Words. *Menage* obſerves that Maſculine *Rhymes* cloſe the Periods better: But that Feminines, being the ſofter and more languiſhing, end more agreeably, eſpecially in mournful Subjects.

They alſo diſtinguiſh further between *rich Rhymes*, which are thoſe where the two Words terminate alike, through the whole two laſt Syllables, as *ſquabble* and *rabble*, &c.—*Plain Rhymes* are thoſe where the two *rhyming* Verſes ſucceed immediately to each other.—*Croſs Rhymes*, thoſe where the Verſes are ſo diſpoſed as that the firſt *rhymes* with the third, and the ſecond with the fourth, *&c.*

They alſo diſtinguiſh Normand *Rhymes*, Pariſian *Rhymes*, Equivocal *Rhymes*, &c.

RHYPTICKS, or RYPTICKS, RHYPTICA, in Medicine. See RYPTICKS.

RHYTHM, RHYTHMUS, in Muſick, the Variety in the Movements, as to the quickneſs or ſlowneſs, length and ſhortneſs of the Notes. See NOTE.

Or, the *Rhythmus* may be defined more generally, the Proportion which the Parts of a Motion have to each other. See RHYTHMICA.

Ariſtides among the antient Muſicians, applies the Word *Rhythmus* three Ways; *viz.* either to immoveable Bodies, when their Parts are rightly proportioned to each other; as a well-made Statue, *&c.* or to things that move regularly, as in handſome Walking, in Dancing, in the dumb Shews of the Phantomimes, *&c.* or thirdly, to the Motion of Sound, or the Voice; in which, the *Rythmus* conſiſts of long and ſhort Syllables or Notes, join'd together in Succeſſion in ſome kind of order, ſo as their Cadence on the Ear may be agreeable.

This, in Oratory conſtitutes what we call a *numerous Style*, and when the Tones of the Voice are well choſen, a harmonious Stile. See STYLE and NUMBERS.

In effect, *Rythmus* in the general is perceiv'd either by the Eye or Ear; and may either be with or without Metre: But the ſtrict muſical *Rythm* is only perceiv'd by the Ear, and cannot exiſt without it.—The firſt exiſts without Sound, as in Dancing; in which Caſe it may be either without any Difference of Acute and Grave, as in a *Drum*, or with a Variety of theſe as in a *Song*.

The *Rythmus* of the Antients, Mr. *Malolm* obſerves, was very different from the Moderns.—The former was only that of the long and ſhort Syllables of the Words and Verſes: It depended altogether on the Poetry, and had no other Forms or Varieties than what the metrical Art affoded. The Changes therein are none but thoſe made from one Kind of Metrum to another, as from Jambic to Choraic *&c.*

In the modern Muſick, the Conſtitution of the *Rythmus* differs from that of the Verſe, ſo far, that in ſetting Muſick to Words, the thing chiefly regarded is to accommodate the long and ſhort Notes to the Syllables in ſuch manner, as that the Words be well ſeparated; and the accented Syllable of each Word ſo conſpicuous, that what is ſung may be diſtinctly underſtood. See MELODY.

Voſſius in his Book *de Pœmatum Cantu & viribus Rythmi*, extols the antient *Rythmus*.—Though he owns 'twas confined to the metrical Feet; yet, ſo well did they cultivate their Language, eſpecially in what relates to the *Rythmus*; that the whole effect of the Muſick was aſcribed to it, as appears, ſays he, by that ſaying of theirs, το πᾶν ᾠδὴ μουσικοῖς ὁ ρυθμός. See MUSIC, PANTOMIME, *&c.* See alſo ODE, *&c.*

RHYTHM, RHYMUS, or RHYME, in the antient Poetry, was the Meaſure of the Feet, or the Number and Combination of long and ſhort Syllables; call'd alſo *Quantity*. See QUANTITY.

Voſſius attributes the whole Force of the antient Muſick to their happy *Rythmus*. But this is ſomewhat inconceivable: Mr. *Malcolm* rather takes it that the Words and Senſe of what was ſung had the chief effect: Hence it was that in all the antient Muſick the greateſt Care was taken that not a Syllable of the Words ſhould be loſt, leſt the Muſick ſhould be ſpoil'd.

Pancirollus ſeems of this Opinion; and the Reaſon he gives why the modern Muſick is leſs perfect than the Antient, is, that we hear Sounds without Words. See MUSICK.

Voſſius ſays, that *Rythm* which does not expreſs the very Forms and Figures of things, can have no effect; and that the antient poetical Numbers alone are juſtly contrived for this End.—He adds, that the modern Languages and Verſe is altogether unfit for Muſick; and that we ſhall never have any right Vocal Muſick till our Poets learn to make Verſes capable to be ſung, *i. e.* till we new model our Languages, reſtore the antient Quantities and Metrical-feet, and baniſh our barbarous Rhimes.

Our Verſes, ſays he, run all as it were on one Foot; ſo that we have not any real *Rythmus* at all in our Poetry: He adds, that we mind nothing further than to have ſuch a Number of Syllables in a Verſe, of whatever Nature, and in whatever Order. But this is an unjuſt Exaggeration. See VERSE.

RHYTHMICA, RYTHMICE, in the antient Muſick, that Branch of Muſick which regulated the *Rhythmus*. See RHYTHMUS.

The *Rhythmica* conſider'd the Motions; regulated their Meaſure, Order, Mixture, *&c.* ſo as to excite the Paſſions, keep them up, augment, diminiſh, or allay them.

Ariſtides and other antient Muſical Writers, divided artificial Muſick into *Harmonica*, *Rhythmica*, and *Metrica*. See MUSICK.

But the *Rhythmica* with them likewiſe comprehends dumb Motions, and, in effect, all *Rhythmical*, i. e. regular, Motion.

Porphyry divides Muſick into *Harmonica*, *Rythmica*, *Metrica*, *Organica*, *Poetica*, and *Hypocritica*. See each under its proper Article.

The Antients ſeem to have had no *Rhythm* in their Muſick beſide the long and ſhort Syllables of their Words and Verſes, which were ſung, and always made a Part of their Muſick; ſo that the *Rhythmica* with them was only the Application of the Metrical-Feet, and the various kinds of Verſes uſed by them.—The Modern goes much further. See RHYTHM.

RYTHMOPÆIA one of the Muſicial Faculties, as they are call'd; which preſcribes Rules for the Motions, or *Rhythm*.

The antient *Rhythmopœia* is very defective.—We find nothing of it in the Books of the Antients but ſome general Hints; which can ſcarce be call'd Rules. In their Explications there appears nothing but what belongs to the Words and Verſes of their Songs, which is a ſtrong Preſumption they had no other. See RHYTHM.

RIAL, or RYAL, or REAL, a Coin ſtruck, and Current in *Spain*. See REAL and COIN.

RIAL is alſo a Piece of Gold, antiently Current among us for ten Shillings.

In 1 *Henry* VI. by Indenture of the Mint, a Pound Weight of Gold of the old Standard was coined into 45 *Rials*, going for ten Shillings a-piece, or a proportionable Number of *half Rials*, going at five Shillings a-piece: Or *Rial Farthings*, which went at 2 *s.* and 6 *d.*

In 1 *Henry* VIII. the Gold *Rial* was ordered to go at 11 *s.* 3 *d.*—In 2 *Eliz.* Golden *Rials* were coined at 15 *s.* a-piece, when a Pound Weight of old Standard Gold was to be coined into 48 *Rials*.—In 3 *Jac.* I. the *Roſe Rials* of Gold were coined at 30 *s.* a-piece, and the *Spurr-Rials* at 15 *s.* See MONEY.

RIBBAND, or RIBBOND, a narrow ſort of Silk, chiefly uſed for Head Ornaments, Badges of Chivalry, *&c.* See SILK.

The Knights of the Garter wear a Blue *Ribbond*, thoſe of the Thiſtle, a Green *Ribbond*. See COLLAR, GARTER, *&c.*

RIBBON, in Heraldry, is the eighth Part of a Bend. See BEND.

It is born a little cut off from the out-lines of the Eſcutcheon; thus; He beareth Or, a *Ribbon* Gules.

RIBS, COSTÆ, in Anatomy, long, arch'd Bones; ſerving to form, or ſuſtain the inner-ſides of the Thorax, or Breaſt. See BONE and THORAX.

The *Ribs* are in Number 24; twelve on each Side.—Their Figure is an imperfect Segment of a Circle, harder, rounder, and more incurvated towards their Articulation with the *Vertebræ*, than at the other Extremity towards the *Sternum*, which is thinner, broader, and more ſpungy.

The *Ribs* are divided into *true*, or genuine, and *ſpurious*.

The *true* are the ſeven upper Pair, which are thus diſtinguiſhed, as forming the moſt perfect Arches, and as having a ſtrong Articulation with the *Sternum*. See STERNUM.

The five lower are call'd *Nothæ*, or *Spurious*, as being ſmaller, ſhorter, and more cartilaginous than the reſt, and not reaching ſo far as the *Sternum*, which makes their Articulation very lax; in regard they terminate in long, ſoft Cartilages, which bending upwards are join'd to the upper Ribs.

On the inſide of the true *Ribs*, except the loweſt, and ſometimes the next to it, runs a pretty deep *Sinus*, reaching from the end towards the Spine, almoſt to its Juncture with the Cartilage.

All

All the *Ribs*, together with the *Sternum*, are rais'd by the respiratory Muscles, in the Action of Inspiration; by which means, and the Descent of the Diaphragm in that Action, the Cavity of the Thorax is enlarged for the more commodious Expansion of the Lungs. See RESPIRATION.

RIBS *of a Ship*, are the Timbers of the Puttocks, when the Planks are off; so called because they are bent like the *Ribs* of a Carcase or Skeleton.

RICE, a Grain or Seed of a leguminous Plant of the same Name; frequent in the *East-Indies*, in *Greece*, and *Italy*. See LEGUMINOUS.

The Grains, which grow in Clusters each terminated with a Spica or Beard, are inclosed severally in yellow rough Capsulæ, or Cases. When stript off its Skin the Grain is almost oval; of a shining white Colour, and as it were transparent. It grows in moist marshy Places.

Throughout the *East*, and a great Part of the *Levant*, *Rice* is the principal Food, and serves for Bread. See BREAD.

In the *Indies*, the Women thrash and dress all the *Rice*, which is a very painful Office, that the Men leave them either out of Idleness, or Disrespect.

Rice is a great Food in the *Roman Catholick* Countries in time of *Lent*.—The ordinary Preparation is by first steeping it in Water, then boiling it in Milk.—Some make it into a sort of Farina, or Flower, by pounding it in a Mortar, after having first put it in hot Water, and again wash'd it out in cold.

Rice is of some use in Medicine, being esteem'd proper to soften and thicken sharp Humours, to moderate the Flux of the Belly.—The Northern Nations eat their Fowls and other Meats with *Rice* and Saffron.—The *Chinese* make a Wine of *Rice*, which is of an Amber Colour, tastes like *Spanish* Wine, and serves them for their common Drink.

In some Parts of *Europe* they also draw a very strong Brandy or Spirit from *Rice*. See BRANDY and SPIRIT.

RICKETS, RHACHITIS, in Medicine, a Disorder affecting the Bones of Children, and causing a considerable Protuberance, Incurvation, or Distortion thereof. See CHILDREN, BONE, *&c.*

It sometimes arises from a fault in swathing the Child; rolling him too tight in some Places, and too loose in others; placing him in an inconvenient, or too often in the same Posture, or suffering him to be long wet.—'Tis likewise attributed to the want of proper Motion, and the using of the Child to one Arm only; whence the Legs and Knees remain too long in the same incurvated Situation.

Or it may be occasioned by some Fault in the Digestion occasioning the Aliment to be unequally apply'd to the Body, by which some Parts of the Bones increase in Bulk more than the rest.

The *Rickets* usually appear between the first eight Months, and the sixth Year of the Child's Age: The Part it affects grows lax, flaccid, and weak; and if it be the Legs, they become unable to support the Body.—All the Parts subservient to voluntary Motion are likewise debilitated and enfeebled; and the Child grows pale, sickly, slothful, and cannot sit erect.

His Head generally becomes too large for the Trunk, and cannot be supported or managed by the Muscles of the Neck, which gradually wear away. Swellings, and knotty Excrescencies appear in the Wrists, Ancles, and Tops of the Ribs; and the Bones of the Legs and Thighs grow bowed or crooked.—The like Disorder sometimes seizes the Bones of the Arms.

If the Symptoms continue long, the Thorax becomes strait, a difficulty of Respiration comes on, as also a Cough, and a hectick Fever; the Abdomen swells, the Pulse grows weak and small, and the Symptoms increasing, at length prove mortal.

When the Child is able to talk before he can make use of his Legs, he is supposed to have the *Rickets*.

When the Disorder is taken early, it may be remedied by proper Bolsters and Bandages, suited to the Parts affected: But when the Bones are grown rigid and inflexible, other mechanical Contrivances, as Padding, strait Boots, and several sorts of Machines or Engines, made of Pastboard, Whalebone, Tin, *&c.* are made use of; to restore the distorted Bones to their natural straitness.

Cold Bathing is also found of Service in the *Rickets*, before the Distemper comes to be confirmed, during *May* and *June*; continuing him in the Water two or three Seconds at each Plunge.

Others chuse a Liniment of Rum and Palm Oil; and others a Plaister of Deminium and Oxycroceum, applied along the Back, to cover the whole Spine.—Dry Frictions over the whole Body, with a warm Linnen Cloth before the Fire, especially on the Parts affected, are found of Service. The Oil of Snails is famous for the same Intention, being what Drops from them, after bruising and suspending them in a Flannel Bag. With this the Limbs and spinal Bone, are anointed.

RIDDLE. See ENIGMA.

RIDDLE, or RUDDLE, is also a mineral Stone. See RUDDLE.

RIDE, of *Hazle*, or other Wood, is a Group or Plump of Sprigs shooting out of the same Root, or Foot.

RIDE, in the Manage.—To *ride* signifies to learn to *ride*.—Thus, He *rides* under a good Master. See HORSE.

RIDE, in the Sea Language, is a Term variously applied.—Thus, a Ship is said to *Ride* when her Anchors hold her fast, so that she drives not away by the Force of the Wind or Tide.

A Ship is said to *Ride well*, when she is built so as not to over-beat herself into an Head Sea, as that the Waves overtake her (that is, overwash her) from Stem to Stern.

A Ship *Rides a-cross*, when she *rides* with her Main-Yards and Fore-Yards hoisted up to the Hounds; and both Yards and Arms topped alike.

She is said to *Ride a Peek* when one End of the Yard is peeked up, and the other hangs down: This is also said of a Ship when in weighing, she is brought directly over her Anchor.

She is said to *Ride athwart*, when her Side is to the Tide.—And to *Ride betwixt Wind and Tide*, when the Wind hath equal force over her one Way and the Tide another.—If the Wind have more Power over her than the Tide, she is said to *Ride Wind Rode*.—She is said to *Ride Hawseful*, when in a Stress of Weather she falls so deep, that Water runs in at her Hawses.—She is said to *Ride Portoise*, when her Yards are struck upon the Deck, or when they are down Aportlast.

RIDEAU, in Fortification, a small Elevation of Earth, extending itself lengthways on a Plain; serving to cover a Camp, or give an Advantage to a Post.—It is also convenient for those who would besiege a Place at a near Distance, and to secure the Workmen in their Approaches to the Foot of a Fortress.

RIDEAU, is sometimes also used for a Ditch, the Earth whereof is thrown upon its Side. See DITCH.

The Word in its original *French* signifies a Curtain or Cover; form'd from the *Latin*, *Ridellum*.—*Borel* derives it from *ridere*.

RIDERS, in a Ship, are great Timbers both in the Hold and Aloft, which are bolted on to other Timbers to strengthen them, when the Ship is discovered to be too weakly built.

The Word RIDER is also used for after-Clauses, added to Bills, whilst they are depending in Parliament. See BILL.

RIDGE, in Building, the highest Part of the Roof or Covering of a House. See ROOF.

Ridge is particularly used for the Piece of Wood wherein the Rafters meet. See RAFTER.

RIDGE-TYLE. See TYLE.

RIDGES *of a Horse's Mouth*, are Wrinkles or Risings of the Flesh in the Roof of the Mouth, running a-cross from one Side of the Jaw to the other, with interjacent Furrows. See HORSE.

It is commonly in the third or fourth Ridge that the Farriers strike, in order to bleed a Horse whose Mouth is over heated.

RIDGLING, or RIDGEL, among Farriers, *&c.* the Male of any Beast that has been but half Gelt. See GELDING.

RIDICULE. See LAUGHTER, RISIBILITY, *&c.*

RIDING, a Division of *Yorkshire*, whereof there are three, *viz.* the *East-Riding*, *West-Riding*, and *North-Riding*.

In Indictments in that County, 'tis necessary the Town and *Riding* be express'd.

RIDING-*Clerk*, one of the six Clerks in Chancery, who, in his turn, for one Year, keeps the Controllment Books of all Grants that pass the Great Seal that Year. See CLERK, GRANT, *&c.*

RIENS *Arrear*, in Law, a kind of Plea used to an Action of Debt, upon Arrearages of Account, whereby the Defendant alledges that there is *nothing in Arrear*.

Riens passe par le fait, nothing passes by the Deed, is the Form of an Exception taken in some Cases to an Action. See EXCEPTION, and DEED.

Riens par Descent, nothing by Descent, is the Plea of an Heir, where sued for his Ancestor's Debt; though he had no Lands from him by Descent. See DESCENT.

RIER, or REER-*County*, *Retro Comitatus*, is used in our Law Books in opposition to open County.

This appears to be some publick Place, which the Sheriff appoints for the Receipt of the King's Money, after the end of his County. See SHERIFF, *&c.*—*Fleta* says it is *Dies Crastinus*, *post comitatum*.

RIGADOON, a kind of Dance, borrowed originally from *Provence*; perform'd in Figure, by a Man and a Woman.—The *Rigadoon* is gay, pleasant, *&c.* The Word is form'd from the *French Rigodon*, which signifies the same thing.

RIGGING, *of a Ship*, includes her whole Cordage; or all the Ropes belonging to her Masts, and Yards, *&c.* See CORDAGE, ROPE, *&c.*

A Ship is said to be *well-rigg'd* when all her Ropes are of their fit Size, in Proportion to her Burden.—She is *over-rigg'd*, when her Ropes are too big for her; which wrongs her much in her Sailing, and is apt to make her Heel. See SHIP.

RIGHT, in Geometry, something that lies evenly, and without inclining or bending one way or another.

Thus, a *Right Line* is that whose several Points all tend the same way. See LINE.

In this Sense *Right* signifies as much as *straight*, and stands opposed to *curved* or crooked. See CURVE.

RIGHT *Angle* is that form'd by two Lines falling perpendicularly on one another. See PERPENDICULAR.

The Quantity or Measure of a *Right Angle* is a Quadrant of a Circle, or 90°.—All *Right Angles* therefore are equal. See ANGLE.

In this Sense the Word *Right* stands opposed to *Oblique*. See OBLIQUE.

RIGHT-*Angled*, is understood of a Figure when its Sides are at Right Angles, or stand perpendicularly one upon another. See FIGURE.

This sometimes holds in all the Angles of the Figure, as in Squares and Rectangles: Sometimes, only in Part, as in *Right-angled* Triangles.

RIGHT *Sine*. See SINE.

The Word here stands contradistinguished to *versed*. See VERSED.

RIGHT *Sphere*, is that where the Equator cuts the Horizon at *Right* Angles. See SPHERE.

Or, *Right*, or *Direct Sphere*, is that wherein the Poles are in the Horizon, and the Equator in the Zenith. See SPHERE.

Such is the Position of the Sphere with regard to those who live directly under the Equator.—The Consequences hereof are, that they have no Latitude nor Elevation of the Pole.—They can see nearly both Poles of the World; all the Stars rise, culminate, and set with them, and the Sun always rises and descends at *right* Angles to their Horizon, and makes their Days and Nights equal. See LATITUDE, STAR, RISING, DAY, NIGHT, *&c.*

In a *Right Sphere* the Horizon is a Meridian; and if the Sphere be supposed to revolve, all the Meridians successively become Horizons, one after another. See HORIZON, *&c.*

RIGHT *Ascension*, of the Sun, or a Star, is that Degree of the Equinoctial, accounted from the beginning of Aries, which rises with it in a *Right* Sphere. See ASCENSION.

Or, *Right Ascension*, is that Degree and Minute of the Equinoctial, counted as before, which comes to the Meridian with the Sun or Star, or other Point of the Heavens. See SUN, STAR.

The Reason of thus referring it to to the Meridian, is, because that is always at *Right* Angles to the Equinoctial, whereas the Horizon is only so in a *Right* or direct Sphere. See SPHERE.

Two fix'd Stars which have the same *Right Ascension*, i. e. are at the same Distance from the first Point of Aries in a *Right* Sphere; or, which amounts to the same, are in the same Meridian, rise at the same time: If they be not in the same Meridian, the Difference between the time when they rise is the precise Difference of their *Right Ascension*.—In an oblique Sphere, where the Horizon cuts all the Meridians obliquely, different Points of the Meridian never rise or set together; so that two Stars on the same Meridian never rise or set at the same time; and the more Oblique this Sphere, the greater is the interval of time between them. See RISING, SETTING, HEIGHT, *&c.*

RIGHT *Sailing*, is when a Voyage is perform'd on some one of the four Cardinal Points. See SAILING and CARDINAL *Point*.

If a Ship sail under the Meridian; that is, on the North or South Points, she varies not in Longitude at all; but only changes the Latitude, and that just so much as the Number of Degrees she hath run. See LATITUDE.

If a Ship sail under the Equinoctial, upon the very East or West Points, she alters not her Latitude at all, but only changes the Longitude, and that just so much as the Number of Degrees she hath run. See LONGITUDE.

If she Sail directly East or West, under any Parallel, she there also altereth not her Latitude, but only the Longitude; yet not according to the Number of Degrees of the great Circle she hath sailed in, as under the Equinoctial, but more according as the Parallel is remoter from the Equinoctial towards the Pole. For the less any Parallel is, the greater is the Difference of Longitude. See RHUMB.

RIGHT *Circle*, in the Stereographical Projection of the Sphere, is a Circle at *Right* Angles, to the Plane of Projection, or that which passed through the Eye. See CIRCLE, PROJECTION and STEREOGRAPHIC.

RIGHT, *Rectum*, in Logicks, Ethicks, *&c.* See RECTITUDE.

In this Sense the Word stands opposed to *Wrong*, *Erroneous*, *False*, &c. See ERROR, FALSHOOD, *&c.*

RIGHT, *Jus*, in Law, signifies not only a Property, for which a Writ of *Right* lies; but also any Title or Claim, either by Virtue of a Condition, Mortgage, or the like, for which no Action is given by Law, but only an Entry. See PROPERTY.

Thus is *Jus Proprietatis*, a Right of Propriety: *Jus Possessionis*, a Right of Possession: And *Jus Proprietatis & Possessionis*, a Right both of Property and Possession. See POSSESSION, *&c.*

This was formerly called *Jus duplicatum*.—As, if a Man be disseised of an Acre of Land, the Disseisee hath *Jus Proprietatis*; the Disseisor hath *Jus Possessionis*, and if the Disseisee release to the Disseisor, he hath *Jus Proprietatis & Possessionis*.

Writ of RIGHT. See RECTUM.

RIGHT *in Court*. See RECTUS *in Curia*.

RIGHT *the Helm*, a Sea Phrase, ordering to keep the Helm even with the middle of the Ship. See HELM.

RIGIDITY, among Philosophers, a brittle-hardness; or that kind of hardness supposed to arise from the mutual Indentation of the component Particles within one another. See HARDNESS.

Rigidity is opposed to Ductility, Malleability, *&c.* See DUCTILITY.

RIGOL, a kind of musical Instrument, consisting of several Sticks bound together, only separated by Beads.—It makes a tolerable Harmony, being well struck with a Ball at the End of a Stick.

RIGOR, in Medicine, a convulsive Shuddering, from Cold, or an Ague Fit. See HORROR, FEVER, AGUE, *&c.*

RILL, or RIVULET. See RIVER.

RIM, in a Watch or Clock, the Circumference, or circular Part of a Wheel. See WHEEL, WATCH, CLOCK, *&c.*

RIMA, litterally denotes a Fissure or Chink.—Hence it is applyed to several Parts of the Body, that bear a Resemblance thereto; as the *Rima Pudendi*, or *Fissura Magna*, the same with the *Vulva*; *Rima Laryngis*, is the Aperture of the *Larynx*, call'd the *Glottis*. See GLOTTIS, *&c.*

RIMA, is also used for a narrow Aperture of a small Cavity under the *Fornix*, opening into the *Infundibulum*; call'd also the third Ventricle of the Brain. See BRAIN and VENTRICLE.

RIME, RHIME, or RHYME. See RHYME.

RIND, the Skin of any Fruit that may be cut off, or pared. See SKIN, FRUIT, *&c.*

The outer Coat of the Chesnut, set with prickles, is particularly called the *Urchin-like Rind*.

RIND, is also us'd for the Ble, or inner Bark of Trees; or that soft, whitish, juicy Substance, adhering immediately to the Wood. See TREE and WOOD.

Through this it is that the Sap, in the modern Theory of Vegetation, is supposed to return from the Extremities of the Branches to the Root; the Vessels hereof being supposed to do the Office of Arteries; whence Mr. *Bradley* calls them *Arterial* Vessels. See BARK. See also PLANT and VEGETATION.

RING, *Annulus*, a little moveable, put on the Finger, either by way of Ceremony, or of Ornament.

The Bishops *Ring* makes a Part of the Pontifical Apparatus; and is esteemed a Pledge of the spiritual Marriage between the Bishop and his Church. See BISHOP.

The Episcopal *Ring* is of very antient standing.—The fourth Council of *Toledo*, held in 633, appoints, that a Bishop condemned by one Council, and found afterwards innocent by a second, shall be restored, by giving him the *Ring*, Staff, *&c.*

From Bishops, the Custom of the *Ring* has pass'd to Cardinals, who are to pay, I know not what Sum, *pro Jure annuli Cardinalitii*. See CARDINAL.

As to the Origin of Rings.—*Pliny*, lib. xxxviii. *Chap.* 1. observes, that we are in the dark as to the Person who first invented, or wore the *Ring*; for that what is said of *Prometheus*, as also of *Midas*'s Ring, are Fables. The first among whom we find the *Ring* in use, are the *Hebrews*, *Gen.* xxxviii. where *Judah*, *Jacob*'s Son, gives *Thamar* his *Ring* or Signet, as a Pledge of his Promise: But the *Ring* appears to have been in use at the same time among the *Egyptians*, from *Gen.* xli. where *Pharoah* puts his *Ring* upon *Joseph*'s Hand as a Mark of the Power he gave him. And in the third Book of *Kings*, Chap. xxi. *Jezebel* seals the Warrant she sent for the killing of *Naboth*, with the King's *Ring*.

The antient *Caldeans*, *Babylonians*, *Persians* and *Greeks*, had likewise the use of the *Ring*; as appears from several Passages in Scripture, and from *Quintus Curtius*, who tells us, that *Alexander* seal'd the Letters he wrote into *Europe*, with his own Seal; and those into *Asia* with *Darius*'s *Ring*.

The *Persians* will have *Guiamschild* the fourth King of their first Race, to have first introduced the *Ring*, to seal his Letters and other Acts withal.—The *Greeks*, *Pliny* thinks, knew nothing of the *Ring* in the time of the *Trojan* War: The Reason he gives is, that we find no mention thereof in *Homer*, but that when Letters, *&c.* were to be sent away, they were tied up, and the Strings knotted.

The *Sabins* had *Rings* in *Romulus*'s time; and 'tis to them, probably, the Practice first came from the *Greeks*; and from them pass'd to the *Romans*; though 'twas some time e're it got footing there.—*Pliny* cannot learn which of the Kings of *Rome* first adopted it; but there are no Signs of it in any of their Statues, before those of *Numa*, and *Servius Tullius*. He adds, that it was in use among the antient *Gauls* and *Britons*. See SEAL.

As to the Matter of Rings.—There were some of one single Metal, and others of a Mixture, or of two. For the Iron and Silver were frequently gilt; or at least the Gold was inclosed within the Iron, as appears from *Artimidorus*, lib. ii. cap. 5.—The *Romans* were contented with Iron *Rings* a long time; and *Pliny* assures us, that *Marius* first wore a Gold one in his third Consulate, which was in the Year of *Rome* 650. Sometimes the *Ring* was Iron, and the Seal Gold; sometimes 'twas hollow, and sometimes solid; sometimes the Stone was engraven, and sometimes plain; and the Graving sometimes in *Relievo*, and sometimes in *Creux*: The last call'd *Gemmæ Ectypæ*; the first, *Gemmæ Sculptura prominente*.

As to the Manner of wearing the Ring.—It has been various: From *Jeremy*, Chap. xxii. it appears that the *Hebrews* wore it on the right

Right-Hand. Among the *Romans*, e're they came to be adorned with Stones, and while the Graving was yet on the Metal, every body wore them at Pleasure, on what Hand and Finger he listed.—When Stones came to be added, they wore them altogether on the Left-Hand; and it would have been held an excessive Foppery to have put them on the Right.

Pliny says, they were at first wore on the fourth Finger, then on the second, or Index; then on the little Finger; and at last on all the Fingers, excepting the middle one.—The *Greeks* wore it altogether on the fourth Finger of the Left-Hand, as we are inform'd by *Aul. Gellius*, lib. x. and the Reason he gives for it is, that having found from Anatomy, that this Finger had a little Nerve that went straight to the Heart, they esteem'd it the most honourable, by reason of this Communication with that noble Part.—*Pliny* says, the *Gauls* and antient *Britons* wore it on the middle Finger.

At first they only wore a single *Ring*; then one on each Finger; and at length several on each Finger, *Martial*, lib. xi. Epig. 60. At last one on each Joint of each Finger, *Aristoph. in Nub.* &c.—Their Delicacy, at length went to that pitch, that they had their Weekly *Rings*. *Juvenal Sat.* VII. speaks of *Annuli Semestres*; as also of Winter and Summer *Rings*. But of all others *Lampridius*, cap. 32. observes, *Heliogabalus* carried the Point furthest, who never wore the same *Ring*, or the same Shoe, twice.

Rings have been also wore in the Nose, as Pendants in the Ears—*Bartholin* has an express Treatise, *de Annulis Narium*, of *Rings* of the Nostrils. St. *Augustin* assures us, 'twas the Fashion of the *Moors*; and *Pedro delle Valle* observes the same of the modern *Orientals*.

In effect, there is no Part of the Body where it has not been wore.—Several *East-India* Travellers affirm, that the Natives commonly wear them in their Nose, Lips, Cheeks, and Chin. *Ramusio* tells us, that the Ladies of *Narsingua* in the *Levant*, and *Diodorus Siculus*, lib. 3. that those of *Ethiopia*, used to adorn their Lips with Iron *Rings*.

As to the Ears, the Custom still obtains of wearing *Rings* therein, both for Men and Women, all over the World. See PENDANT.

The *Indians*, particularly the *Guzzerattes*, have wore *Rings* on their Feet.—And when *Peter Alvarez* had his first Audience of the King of *Calicut*, he found him all covered with Stones set in *Rings*; Bracelets and *Rings* both on the Hands and Fingers, and even the Feet and Toes. *Louis Bartome* represents a King of *Pegu*, as still more extravagant, having *Rings* set with precious Stones on every Toe.

With regard to the Use of Rings.—The Antients had three different Kinds: The first serv'd to distinguish Conditions or Qualities. *Pliny* assures us, that the Senators at first were not allowed to wear the Gold *Ring*, unless they had been Ambassadors at some foreign Court. Nor was it even allowed them to wear the Gold *Ring* which was given them, in Publick; except on publick Occasions. At other times they wore an Iron one. And those who had had a Triumph, observed the same Rules.

At length the Senators and Knights were allow'd the common Use of the Gold *Ring*; but *Acron* on *Horace*, Lib. 2. Sat. VII observes, they cou'd not do it unless it were given them by the Prætor.

In after Days the Gold *Ring* became the Badge of the Knights; the People wearing Silver *Rings*, and the Slaves Iron ones. Tho' the Gold *Ring* was sometimes allow'd the People, and *Severus* granted it his common Soldiers. *Augustus* allow'd it the *Liberti*, or Freedmen; and though *Nero* made a Regulation to the contrary, yet it was soon set aside.

A second Kind of *Rings* were the *Annuli Sponsalitii*, *Wedding Rings*. Some carry the Origin of this Custom as far back as the *Hebrews*, on the Authority of a Text in *Exodus* xxxv. 22.—*Leon de Modena*, however, maintains that the antient *Hebrews* did not use any Nuptial *Ring*. *Selden*, in his *Uxor Ebraica*, Lib. II. Chap. 14. owns, that they gave a *Ring* in the Marriage, but that it was only in lieu of a Piece of Money of the same Value, which had used to have been given before.—The *Greeks* and *Romans* did the same; and from them the Christians took it up very early, as appears from *Tertullian*; and in some antient Liturgies, where we find the Form of Blessing the Nuptial *Ring*. See MARRIAGE.

The third Kind of *Rings* were those used as Seals, call'd *Cerographi*, or *Cirographi*, an Account whereof see under the Article SEAL.

Richard Bishop of *Salisbury*, in his Constitutions, *Anno* 1217, forbids the putting of *Rush-rings*, or any the like Matter, on Women's Fingers; in order to the debauching of them more readily: And he insinuates the Reason of his Prohibition, that there were some People weak enough to believe, that what was thus done in jest was a real Marriage.

De Bzevil in his Antiquities of *Paris*, says, 'twas an antient Custom to use a *Rush-ring* in the Marriage of such as had had an Affair together before Marriage. See CONCUBINE, *&c.*

RING, in Astronomy.—The *Ring* of *Saturn* is a thin, luminous Circle, incompassing the Body of that Planet, but without touching the same. See SATURN.

The Discovery hereof is owing to M. *Huygens*, who after frequent Observation of *Saturn*, perceiv'd two lucid Points, or *Ansæ*, arising out from the Body, in a right Line. See ANSÆ.

Hence, as in subsequent Observations, he always found the same Appearance, he concluded that *Saturn* was incompass'd with a permanent *Ring*; and accordingly produced his new System in 1659.

The Plane of the *Ring* is inclined to the Plane of the Ecliptic in an Angle of 23° 30′.—It sometimes appears Oval; and according to *Campani*, its greatest Diameter is double its least. See PLANET.

RING, is also an Instrument used in Navigation, for taking the Altitudes of the Sun, *&c.* See ALTITUDE.

'Tis usually of Brass, about 9 Inches Diameter, suspended by a little Swivel, 45° from the Point whereof is a Perforation; which is the Centre of a Quadrant of 90° divided in the inner Concave Surface.

To use it, they hold it up by the Swivel, and turn it to the Sun, till the Sun-Beams falling through the Hole, make a Spot among the Degrees, which is the Altitude required.

This Instrument is prefer'd to the *Astrolable* by reason the Divisions are here larger than on the Astrolabe. See ASTROLABE.

RING-*Dial*, is a kind of Dial, usually small, and portable; consisting of a Brass *Ring*, or Rim, seldom exceeding two Inches in Diameter, and one third of an Inch in Breadth. See DIAL.

In a Point of this Rim, is a Hole, through which the Sun-Beams being received, make a lucid Speck on the Concavity of the opposite Semicircle, which gives the Hour of the Day in the Divisions mark'd therein.

But it only holds good about the Times of the Equinox.—To have the Dial perform throughout the whole Year, the Hole is made moveable; and the Signs of the Zodiac, or the Days of the Month are mark'd on the Convex Side of the *Ring*; by means whereof the Dial is rectified for the Time.

To use it, put the moveable Hole to the Day of the Month, or the Degree of the Zodiac the Sun is in; then suspending it by the little Ring, turn it towards the Sun, till his Rays, as before, point out the Hour among the Divisions on the Inside.

Universal, or *Astronomical* RING-*Dial*, is a *Ring-Dial* which serves to find the Hour of the Day in any Part of the Earth; whereas the former is confined to a certain Latitude. See DIAL.

Its Figure see represented in *Table*, *Dialling*, *Fig.* 7.

It consists of two *Rings*, or flat Circles, from two to six Inches in Diameter; and its Breadth, *&c.* proportionable.—The outward Ring A represents the Meridian of any Place you are at; and contains two Divisions of 90° each, diametrically opposite to one another; serving, the one from the Equator to the North, the other to the South Pole.—The inner *Ring* represents the Equator, and turns exactly within the outer, by means of two Points in each *Ring* at the Hour of 12.

A-cross the two Circles goes a thin Reglet or Bridge, with a Cursor C, that Slides along the middle of the Bridge. In the Cursor is a little Hole for the Sun to shine through.

The middle of this Bridge is conceiv'd as the Axis of the World, and the Extremities as the Poles; and on the one Side are drawn the Signs of the Zodiack, and on the other the Days of the Month. On the Edge of the Meridian slides a Piece, to which is fitted a Ring to suspend the Instrument by.

Use of the universal RING-*Dial.*

Place the Line *a* (on the middle of the sliding Piece) over the Degree of Latitude of the Place (*e. gr.* 51° for *London*) put the Line which crosses the Hole of the Cursor to the Degree of the Sign, or Day of the Month. Open the Instrument so as the two *Rings* be at right Angles to each other, and suspend it by the Ring H, that the Axis of the Dial, represented by the middle of the Bridge, be Parallel to the Axis of the World. Then turn the flat Side of the Bridge towards the Sun, so as his Rays striking through the little Hole in the middle of the Cursor, fall exactly on a Line drawn round the middle of the Concave Surface of the inner *Ring*; in which Case the bright Spot shews the Hour of the Day in the said Concave Surface of the *Ring*.

Note, The Hour of 12 is not shewn by this Dial; by reason the outer Circle, being then in the Plane of the Meridian, hinders the Sun's Rays from falling on the inner: Nor will this Dial shew the Hour when the Sun is in the Equinoctial, by reason his Rays, then, fall Parallel to the Plane of the inner Circle.

RING is also used for the Sound or Tone of a Bell. See BELL, SOUND, *&c.*

RING-*Bone*, among Farriers, *&c.* a hard callous Substance, growing in the hollow Circle of the little Pastern of a Horse, above the Coronet. See HORSE.

It sometimes goes quite round, like a *Ring*; whence its Name.

It is sometimes hereditary, derived from the Stallion, or Mare, but oftener comes by Accident, as a Strain, blow of a Horse, *&c.*

RING-*Walk*, among Hunters, a round Walk. See HUNTING.

RING-*Worm*, in Medicine, *&c.* See TETTER.

RIOT,

RIOT, in Law, the forcible doing of an unlawful thing, by three or more Persons assembled together for that Purpose.

The Word is form'd from the *Latin, riota*, of *arietare*, to run at each other as Rams do. Though, from an antient *Gallish* Version of the Bible, quoted by *Skinner*, *Riot* shou'd rather seem originally to signify Luxury and Excess; whence our *Riot* might proceed; in regard these are frequently attended with Quarrels.

For the Difference between a *Riot*, Rout, and unlawful Assembly, see ROUT, and UNLAWFUL *Assembly*.

Kitchen gives us the following Cases of *Riots*.—*viz.* The Breach of Inclosures, Banks, Conduits, Parks, Pounds, Barns, the burning of Stacks of Corn, *&c.* *Lambard* adds, the beating a Man, and entering on a Possession forcibly.

By a late Act of Parliament, made on occasion of the frequent pulling down of Meeting-Houses, *&c.* by Mobs, or Riotous Assemblies, about the time of the last Rebellion; a *Riot* was made Felony, if the *Rioters* did not disperse after reading a Proclamation made for that Purpose.

RIPENERS, in Medicine, a sort of topical Remedies, call'd *Digestives, Maturantia*, &c. See DRAWERS, DIGESTIVES, MATURANTIA, *&c.*

RIPENING. See MATURATION and DIGESTION.

RISING, in Astronomy, the appearance of the Sun, a Star, or other Luminary above the Horizon, which before was hid beneath it. See HORIZON, SUN, STAR, *&c.*

By reason of the Refraction of the Atmosphere, the heavenly Bodies always *rise* before their time, *i. e.* are seen above the Horizon, while they really are below it. See REFRACTION.

There are three *Poetical* Kinds of *Rising* of the Stars.—The *Cosmical Rising*, when a Star rises at the same time with the Sun. See COSMICAL.

Acronycal Rising is when the Star rises at the same time that the Sun sets. See ACRONYCAL.

Heliacal, Solar, or *Apparent Rising*, is when the Star emerges out of the Sun's Rays near the Horizon, and is no longer hid in his Brightness; which happens about 20 Days after the Conjunction of such Star with the Sun; more or less, according to the Magnitude of the Star, its Distance, *&c.*

Hesiod long ago observ'd, that *Sirius* was hid 40 Days; *viz.* 20 Days before his *Cosmical Rising*, and 20 after.—Some Nations of *America*, and among others the Savages of *Cayenna*, regulate their Civil Year by the Course of *Sirius*; beginning it with the *heliacal Rising* of that Star.

To find the Rising, &c. *of the Sun and Stars by the Globe.* See GLOBE.

RISIBILITY, the Faculty of Laughing. See LAUGHING.

Risibility is commonly supposed an Attribute peculiar to Man; as being the only Creature capable of judging of what is ridiculous. —Some Philosophers go so far as to assert, that the Degree of Judgment is always seen in that of Laughter; Fools either have too little or too much.

Authors do not agree as to the peculiar Mechanism in Man, whereby Laughter is rais'd,—'Tis usually attributed to the Communication between the *Plexus Nervosus*, and the *Diaphragmatic Nerves*. See CONSENT *of Parts*.

RISK, RISQUE, the Hazard or Chance of a Loss, Damage, *&c.* See CHANCE.

There is a great *Risk* run in letting Goods go upon Credit to great Lords, Wives not authorized by their Husbands, and young People not yet arrived at the Age of Majority.

Skinner derives the Word from the *Spanish, Risco*, steep: *Covarruvias*, from *rigeo*. In the barbarous *Greek*, they say, ριζικαρεω, for *Periclitor*, I hazard; and ριζικον, for Lot, Chance; which Words, as well as *Risque*, *Skinner* thinks, may be deduced from ριπτω, for ἀναριπτω τὸν κυβον, to cast the Dice.

To prevent any *Risk* in Invoices of Merchandizes by Sea, 'tis usual to insure them. See POLICY *of Insurance*.

The *Risk* of Merchandizes commences from the Time they are carried aboard.—In Matters of Insurance, 'tis a Maxim, that all is never to be *risk'd* on one Bottom, or in the same Vessel; to denote, that Assurers must act with Discretion in the signing of Policies, and not hazard too much on each Vessel; there being more to be expected from several than from one.

RISUS. See LAUGHTER.

Risus Sardonius, Sardonian Laughter is a forced, spightful Laughter; or a Laughter that does not go beyond the Teeth.—The Phrase is founded on this, that in *Sardinia* there is a venomous Plant, which occasions such a Contraction of the Muscles of the Face in Persons it kills, that they seem to dye Laughing.

Risus Caninus is a kind of Laughter wherein the Lips are contracted, so as to show all the Teeth.

RITE, in the School Divinity, the particular Manner or Form of celebrating or performing the Religious Ceremonies, which obtains in this or that Place. See CEREMONY.

The *Eastern* People, *Armenians*, &c. celebrate Divine Service according to the *Greek Rite*.—The *Western* World follow the *Latin Rite*; or that of the *Roman* Church.

The *English* observe the *Rite* of the Church of *England*, prescribed in the Book of Common-Prayer, *&c.* See RITUAL.

RITORNELLO, or REFRECT, in Musick, the Burthen of a Song, or a Repetition of the first Verses of the Song, at the end of each Stanza or Couplet. See REPETITION.

The Word is *Italian*, and signifies properly a *little Return*, or a short Repetition, such as that of an Eccho; or of the last Words of a Song; especially when the Repetition is made after a Voice by one or more Instruments.

But Custom has extended the use of the Word to all Symphonies, play'd before the Voices begin, and which serve by way of Prelude or Introduction to what follows.

In the Partitions or Score of the *Italian* Musick, we frequently find the *Ritornello*'s signified by the Words *si suona*; to shew that the Organ, Spinet, or the like, are to repeat what the Voice has been singing. See REPEAT.

RITUAL, a Church-Book, directing the Order and Manner of the Ceremonies to be observ'd in celebrating Divine Service, in a particular Church, Diocese, Religious Order, or the like. See RITE.

The antient Heathens had, likewise, their *Rituals*; call'd *Rituales Libri*; whereof those of the *Hetrurians* were famed.

These Books contain'd the Rites and Ceremonies to be observ'd in the building a City, in the consecrating a Temple or an Altar, in Sacrificing, Deifying, in dividing the *Curiæ*, Tribes, Centuries, and in general, all their Religious Ceremonies. See SACRIFICE, APOTHEOSIS, ALTAR, *&c.*

There are several Passages in *Cato*'s Books, *De re rustica*, which may give us some Idea of the *Rituals* of the Antients.

RIVAL, RIVALIS, a Term of Relation, applied to two Persons who have the same Pretensions. See CORRIVAL.

'Tis properly used for a Competitor in Love; and figuratively for an Antagonist in any other Pursuit.—The Intriegues of Comedies and Romances usually turn on the Jealousies of *Rivals*, who dispute for the same Mistress.

The Lawyers derive the Word from the *Latin, Rivus*, Stream, *quod ab eodem rivo aquam hauriant*. *Donatus* supposes it to have taken its Name hence, that Beasts coming to drink at the same Brook, or Fountain, frequently quarrel.

Cælius says, that *Rivales* were originally such whose Fields were parted by a Brook or Rivulet; the Course whereof being liable to be varied several Ways, occasions frequent Disputes and Law-Suits.

RIVAGE, a Toll antiently paid to the King in some Rivers, for the Passage of Boats therein. See FERRY.

RIVER, FLUVIUS, FLUMEN, in Geography, a Stream or Current of fresh Water, flowing in a Bed or Channel, from a Source or Spring, into the Sea. See WATER, *&c.*

If the Stream be not large enough to bear Boats, or small Vessels, loaden; it is properly call'd in *English*, by the Diminutive, *Rivulet*, or *Brook*; by the *Latins, Rivus*; and the *French, Riviere*.—If it will only bear such Vessels, the *Latins* call it *Amnis*. —If it be considerable enough to carry larger Vessels, 'tis call'd by the general Name *River*; by the *Latins, Fluvius*, and *Flumen*; and by the *French, Fleuve*.—In all which, the Difference is only as to greater and less.

Some will have none to be properly *Rivers*, except those which bear the same Name from their Source to their Mouth.—Others, none but those which empty themselves immediately into the Sea; and not into any other River. See SEA.

Rivulets have their Rise, sometimes, from great Rains, or great Quantities of thaw'd Snow; especially in mountainous Places; as in the long Ridges in *Africa, India, Sumatra*, &c. But the generality of *Rivulets* arise from *Springs*. See SPRING.

Rivers themselves all arise either from the Confluence of several *Rivulets*, or from Lakes: Nor is there any great *River*, such as the *Rhine, Elbe*, &c. known to flow from a single Spring. —The *Volga, e. gr.* consists of above two hundred *Rivulets*, all flowing into it, before it reach the *Caspian*: And the *Danube* receives as many. *Pliny*, indeed, and *Cardan*, say, that the *Nile* receives none; but the later Travellers into *Abassia* assure us of the contrary.

The *Rhine, Rhoan, Danube, Borysthenis*, &c. arise originally from Springs in the Mountains; the *Nile, Volga*, the great *River* of St. *Laurence*, &c. from Lakes. See LAKE.

Phænomena and Kinds of RIVERS.

Rivers are found subject to great Alterations, at different Seasons of the Year, Day, *&c.* from frequent Rains, and melted Snow.—Thus in *Peru* and *Chili* many of the *Rivers* are almost insensible in the Night-time; and only flow by Day; as being then augmented by the Resolution of the Snow on the Mountains, *Andes*. —Thus the *Volga* abounds in Water in *May* and *June*; so as to cover the Sand-Banks, *&c.* which all the rest of the Year lie bare, so as scarce to allow a Passage to the loaden Ships.—Thus also the *Nile, Ganges, Indus*, &c. are frequently so increas'd as to overflow; and that either in the Winter, from Rain, or in the Summer, from the melting of the Snow.

Some *Rivers* bury themselves under Ground in the middle of their Course, and break out again in other Places, like new *Rivers*.—Thus the *Niger*, which some Cosmographers derive by a subterraneous Channel from the *Nile*, because it swells at the same time with the *Nile* without any other apparent Cause of its

its swelling: The *Niger* it self meeting the Mountains of *Nubia*, is hid under them, and rises again on the Western Side of the Mountains. Thus also the *Tygris* is lost in the Mountain *Taurus*, &c.

Aristotle, and the Poets, mention several such *Rivers* about *Arcadia*: *Alpheus*, a *River* of *Arcadia*, is particularly famed.—This, being swallowed up in the Ground, is supposed by the *Greek* Authors to continue its Progress under Earth and Sea, into *Sicily*; where breaking up near *Syracuse*, it forms the *River Arethusa*. The great Reason of this Opinion is, that every fifth Summer the *River Arethusa* in *Sicily*, casts up the Dung of Cattel about the time of the Celebration of the Olympic Games, in *Achaia*, when the Dung of Victims was used to be cast into the *Alpheus*.

Some *Rivers* empty themselves into the Sea by one Mouth, some by several,—Thus the *Danube* opens into the *Euxine* Sea by seven Mouths, the *Nile* by seven, and the *Volga* by at least seventy. The Cause of this variety of Mouths *Varenius* attributes principally to Banks of Sand, *&c.* form'd therein; which gradually increasing, form Islands, whereby the Channel is divided into several Branches.—Indeed, the Antients tell us that the *Nile* formerly only emptied it self at one Mouth, call'd the *Ostium Canobicum*; and add, that the other six are Artificial.

The Channels of *Rivers*, except such as were form'd at the Creation, *Varenius* endeavours to prove to be all Artificial, and dug by Men.—His Reasons are, that when a new Spring breaks forth, the Water does not make it self a Channel, but spreads over the adjacent Land; so that the People have been necessitated to cut it a Channel to secure their Grounds; and that a great Number of Channels of *Rivers* are certainly known, from History, to have been dug by Men, *&c.*

As to the Question, whether those *Rivers* which run into others, have made themselves that way by their own Motion, or have been turn'd thither in Canals cut by Men? He takes the latter to be the more probable; and concludes the same of the Arms or Branches of *Rivers*; and of the Turns whereby Islands are form'd in the *Tanais*, *Volga*, &c.

To the Question, why we have no *Salt-Rivers*, when as there are many Salt Springs? He answers, that 'tis because Men having no Occasion for Salt Water, have not dug Channels to conduct the Water of Salt Springs; Salt being procurable at less expence. See SALT.

The Water of most *Rivers* flows impregnated with Particles of Metals, Minerals, Sands, oily and fat Bodies, *&c.*—Thus some *Rivers* bring Sands intermix'd with Grains of Gold; of which Kind is, 1°. a *River* in *Japon*; a second in the Islands *Lequeo*, near *Japon*; 3°. a *Rivulet* in *Africa*, call'd *Arroe*, breaking out of the Roots of the Mountains of the Moon, wherein are Gold Mines: 4°. a *River* in *Guinea*, where the Negroes separate the Gold Dust from the Sand, and sell it to the *Europeans*, who Traffick hither for that very purpose. 5°. In some *Rivulets* near the City of *Mexico*, are Grains of Gold taken up: especially after Rain; which is to be understood of all the other *Rivers*; none of which yield any thing considerable, except in rainy Seasons. 6°. In *Peru*, *Sumatra*, *Cuba*, *Hispaniola*, and *Guiana*. Lastly, there are several Brooks in the Countries about the *Alps*, especially *Tirol*, out of whose Waters Gold is drawn, though there be no Grains conspicuous therein. Add to this, that the *Rhine* in many Places brings a Golden Mud. See GOLD.

As to *Rivers* that bring Grains of Silver, Iron, Copper, Lead, *&c.* we find no mention of them in Authors; though doubtless there are great Numbers of each; and many of the medicinal Effects of mineral Waters are doubtless owing thereto.

We must not here omit a *River* in *Germany*, which is ordinarily supposed to change Iron into Copper.—The Truth is, there is no real Conversion of the Metal; all that is done is, that the Copper, and Vitriolic Particles in the Water, corrode the Iron, and detaching Parts thereof, by means of the Motion of the Water succeed in their room.

From this variety in the Mixture of the *River Water*, result various Qualities, different specific Gravities, different Colours, *&c.* See *Mineral*-WATER.

Some *Rivers*, at certain Seasons of the Year, swell, so as to overflow their Banks, and drown the neighbouring Lands.—Of these the most eminent is the *Nile*, which rises so as to cover all *Egypt*, except the Hills. The Inundation begins about the 17th Day of *June*, and increases for the space of forty Days; and decreases for as many: During which Period the Cities of *Egypt*, which are all built on Hills, appear as so many Islands.

To these Inundations *Egypt* owes all its Fertility; the Heavens there affording no Rain, or at least none in any respect considerable.—Hence as the Inundation is great or small, *Egypt*, for that Year is fruitful or barren.

The Antient *Greeks*, &c. were mistaken as to the Cause of this Inundation; no body in those Days having travelled up to its Source: But the modern *English* and *Portugueze* Traders into *Congo*, *Angola*, *Monomotapa*, &c. have let us into the Secret.—From them we learn that the Spring or Source of the *Nile* is in a large Lake call'd *Zaire*, round which are a great Number of huge Mountains, call'd the Mountains of the Moon. Now as these lie in the Southern Hemisphere, their Winter will be at the time of our Summer: But by reason of their nearness to the Equator, (being only 10° distant from it) they never feel any notable Cold: Hence it is, that instead of Snow in the Winter, they have Rain every Day, at least two Hours before, and two after Noon. In effect, the Tops of these Mountains are always cover'd with Clouds, and the Rains almost continual. Hence Torrents are constantly gushing down from the Mountains; all ending in the Lake of *Zaire*; whence they flow into the Channel of the *Nile*, and other *Rivers* arising from the same Lake, as the *Cuama*, *Zaire*, &c. Hence the Inundation of the *Nile*.

The other *Rivers*, which have any notable stated Inundations, are; the *Niger*, which overflows at the same Time with the *Nile*. *Leo Africanus* says, it begins on the 15th Day of *June*, increases for 40 Days, and decreases as long.—The *Zaire*, a *River* of *Congo*, proceeding from the same Lake with the *Nile*, and therefore affected in the same Manner: The *Rio de la Plata* of *Brasil*, which *Maffeus* observes, overflows at the same time with the *Nile*: The *Ganges*: The *Indus*; both which last overflow in *June*, *July*, and *August*; at which Times the Natives save great Quantities of the Water in Ponds, to serve them the rest of the Year: Several *Rivers* flowing out of the Lake *Chiamay*, into the Bay of *Bengal*, which overflow in *September*, *October*, and *November*. These all bring a very great Fertility with them to the Ground: The *River Macoa* in *Camboia*: The *River Parana*, or *Paranaguasa*, which some will have to be the same with the Silver *River*: Several *Rivers* in *Coromandelia*, a Part of *India*, overflowing in the rainy Months from the great Quantity of Water issuing off the Mountain *Gatis*: The *Euphrates*, which overflows *Mesopotamia*, certain Days in the Year. Lastly, the *River Sus* in *Numidia*.

The *Rivers* most celebrated for their Length, Breadth, Swiftness of Current, *&c.* are,—The *Nile*, which runs almost in a straight Course 2520 Geographical Miles. The *Niger*, which runs 2400 Miles. The *Ganges*, 1200 Miles. The *Ob*, 1600 Miles. The *Jeniscea* in *Asia*, about the same Length with the *Ob*. The *River Orellana* in *America*, 60 Miles broad at its Mouth, and 5000 Miles long. The *Rio de la Plata*, 80 Miles broad at the Mouth. The *Omarranan*, another *River* of *Brasil*: And the great *River* of St. *Laurence*, near 2500 Miles long.

RIVER, in Physicks, a Water running by its own Gravity, in a Channel open above.—Such is AE *Tab. Hydrostaticks*, *Fig.* 34.

Laws of the Motion of RIVERS.

The modern Philosophers endeavour to bring the Motion and Flux of *Rivers* to precise Laws; and with this View have applied Geometry and Mechanicks thereto: So that the Doctrine of *Rivers* is become a Part of the new Philosophy.

The *Italian* Authors have distinguished themselves herein, and 'tis chiefly to them we are indebted for the Improvement; particularly S. *Guglielmini*, who in his Treatise, *Della Natura de' Fiumi*, has abundance of new Observations and Discoveries relating thereto.

Rivers, he observes, usually have their Sources in Mountains or Elevations of Ground; and 'tis in their Descent from these, that they acquire the Velocity or Acceleration which maintains their future Current.—In Proportion as they advance further, this Velocity diminishes; by reason of the continual Friction of the Water against the Bottom and Sides of the Channel, of the various Obstacles they meet withal in their Progress; and of their arriving at length in Plains, where the Descent is less, and their Inclination to the Horizon, of consequence, greater.—Thus the *Reno*, a *River* of *Italy*, which gave Occasion in some Measure to these Speculations, is found near its Mouth, to have scarce a Descent of 52 Seconds.

If the acquired Velocity be quite spent through the many Obstacles; so that the Current becomes horizontal; there will then nothing remain to propagate the Motion, and continue the Stream, but the Height, or the perpendicular Pressure of the Water which is always Proportional to the Heighth.—And, happily for us, this Resource increases as the Occasion for it increases: For in Proportion as the Water loses of the Velocity acquired by the Descent, it rises and augments in Depth.

The upper Parts of the Water of a *River*, and those at a Distance from the Banks, may continue to flow from the single Cause or Principle of Declivity, how small soever it be; for not being detain'd by any Obstacle, the minutest Difference of Level will have its Effect: But the lower Parts, which roll along the Bottom, will scarce be sensible of so small a Declivity, and will only have what Motion they receive from the Pression of the superincumbent Waters.

The natural Viscidity and Cohesion of the Particles of Water, and that Implication, as it were, which they seem to have with one another, makes the lower, which are moved by means of the Depth, carry along with them the upper, which in a horizontal Channel wou'd have no Motion at all, or in a Channel very little inclined, next to none. So that the lower, in this Case, communicate to the upper, a Part of the Motion they have receiv'd from it. Hence it frequently happens that the greatest Velocity of a *River* is about the middle of its Depth; such middle

Parts having the Advantage of being preſs'd with half the Depth of the *River*, and of being free, at the ſame Time, from the Friction of the Bottom.

To find whether the Water of a *River* almoſt Horizontal, flows by means of the Velocity acquired in it Deſcent, or by the Preſſure of its Depth; ſet up an Obſtacle Perpendicular thereto; and if the Water riſe and ſwell immediately againſt ſuch Obſtacle, it runs in Virtue of its fall; or if it ſtop a little while, in Virtue of its Preſſion.

Rivers, according to this Author, almoſt always make their own Beds.—If the Bottom have originally been a large Declivity; the Water in Conſequence hereof falling with a great deal of Force, will have ſwept away the moſt elevated Parts of the Soil, and carrying them lower down, will gradually make the Bottom horizontal; where the Stream is ſwifteſt, there will the Earth be moſt dug up, and conſequently there the greateſt Cavity will be made.

The Water having made its Bed horizontal, becomes ſo it ſelf, and conſequently rakes with the leſs Force againſt the Bottom; till at length that Force is only equal to the Reſiſtance of the Bottom. The Bottom is now arrived at a State of Permanency, at leaſt for a conſiderable Time; and the longer, according to the Quality of the Soil; Clay and Chalk reſiſting longer than Sand or Mud.

On the other Hand, the Water is continually gnawing and eating off the Brims of its Channel; and this with the more Force as by the Direction of its Stream it ſtrikes more perpendicularly againſt them. By this means it has a continual Tendency to render them parallel to its own Courſe; and when it has arrived as near that as poſſible, it ceaſes to have any Effect in that Way. At the ſame time that it has thus rectified its Edges, it has inlarged its own Bed; that is, has loſt of its Heigth, and conſequently of its Force and Preſſure: This it continues to do till there is an Equilibrium between the Force of the Water and the Reſiſtance of its Banks, upon which they will remain fix'd. —And it is evident from Experience, that theſe Equilibriums are all real; inaſmuch as we find that *Rivers* only dig and widen to a certain Pitch.

The very reverſe of all theſe things does alſo happen.—*Rivers* whoſe Waters are thick and muddy, raiſe their Bed by letting Part of the heterogeneous Matters contain'd in them fall to the Bottom: They alſo contract their Banks by a continual Appoſition of the ſame Matter in bruſhing over them. This Matter being thrown aſide far from the Stream of Water, might even ſerve, by reaſon of the obſcureneſs of the Motion, to form new Banks.

Now, theſe oppoſite Effects almoſt always ſeem to meet together, and are differently combined, according to the Circumſtances; whence 'tis very difficult judging of the Reſult. Yet muſt this Combination be known very accurately, e're any Meaſures can be taken about *Rivers*, eſpecially as to the diverting their Courſes.—The *Lamona*, which emptied it ſelf into the *Po*, being turn'd another Way to make it diſcharge it ſelf into the *Adriatic*, was ſo alter'd, and its Force ſo far diminiſh'd, now that its Waters were left to themſelves, that it rais'd its Bed a great Heighth, by continual Depoſitions of Mud; 'till it became much higher than the *Po*, in its utmoſt Accretions, and needed very high Banks or Dykes to keep it from overflowing. See ALLUVION.

A little *River* may be receiv'd into a large one, without either augmenting its Width or Depth.—This ſeeming Paradox ariſes hence, that the Addition of the little *River* may only go to move the Waters before at reſt near the Banks of the large one, and thus augment the Velocity of the Stream, in the ſame Proportion as it does that of the Quantity of Water.—Thus the *Venetian* Branch of the *Po* ſwallowed up the *Ferrareſe* Branch, and that of *Panaro*, without any inlargement of its own Dimenſions. And the ſame may be concluded proportionably of all other Acceſſions to *Rivers*; and in the general, of all new Augmentations of Water.

A *River* offering to enter into another, either perpendicularly, or in an oppoſite Direction, will be diverted by Degrees from that Direction, and obliged to make it ſelf a new and more favourable Bed next the Mouth.

The Union of two *Rivers* into one, makes it flow the ſwifter, by reaſon in lieu of the Friction of four Shores, they have only two to ſurmount; and that the Stream being further diſtant from the Banks, goes on with the leſs Interruption; beſide that a greater Quantity of Water moving with a greater Velocity digs deeper in the Bed, and of Courſe retrenches of its former Width. —Hence alſo it is that *Rivers*, by being united, take up leſs Space on the Surface of the Earth are more advantageous to low Grounds; which diſcharge their ſuperfluous Moiſture into them, and have leſs Occaſion for Dykes to prevent their overflowing.

Theſe Advantages are ſo conſiderable, that S. *Guglielmini* thinks them worthy of Nature's having had a View to them in her contriving to make the Confluence of *Rivers* ſo frequent as we find it.

To determine more preciſely the general Laws of the Motion of *Rivers*, it may be obſerved that a *River* is ſaid to remain in the *ſame State*, or to be in a *permanent State*, when it flows uniformly, ſo as to be always at the ſame Heighth in the ſame Place. 2°. That a Plane, which cutting a *River* is perpendicular to the Bottom, as *p o n g*, is call'd the *Section of a River*.

Hence, when a *River* is terminated by flat Sides, parallel to each other, and perpendicular to the Horizon, and the Bottom alſo is a Plane, either horizontal, or inclined, the Section of the *River* with theſe three Planes makes Right Angles, and is a Parallelogram.

Now in every *River* that is in a permanent State, the ſame Quantity of Water flows in the ſame Time through every Section; for unleſs there be in every Place as great a Supply of Water, as what runs from it, the *River* will not remain in the ſame State. This will hold good, whatever be the Irregularity of the Bed, or Channel, from which in another reſpect ſeveral Changes in the Motion of the *River* may ariſe: For Example, a greater Friction, in Proportion to the Inequality of the Channel.

The Irregularities in the Motion of a *River* may be infinitely varied, nor can any Rules be given to ſettle them. All Irregularities muſt be ſet aſide; and only the general Tenor or Flux be conſidered to examine the general Courſe of *Rivers*.

Suppoſe, then, the Water to run in a regular Channel, without any ſenſible Friction, and that the Channel is terminated with Plane Sides, parallel to one another, and Vertical; and alſo that the Bottom is a Plane, and inclined to the Horizon.—Let AE be the Channel, into which the Water runs from a greater Receptacle or Head; and let the Water always remain in the ſame Heighth at the Head, ſo that the *River* may be in a permanent State: The Water here deſcends along an inclined Plane, and is accelerated; whereby, becauſe the ſame Quantity of Water flows through every Section, the Heighth of the Water, as you recede from the Head of the *River*, is continually diminiſhed, and its Surface will acquire the Figure, *i q v*.

To determine the Velocity of the Water in different Places; ſuppoſe the hollow of the Channel ADCB to be ſhut up with a Plane; if there be an Hole made in the Plane, the Water will ſpout the faſter through the Hole, as the Hole is more diſtant from the Surface of the Water HI; and the Water will have the ſame Celerity that a Body falling from the Surface of the Water to the Depth of the Hole below it, would acquire: All which ariſes from the Preſſure of the ſuperincumbent Water.—There is the ſame Preſſure, that is, the ſame moving Force, when the Obſtacle at AC is taken away, upon which every Particle of Water enters into the Channel with the Celerity a Body would acquire in falling from the Surface of the Water to the Depth of that Particle. This Particle is moved along in an inclined Plane in the Channel, with an accelerated Motion; and that in the ſame manner, as if in falling vertically, it had continued its Motion to the ſame Depth below the Surface of the Water in the Head of the *River*.

So, if you draw the horizontal Line *i t*, the Particle at *r* will have the ſame Celerity as a Body falling the length *i* C, and running down C*r*, can acquire; which is the Celerity acquired by the Body in falling down *t r*. Therefore the Celerity of a Particle may be every where meaſured, by drawing from it a Perpendicular to the horizontal Plane, which is conceived to run along the Surface of the Water in the Head of the *River*; and the Velocity which a Body acquires in falling down that Perpendicular, will be the Celerity of the Particle; which is greater, the longer the Perpendicular is. From any Point, as *r*, draw RS perpendicular to the Bottom of the *River*, this will meaſure the Heighth or Depth of the *River*. Since *r s* is inclined to the Horizon, if from the ſeveral Points of that Line, you draw Perpendiculars to *i t*, they will be ſhorter, the more diſtant they are from *r*, and the ſhorteſt of them alſo will be *ſ v*: Therefore the Celerities of the Particles in the Line *r s*, are ſo much the leſs, the nearer they are to the Surface of the *River*, and the lower Water is moved faſter than the upper Water.

Yet the Celerities of thoſe Waters, as the *River* runs on, continually approach nearer and nearer to an Equality: For the Squares of thoſe Celerities are as *r t* to *s v*, the Difference of which Lines, as you recede from the Head of the *River* is continually leſſened, becauſe of the Heighth *r s*, which is alſo continually diminiſhed as the Lines themſelves are lengthened. Now as this obtains in the Squares, it will much more obtain in the Celerities themſelves, whoſe Difference therefore is diminiſhed as they increaſe.

If the Inclination of the Bottom be changed up to the Head of the *River*, ſo as to become *y z*, and a greater Quantity of Water flow into the Channel, it will be higher every where in the *River*, but the Celerity of the Water will not be changed.—For this Celerity does not depend on the Heighth of the Water in the *River*, but, on the Diſtance of the moved Particle from the horizontal Plane of the Surface at the Head continued over the ſaid Particle; which Diſtance is meaſured by the Perpendicular *r t*, or *ſ v*; but theſe Lines, are not changed by the Afflux of Water, provided the Water remain at the ſame Heighth in the Baſon or Head.

Suppoſe the upper Part of the Channel ſtop'd by an Obſtacle, as X, which deſcends a little way below the Surface of the Water; here, the whole Water which comes cannot run through, therefore it muſt riſe: But the Celerity of the Water below this Cataract is not increaſed; and the Water that comes on, is continually

nually heaped up, so that at last it must rise so as to flow over the Obstacle, or the Banks of the *River*. If the Banks be raised, and the Obstacle be continued; the Heighth of the Water would rise above the Line *i t*; but before that, the Celerity of the Water cannot be increased: In which Case the Heighth of all the Water in the Head will be increased; for, as we suppose the *River* in a permanent State, there must continually be as great a Supply of Water to the Head, as there runs from it down the Channel; but if less Water runs down, the Heighth must necessarily be increased in the Head, till the Celerity of the Water flowing under the Obstacle be increased to such Degree, that the same Quantity of Water shall run under the Obstacle, as used to run in the open Channel before.

RIVULET, a Diminutive of *River*. See RIVER.

RIXDOLLAR, a Silver Coin, struck in several States and free Cities of *Germany*; as also in *Flanders*, *Poland*, *Denmark*, *Sweden*, &c. See COIN.

There is but very little Difference between the *Rixdollar* and the *Doller*, another Silver Coin struck in *Germany*; each being equal to the *French* Crown of three Livres, the *Spanish* Piece of Eight, or 4*s*. 6 *d*. *Sterling*. See CROWN, *&c*.

The *Rixdollar* is one of the most Currant and universal Coins in the World.—'Tis used equally in the Commerce of the *Levant*, the *North*, *Muscovy*, and the *East-Indies*.

ROAD, VIA, an open Way or Passage, which makes a commodious Communication between one Place and another. See WAY.

The *Romans*, of all other People, took the most pains in their *Roads*: The Labour and Expences they were at to render them spacious, straight, smooth, and agreeable to the very Extremities of their Empire, are incredible. See *Bergier*'s History of the great *Roads* of the *Roman* Empire.

Usually, they strengthened the Ground by ramming it, laying it with Flints, Pebbles, or Sand; sometimes by a Lining of Masonry, Rubbish, Bricks, Potsherds, *&c*. bound together with Lime.

F. *Menestriers* observes, that in some Places in the *Lyonnois* he has found huge Clusters of Flints cemented with Lime, reaching 10 or 12 Foot deep, and making a Mass as hard and compact as Marble it self; and which, after resisting the Injuries of Time for 1600 Years, is still scarce penetrable by all the Force of Hammers, Mattocks, *&c*. and yet the Flints it consists of don't exceed the bigness of an Egg.

Sometimes they even paved their *Roads* regularly, with large, square Free-Stones; such is the *Appian* and *Flaminian Way*, &c. See PAVING.

The *Roads* paved of very hard Stones they usually call'd *Viæ Ferreæ*, either because they resembled Iron, or because they resisted the Iron of the Horse's Feet, Chariots, *&c*.

Roads are either *Natural*, or *Artificial*; *Terrestrial*, or *Aquatic*, *Publick*, or *Private*.

A *natural Road* is that which has been frequented for a long succession of Time, and subsists with little Expence, by reason of its Disposition, *&c*.

Artificial Road is that made by Labour of the Hand, either of Earth, or Masonry; and wherein there were several Difficulties to be surmounted: Such are most of those along the Banks of Rivers, through Marshes, Lakes, *&c*.

Terrestrial, or *Land Roads*, are not only those made upon the Ground, but also those form'd of Earth heaped up in Manner of a Bank, and sustained by Spurs, Buttresses, and Counter-Forts.

Aquatic Road, is a *Road* made in the Waters, whether Currant, as over Rivers, *&c*. or Stagnant, as Banks and Causeways over Morasses, Ponds, *&c*. See CAUSEWAY.

Under this Denomination are also comprehended navigable Rivers, and artificial Canals; as those in *Italy*, *Holland*, &c.

Publick Road, or *Grand Road*, is any common *Road*, whether straight, or a-cross, Military or Royal, *&c*.—*Private Road* is that made for the Convenience of some particular House, *&c*.

Military ROADS, so call'd among the *Romans*, were grand *Roads* appointed for the marching of their Armies into the Provinces of the Empire, or for the Assistance of their Allies. See MILITARY.

The principal of these *Roads* in *England*, are *Watling-street*, *Ikenild-street*, *Foss-way*, and *Erminage-street*; which see under the Article WAY.

Double-ROADS, among the *Romans*, were *Roads* for Chariots, *&c*. having two Pavements, or Causeways; the one for those going one way, the other for those returning the other; to prevent clashing, stopping, and confusion.

These two Ways were separated from each other by a Bank raised in the Middle, paved with Bricks, for the Convenience of Foot-People, with Borders, mounting Stones from Space to Space, and military Columns to mark the Distance.—Such was the *Road* from *Rome* to *Ostia*; call'd *Via Portuentis*. See MILIARY.

Subterraneous-ROAD, is that dug in a Rock, with the Chissel, *&c*. and left vaulted.—Such is that of *Puzzuoli* near *Naples*, which is near half a League long, fifteen Foot broad, and as many high. See SUBTERRANEOUS.

Strabo says it was made by one *Cocceius*, a Relation, probably, of *Nerva*'s; but it has since been widened by *Alphonsus* King of *Arragon* and *Naples*, and made straight by the Viceroys.—There is another of the same Kind in the same Kingdom, between *Baiæ* and *Cumæ*, call'd the *Grotto of Virgil*, because mentioned by the Poet in the sixth Book of his *Æneid*. See GROTTO.

ROAD, in Navigation, a Place of Anchorage, at some Distance from Shore, and shelter'd from the Winds; where Vessels usually moor, to wait for a Wind or Tide proper to carry them into Harbour, or to set Sail. See HARBOUR, MOORING, ANCHOR, *&c*.

When the Bottom is clear of Rocks, and the Hold firm, and the Place well cover'd from a certain Wind; the *Road* is said to be good.

A wild ROAD, among Sailors, is one which has but a little Land on any Side.

The *Roads* within his Majesty's Dominions are free to all Merchant Vessels, either of his Subjects or Allies.—Captains and Masters of Ships who are forced by Storms, *&c*. to cut their Cables, and leave their Anchors in the *Roads*, are obliged to fix up Marks or Buoys, on Pain of a Forfeiture of their Anchors, *&c*. See BUOY.

The Masters of Ships coming to Moor in a *Road*, must cast Anchor at such Distance as that the Cables, *&c*. mayn't mix, on Pain of answering the Damages: When there are several Vessels in the same *Road*, the outermost to the Sea-ward, is obliged to keep a Light in his Lanthorn in the Night-time, to apprize Vessels coming in from Sea.

ROADER, among Sailors, a Ship that Rides at Anchor in a Road. See ROAD and ANCHOR.

ROB, in Pharmacy, a Preparation antiently much used, consisting of the Juices of Fruits, purified, and boil'd to a Consumption of two thirds of their Moisture. See MEDICINE, *&c*.

There are *Robs* made of Quinces, Mulberries, Elderberries, Aloes, Acacia, Liquorice, Barberries, Gooseberries, and other Fruits, for various Diseases.—The Juice of Grapes thus prepared, is particularly call'd *Sapa*; which *Sapa* is almost of the Consistence of a Syrup. See SAPA.

When only one third of the Humidity is boil'd away, 'tis call'd *Defrutum*; and when only boil'd to the Consistence of a soft Electuary, a *Resin*. See DEFRUTUM and RESIN.

The Word *Rob* is pure *Arabick*; and signifies, originally, a Juice dried in the Sun, or over the Fire; that it may keep the longer without Damage.

Sometimes it also denotes a Composition of some Juice made up with Honey or Sugar; in which Sense it is confounded with *Loche* or *Lohoc*. See LOHOC.

The *Rob* is a Form now much out of use; though there are several directed in the College Dispensatory; as *Robs* of black Cherries, of Sloes, of Quinces, *&c*.

ROBBERY, in Law, a felonious taking away another Man's Goods, from his Person, Presence, or Estate, against his Will; putting him in Fear, *&c*.—This is sometimes call'd *violent Theft*. See THEFT.

The Word is said to have taken its rise hence, that antiently *Robbers* only took away the Robes or Cloaths from Travellers. Though my Lord *Coke* in the third of his *Institutes*, takes the Name to have had its rise from *Robin Hood*, who lived under *Richard* I. in the Borders of *England* and *Scotland*, by *Robbery*, burning Houses, Rape, and Spoil.

Hence also *Robers-Men*, or *Roberds-Men*, mentioned in several Statues for mighty Thieves.

ROBE, a Gown or Garment wore by Lawyers, Divines, and other Graduates; who are hence call'd *Gentlemen of the long Robe*. See GOWN.

The *Robe* is an ample Garment bore over the ordinary Cloaths, hanging down to the Feet.—'Tis fashion'd differently for Ecclesiasticks, and for Laymen.

At *Rome*, they gave the Name *Virile Robe*, *Toga Virilis*, to a plain kind of Gown which their Youth assumed when arrived at Puberty. This, they particularly denominated, *Prætexta*. See TOGA, PRÆTEXTA, VIRILE, PUBERTY, *&c*.

In some Universities, Physicians wear the red *Robe*.—In the *Sorbonne* the Doctors are always in *Robes* and Caps. Beadles, *&c*. wear *Robes* of two Colours.

Among the *French* Officers, *&c*. they distinguish those of the *short Robe*; which are such as have not been regularly examined.—They have also Barbers of the *short Robe*, who are such as are obliged to Practice in an inferiour Way to those of the long *Robe*.

ROBE, is also taken in the general for, Civil Magistrature, or the Profession opposite to that of Arms. See MAGISTRATE.

In this Sense it was that *Cicero* said, *Cedant Arma Togæ*.

Master of the ROBES, is an Officer of the Houshold, who has the ordering of all his Majesty's *Robes*; as those of the Coronation, those of St. *George*'s Feast, of Parliament, *&c*. as also of his wearing Apparel, Collar of SS's, *&c*.

He has several Officers under him, as a *Clerk of the Robes*, a Yeoman, three Grooms, a Page, a Brusher, Sempstress, Laundress, Starcher; a Keeper of the Wardrobe at *Whitehall*, &c. See WARDROBE.

ROBERVALLIAN *Lines*, a Name given to certain Lines, used for the Transformation of Figures; thus call'd from their Inventor M. *de Roberval*. See TRANSFORMATION, *&c*.

The

The Abbot *Galloys*, in the Memoirs of the *French* Academy, *An.* 1693. obſerves, that the Method of transforming Figures, explain'd at the latter end of M. *de Roberval's Treatiſe of Indiviſibles*, is the ſame with that ſince publiſhed by Mr. *James Gregory*, in his *Univerſal Geometry*; and that, by a Letter of *Torricelli's*, it appears that *Roberval* had invented this manner of tranſforming Figures, by means of certain Lines which *Torricelli* called *Robervallian Lines*.

He adds, that 'tis highly probable that *J. Gregory* firſt learned the Method in the Journey he made to *Padua* in 1668; the Method it ſelf having been known in *Italy* from the Year 1646; though the Book was not publiſhed till the Year 1692.

This Account Dr. *David Gregory* has endeavour'd to refute, in Vindication of his Brother.—His Anſwer is inſerted in the *Phil. Tranſact. An.* 1694. and the Abbot has rejoin'd in the *French* Memoirs of the Academy, *An.* 1703.

ROBIGALIA, or RUBIGALIA, in Antiquity. See RUBIGALIA.

ROBORANTIA, in Medicine, *Strengtheners*; or ſuch Medicines as ſtrengthen the Parts, and give new Vigour to the Conſtitution. See STRENGTHENER.

ROCAMBOLES, a mild, pleaſing Sort of Garlick, by ſome call'd *Spaniſh* Garlick; being much of the Nature of Shalot; and well known in Cookery, in Quality of a Sauce.

ROCHET, a Lawn Garment, wore by Biſhops and Abbots; reſembling a Surplice, except in this, that the Sleeves are gathered at the Wriſt; whereas the Surplice is quite open. See SURPLICE.

The Regular Canons of St. *Auguſtin* do alſo wear *Rochets* under their Copes.—*Menage* derives the Word from the *Latin Rochettus*, a Diminutive of *Rocchus*, uſed in the Writers of the lower *Latin* for *Tunica*, and formed originally from the *German*, *Rock*.

ROCHETS are alſo the Mantles wore on Days of Ceremony, by the Peers ſitting in the *Engliſh* Parliament. See PEER and PARLIAMENT.

Thoſe of Viſcounts have two Bands or Borders and a half; thoſe of Earls three; thoſe of Marquiſſes three and a half; and thoſe of Dukes four. *Larrey*.

ROCK, RUPES, a large Maſs or Block of hard Stone, rooted in the Ground. See STONE.

There are various Ways of breaking *Rocks* with Wood, Gunpowder, *&c.* See QUARRY, WOOD, *&c.*

We have Roads, Grotto's, Labyrinths, *&c.* dug through *Rocks*. See ROAD, GROTTO, LABYRINTH, *&c.*

The Word is form'd of the *Greek* ῥοῦς, *Rima*, Cleft, Chink; and ῥοῦς from ῥήγνυμαι, I break; whence ῥαγία, a ſtony River.

ROCK-*Work*, ROCAILLE. See SHELL-*Work*.

ROCK-*Cryſtal*, or *Cryſtal of the Rock*, is that form'd by a Congelation of the lapidific Juices which trickle down in *Rocks* and Caverns. See CRYSTAL.

ROCK-*Alumn*, ROCK-*Salt*, } See { ALUMN. SALT.

ROCKET, in Pyrotechnia, an artificial Fire-work, conſiſting of a cylindrical Caſe of Paper, filled with a Compoſition of certain combuſtible Ingredients; which being tied to a Stick, mounts in the Air to a conſiderable Heighth, and there burſts. See PYROTECHNIA and FIRE-WORKS.

The *Rocket* has a great Part in all Fire-Works of Entertainment, being not only uſed ſingly, but ſometimes, alſo, as an Ingredient in others.

Beſides the *Rocket* here defined, which is properly call'd the *Sky-Rocket*, there is another, which from the Sphere it moves in, the Water, is denominated *Water-Rocket*.—The Mechaniſm, Preparation, *&c.* of each whereof, we ſhall here deſcribe.

*Method of making a Sky-*ROCKET.

1°. A Concave cylindrical Mould, or Frame, AB, *Tab. Miſcellany, Fig.* 7. is turn'd, of hard Wood, with a Baſe BD, and a Capital HC, uſually adorned with architectonical Mouldings.—The Cylinder is to be open at both Ends, and its Dimenſions, for *Rockets* of various Sizes, as in the following Article.—When large, they are ſometimes alſo made of Braſs or Tin; and when ſmall, of Bone.

2°. Of the ſame Matter with the Cylinder, is prepared a Quadra, or Foot E; in the middle whereof is turn'd a Hemiſphere G, conſiderably leſs than that of the Cavity of the Frame; making the Cap or Head of another Cylinder IK, and reaching up within the Caſe; where 'tis kept ſteady by a Pin LM.

Authors don't agree about the Proportions.—*Semionowitz* preſcribes thoſe that follow. If the Diameter of the Aperture HN be equal to that of a Leaden-Ball of a Pound, or at moſt two Pound Weight; the Heighth of the Cylinder, with the Baſe and Capital HC, are to be ſeven Diameters of the Heighth of the Quadra FE 1 $\frac{1}{3}$. The Altitude of the Cylinder KI, 1. The Diameter IN $\frac{12}{25}$. The Diameter of the Hemiſphere G, $\frac{2}{3}$. The Heighth of the Capital AC, 1.—The ſame Author adds, that he finds by abundant Experience, that if the Diameter of the Aperture be divided into 100 Parts, according to the different Weight of the Leaden-Balls to whoſe Diameter 'tis equal, the following Numbers being multiplied by 7 give the Heighth HE.

Weight of Leaden-Ball.	Subſeptuple of Altitude HE.	Weight of Leaden-Ball.	Subſeptuple of Altitude HE.
1	100	20	86
2	98	30	82
4	26	40	78
6	94	50	75
10	91	70	67
15	88	100	57

The Frame being ready, a wooden Cylinder or Mould AB (*Fig.* 8.) is provided, whoſe Diameter is $\frac{3}{4}$ of the Aperture of the Frame, and its Length equal to the Heighth of the ſame; to which is afix'd a Haft or Hilt AD. About this Mould is a thick ſtrong Paper roll'd, 'till ſuch time as it fill the Cavity of the Frame. This done, where the Haft is join'd to the Cylinder, as at A, 'tis *choak'd*, i. e. firmly bound round with fine Pack-thread, ſo as to conſtringe or ſtraighten the Cavity thereof.—The Part thus *choak'd* or bound up FG, (*Fig.* 9.) to be equal to the Hemiſphere G.

The Caſe is now taken off the Mould, and put into the Cavity of the Frame, *Fig.* 7. the *Choak* GP upon the Hemiſphere; and in this Diſpoſition is fill'd with a Compoſition deſcribed in the following Article, ramm'd ſtrongly in by means of a wooden Cylinder or Rammer fitting the Cavity, and a Mallet.

When fill'd, a Paper Cap of a conical Form is glued over the End of the Caſe fill'd laſt; and the Space left a-top fill'd with whole Gun-powder, to the Heighth of about one Diameter; then the *Rocket* bound, or choak'd in E, as before in G.

Laſtly, the *Rocket* is bored, as is repreſented in *a*L *Fig.* 9. care being taken to do it in the middle.—Some, indeed, bore the *Rocket* as they fill it, by thruſting a long, ſharp Spike through the lower Baſis, and drawing it out again when the *Rocket* is full: But 'tis beſt not to bore till the *Rocket* be to be uſed.

The boring is to go two thirds of the Heighth of the *Rocket*, abating one Diameter of the Cavity. The Diameter of the Bore in G is to be $\frac{1}{4}$ of the Diameter of the Cylinder; and in L $\frac{1}{3}$ of the lower Diameter.

To make the *Rocket* mount ſtraight up, it is tied faſt to the End of a long ſlender Stick, MN, eight times as long as the *Rocket*; in ſuch manner as that when poiz'd on the Finger near the Touch-hole F, the Stick (which is uſually made biggeſt at this End, and ſloping gently to the other) may preponderate, tho' very little.—The *Rocket* thus equip'd, is hung at freedom, and lighted with Port-Fire.

Note, Some inſtead of a Stick to make the *Rocket* mount, furniſh it with two Wings, as MN, (*Fig.* 10.) which have the ſame Effect: And inſtead of Paper ſome make the Caſes of Wood, cover'd with Leather; others of a thin Iron Plate. And ſome, inſtead of a wooden Stick uſe an Iron Wire, with a Plummet at the end of it.

The Compoſition wherewith *Rockets* are fill'd, conſiſts of the three following Ingredients, *viz.* Salt-petre, Charcoal, and Sulphur; all well ground: But the Proportions of theſe are various for *Rockets* of various Sizes; as in the following Table. Noting, that in ſmall *Rockets* Gun-powder Duſt is added.

Compoſitions for ROCKETS *of various Sizes.*

Weight of Rocket.	Salt-pet.	Sul-phur.	Char-coal.	Gun-powder Duſt.
℔	℔	℔	℔	
100, or 60	30	10	20	
50 30	30	7	18	
20 18	42	12	26	
15 12	23	8	16	
10 9	62	9	20	
9 6	35	5	10	
5 4	64	8	16	
3 2	60	2	15	
1		2	6	32
Ounces.	Oun.	Oun.	Ounce.	Ounc. s.
9	4	1	2	9
6	12	$1\frac{1}{2}$	4	15
3	2	$\frac{1}{2}$	$1\frac{1}{2}$	12
1			2	15

Note, ſeveral *Rockets* being diſpoſed round the Circumference of a Wheel, whether Circular or Polygonous, the Head of the one applied to the Tail of another, and the Wheel put in Motion; as one *Rocket* is ſpent another will take Fire: And the Wheel be continued in its Rotation.

As an additional Ornament to *Rockets*, 'tis uſual to furniſh them either with Stars or with Serpents, or Sparks, which take Fire when the *Rocket* burſts: And ſometimes little *Rockets* are incloſed in

in great ones, to take Fire when the great one is at its greatest Heighth.

To make Stars for ROCKETS.

Mix 3 Pound of Salt-petre, with 11 Ounces of Sulphur, 3 Ounces of beaten Gun-powder, and 10 of Antimony. Moisten the Mass with Gum-Water, and form it into little Balls of the Size of Filberds; drying them well, either in the Sun or an Oven. When dry inclose a Number of them in the Conical Cap of the *Rocket*.

Method of making a Water-ROCKET.

Make a *Rocket* AB after the usual Manner, excepting in the Number of *Choaks*, express'd in *Fig.* 11.—Let its Diameter be equal to that of a Leaden-Ball of two or three Inches Diameter, and let it be bored to a third Part of its Heighth. Inclose the *Rocket* in a hollow Paper Cylinder; which smear over with melted Pitch or Wax, that it may resist the Moisture.

Note, The Weight of the *Rocket* is to be so proportioned to that of the Water, that the whole Cylinder may be immerg'd. —Some instead of a Cylinder use a truncated Cone, or even a Spheroid; and some hang a Weight to the End at which 'tis lighted.

Theory of the Flight of Sky-ROCKETS.

Mariotte takes the rise of *Rockets* to be owing to the Impulse or Resistance of the Air against the Flame: Dr. *Desaguliers* accounts for it otherwise.

Conceive the *Rocket* to have no vent at the Choak, and to be set on Fire in the conical Bore; the consequence wou'd be, either that the *Rocket* wou'd burst in the weakest Place, or that, if all its Parts were equally strong and able to sustain the Impulse of the Flame, the *Rocket* would burn out immoveable.—Now, as the Force of the Flame is equable, suppose its Action downwards, or that upwards sufficient to lift 40 Pounds. As these Forces are equal, but their Directions contrary, they will destroy each other's Action. See ACTION and REACTION.

Imagine, then, the *Rocket* open'd at the Choak; by this means the Action of the Flame downwards is taken away, and there remains a Force equal to 40 Pounds acting upwards, to carry up the *Rocket*, and the Stick it is tied to.—Accordingly, we find that if the Composition of the *Rocket* be very weak, so as not to give an Impulse greater than the Weight of the *Rocket* and Stick, it does not rise at all: Or if the Composition be slow, so that a small Part of it only kindles at first, the *Rocket* will not rise.

The Stick serves to keep it perpendicular: For if the *Rocket* should begin to tumble, moving round a Point in the Choak, as being the common Centre of Gravity of *Rocket* and Stick, there wou'd be so much Friction against the Air, by the Stick between the Centre and the Point, and the Point wou'd beat against the Air with so much Velocity, that the Reaction of the Medium wou'd restore it to its perpendicularity.

When the Composition is burnt out, and the Impulse upwards is ceas'd, the common Centre of Gravity is brought lower, towards the middle of the Stick; by which means the Velocity of the Point of the Stick is decreased, and that of the Point of the *Rocket* increas'd: So that the whole will tumble down, with the *Rocket*-end foremost.

All the while a *Rocket* burns, the common Centre of Gravity is shifting and getting downwards, and still the faster and the lower as the Stick is the lighter: So that it sometimes begins to tumble, e're it be burn'd out: But, when the Stick being a little too heavy, the Weight of the *Rocket* bears a less Proportion to that of the Stick, the common Centre of Gravity will not get so low, but that the *Rocket* will rise strait, though not so fast.

ROD, VIRGA, VERGE, a Wand, or long slender Stick or Staff. See VERGE, STAFF, *&c.*

ROD, is also a Land-Measure of 16 Foot ½, the same with *Perch* and *Pole*. See PERCH and POLE.

ROD, in Gauging. See GAUGING-*Rod*.

ROD-*Knights*, in antient Customs. See REDMANS.

Black-ROD. See BLACK-*Rod*.

ROE, of a Fish, is that Part which contains the Sperm or Seed thereof. See FISH, SEED, *&c.*

That of Male-Fishes is usually distinguished by *soft Roe*, or *Milt*; that of the Female by *hard Roe*.

The soft *Roe* when squeez'd, yields a Liquor resembling *Milk*; whence its Name *Milt*: The *French* call it expressly *Milk*, *laite*. See MILT.

That of Carps is esteemed an excellent Food.—M. *Leewenhoeck* upon examining the Milt of a Cod-Fish with a Microscope, found it contain'd more living *Animalcules* than there are Men in the whole Earth. See EGG, ANIMALCULE, MICROSCOPE, *&c.*

ROE, one of the Beasts of Chase. See BEAST and GAME.

ROE-*Buck*. See HUNTING.

ROE-*Buck*, a Beast of Chace or Forest. See BEAST, GAME, *&c.*

The *Roe-Buck* is called an *Hind* the first Year; *Gyrle* the second; *Henuse* the third; *Roe-Buck* of the *first Head* the fourth; and a *fair Roe-Buck* the fifth.

The *Roe-Buck* is a Deer well known in *Germany*; and seems to have also been formerly known in *England*, though now the Race be extinct. See HUNTING.

ROGA, in Antiquity, Donatives, or Presents which the *Augusti* or Emperors made to the Senators, Magistrates, and even the People; and the Popes or Patriarchs to their Clergy. See DONATIVE.

The Emperors used to distribute these *Roga* on the first Day of the Year, or on their Birth Day; or on the *Natalis Dies* of the Cities.—The Popes and Patriarchs in Passion Week.

This Custom of *Roga*, or Largesses, was first introduced by the Tribunes of the People, to gain the Populace more effectually over to their Interest. The Emperors at length took it up, and made such Distributions to the People, and even the Soldiery, call'd by the *Greek* Writers in the middle Age ΡΟΓΑΤΟΡΕΣ.

Rogum is also found used for the ordinary Pay of the Soldiery.

The Word is derived by some from the *Latin erogare*, to give, distribute; according to others from *rogo*, I ask; hence, say they, it is that St. *Gregory* the Great calls such Distributions *Precaria*; as being to be demanded, in order to be had. See PRECARIÆ.

Others, again, derive it from the *Greek* ρογος, Corn; because it antiently consisted in Corn distributed among the Populace, the Soldiery, *&c.*

ROGATIO, in the *Roman* Jurisprudence, a Demand made by the Consuls, or the Tribunes, of the *Roman* People, when a Law was proposed to be pass'd. See LAW.

The Demand was made in these Terms; *Do you will and appoint that* (for Instance) *War be declared against* Philip? This was the *Rogatio*; and what the People return'd in answer, as, *The* Roman *People do appoint War to be made against* Philip, was the *Decretum*, *Decree*.

However, the Word *Rogatio* is frequently used for the Decree it self; to distinguish it from a Decree of the Senate. See DECREE.

Frequently, also, *Rogation* is used in the same Sense with *Law*; because there never was any Law established among the *Romans*, but what was done by this kind of *Rogation*.—Otherwise it had been null. See LAW.

ROGATION-*Week*, the Week immediately preceding *Whitsunday*; thus call'd from three Fasts therein, *viz.* on the *Monday*, *Tuesday*, and *Wednesday*, call'd *Rogations*, or *Rogation Days*, because of the extraordinary Prayers and Processions then made for the Fruits of the Earth. See PROCESSION.

The first who appointed these *Rogations* was St. *Mammercus*, Bishop of *Vienna*, who in 474 assembled several Bishops, to implore the Mercy of God by a Fast of three Days; on occasion of an Incursion then made upon the Country by a great Number of wild Beasts.—Others say, 'twas first set on Foot by *Mammercus* in 468, on occasion of some publick Calamities.

ROGUE, in Law, an idle and sturdy Beggar; who for the first Offence is called *a Rogue of the first Degree*; and punish'd by whipping, and boring through the Gristle of the Right Ear with a hot Iron, an Inch in Compass: And for the second Offence is call'd a *Rogue of the second Degree*, and put to Death as a Felon, if he be above eighteen Years of Age. See FELON, *&c.*

ROLL, in the Manufactories, something wound or folded in a Circle. See ROLLING.

Few Stuffs are made up in *Rolls*, but Satins, Gawses, and Crapes, which are apt to break, and take Plaits not easy to be got out if folded otherwise.—Ribbonds, however, and Laces, Galloons, and Padua's of all Kinds, are thus *roll'd*.

To Roll hot—By an Arret of Council in 1698, Fullers, Shearmen, *&c.* in *Poictou*, are prohibited to *Roll* any Stuff *hot*, either by having Fire over or under it, or by heating the *Rollers*, or otherwise, on Forfeiture of 100 Livres for the first Offence; or of being degraded from the Privileges of Mastership in Case of a Relapse.

The Antients made all their Books up in Form of *Rolls*, or little Columns; and in *Cicero's* Time, the Libraries consisted wholly of such *Rolls*.—The dearness of Parchment, and the cheapness of Paper, whereof the *Rolls* were made, were the Reason that scarce any but Paper *Rolls* were used. See PAPER, PARCHMENT, *&c.*

Vossius says, they pasted several Sheets end to end, when fill'd on one Side, and *roll'd* them up together; beginning with the last, which they call'd *Umbilicus*, and to which they fastened an Ivory or boxen Stick, to sustain the *Roll*.—To the other Extremity they pasted a Piece of Parchment, to cover and preserve it. See VOLUME, UMBILICUS, *&c.*

These *Rolls* were placed in the Libraries, perpendicularly, to the Horizon.—The *Jews* still preserve the antient usage of *Rolls* for the Books they read in their Synagogues. See BOOK-BINDING.

ROLL *of Tobacco*, is Tobacco in the Leaf, twisted on the Mill, and wound Twist over Twist, about a Stick or *Roller*.

The generality of Tobacco in *America* is there sold in *Rolls*, of various Weights: And 'tis not till after its Arrival in *England*,

Spain, France, and *Holland,* that it is cut.—*Roll* Tobacco is what is used both for chewing and rasping. See TOBACCO.

ROLL, *in Law,* a Schedule of Paper or Parchment, which may be wound up by the Hand into the fashion of a Pipe. See SCHEDULE, *&c.*

Of these there are in the Exchequer several Kinds, *viz.* the great *Wardrobe-Roll,* the *Cofferer's-Roll,* the *Subsidy-Roll,* &c. See PIPE, *&c.*

The Word is form'd from the *Latin Ratulus,* or *Rotulus,* because most Instruments and Expeditions in Law were antiently wrote on Papers, or Parchments sew'd or glued together: Whence the Words *enroll, controll.* See ENROLL, CONTROLL, *&c.*

ROLLS *of Parliament,* are the Manuscript Registers or *Rolls* of the Proceedings of our antient Parliaments. See PARLIAMENT, REGISTER, *&c.*

Before the use of Printing, and till the Reign of *Henry* VII. our Statutes were all engrossed in Parchment, (and by virtue of the King's Writ for that purpose) proclaimed openly in every County. See ACT.

In these *Rolls* we have a great many Decisions of difficult Points of Law, which were frequently in former Times referr'd to the Decision of that high Court. See STATUTE, COMMON-LAW, *&c.*

Rider-ROLL, a Schedule, or small Piece of Parchment, frequently sew'd or added to some Part of a *Roll,* or Record.

Noy observes that the Court *ex officio,* may award a *certiorari ad Informandam Conscientiam*; and that which is certified shall be annex'd to the Record, and call'd a *Rider-Roll.*

ROLL, in the Customs, is a List of the Names of several Persons of the same Condition, or enter'd in the same Engagement.—Thus,

Court Roll, in a Mannor, is that wherein the Names, Rents, and Services of each Tenant are copied and enrolled. See COURT, MANOR, TENANT, RENT, SERVICE, *&c.*

Muster-Roll, that wherein are enter'd the Soldiers of every Troop, Company, Regiment, *&c.* See MUSTER.

As soon as a Soldier's Name is wrote down on the *Roll,* 'tis Death for him to desert. See DESERTION.

Calves-Head-ROLL, is a *Roll* in the two Temples, wherein every Bencher is tax'd yearly at 2*s.* every Barrister at 1*s.* 6*d.* and every Gentleman under the Bar, at 1*s.* to the Cook, and other Officers of the House, in Consideration of a Dinner of Calves-Heads, provided in *Easter* Term. See TEMPLE.

Ragman's-ROLL, or *Ragimund's*-ROLL, is a *Roll* denominated from *Ragimund* a Legate in *Scotland,* who calling before him all the People who held Benefices in that Kingdom, caused them upon Oath to give in the Value of their Estates; according to which they were afterwards tax'd in the Court of *Rome.*

ROLLS, or *Office of the Rolls,* in *Chancery-Lane, London,* is an Office appointed for the Custody of the *Rolls* and Records in Chancery. See CHANCERY, RECORD, *&c.*

The *Master* of this Office is the second Person in that Court; and in the Absence of the Lord Chancellor, sits as Judge. See MASTER *of the Rolls.*

This House or Office was antiently call'd *Domus Conversorum*; as being appointed by King *Henry* III. for the use of converted *Jews*; but their Irregularities occasioned King *Edward* III. to expell them thence; upon which the Place was deputed for the Custody of the *Rolls.* See CONVERSORUM.

A ROLL *of Parchment,* is the Quantity of sixty Skins. See PARCHMENT.

ROLL, in Antiquity.—From the Time of *Anastasius,* we find in the Hands of the Emperors, on Medals, a kind of narrow long *Roll,* or Sachell, the meaning whereof has puzled the Antiquaries.

Some imagine it to be a *Roll* or Bundle of Papers, Memoirs, Petitions, *&c.* presented occasionally to Princes and Consuls.—Others take it to be a plaited Handkerchief, which the Persons who presided at the Games, cast forth as a Signal for their beginning.—Others will have it a Bag of Dust and Ashes, presented the Emperor at the Ceremony of his Coronation, and call'd AKAKIA, *q. d.* a Means of preserving Innocence, by the remembrance of Dust, *&c.* See ACACIA.

ROLL, or ROLLER, is also a Piece of Wood, of a cylindrical Form, used in the Construction of several Machines, and in several Works and Manufactures; though sometimes under other Names. See ROLLING, CYLINDER, *&c.*

'Tis on such *Rolls* that the Woollen, Silken, and other Threads are wound, whereof the Weaver's Works consist.—For which end each Loom has usually two, that of the Gawse-Weavers, three. See LOOM.

In the Glass Manufacture they have a *running Roll,* being a thick Cylinder of cast Brass, serving to conduct the melted Glass to the end of the Table whereon large Looking-Glasses, *&c.* are to be cast. See GLASS-WORK.

The Founders use a *Roller* to work the Sand which they use in making their Moulds. See FOUNDERY.

The Presses call'd Calenders, as serving to Calender Stuffs withal, consist, among other essential Parts, of two *Rollers.* See CALENDER.

'Tis also between two *Rollers* that the Waves are given to Silks, Mohairs, and other Stuffs proper to be tabied. See TABBY.

Prints, or Impressions from Copper-Plates, are also taken by passing the Plate and the Paper between two *Rollers.* See PRINT, and ROLLING-*Press-Printing.*

ROLLS, in Coining, are two Iron Instruments of a cylindrical Figure, which serve to draw or stretch out the Plates of Gold, Silver, and other Metal; whereof the Planks or Pieces are to be form'd for the Species. See COINING.

ROLLS, in Printing, are two large Cylinders or Barrels of Wood, fastened in the middle of what they call the Cradle or Gallows of the Press; and which by means of a Cord, or Girt, passing over each, and a Handle, which gives Motion to one of them, draws the Carriage of the Press backwards and forwards. See PRINTING.

ROLLS, in the Sugar-Works, are two large Iron Barrels which serve to bruise the Canes, and express the Juice.

They are cast hollow, and their Cavities fill'd up with Wood; the Cylinders of which are properly the *Rollers.* See SUGAR-*Works.*

ROLLS, or ROLLERS, among Carpenters, Masons, *&c.* are plain Cylinders of Wood, seven or eight Inches in Diameter, and three or four Foot long; used for the removing of Beams, huge Stones, and other like Burthens, which are cumbersome, but not exceeding heavy.

These *Rollers* are placed successively under the Fore-part of the Massives to be removed; which, at the same time, are push'd forwards by Levers, *&c.* applied behind. See LEVER.

Endless-ROLLS.—When Blocks of Marble, or other excessive heavy Loads are to be removed; they use what they call *Endless-Rolls.*

These, to give them the greater Force, and prevent their bursting, are made of Wood jointed together by Cross-Quarters, are about double the length and thickness of the common *Roller*; and besides, are girt with several large Iron Hoops at each end. —At a Foot's Distance from the Ends are four Mortaises, or rather only two, but pierced through and through; into which are put the Ends of long Levers, which the Workmen draw by Ropes fastened to the Ends; still changing the Mortaise, as the *Roll* has made, a Quarter of a Turn.

ROLL-*Rich-Stones,* in Antiquity, a Series of huge Stones, ranged in a Circle, near *Morton in-Marsh,* in *Oxfordshire.*

There are a World of fabulous Traditions about them.—Among the Antiquaries, some take them to be a Monument of a Victory; others a Burying-Place; and others a Place for the Coronation of the *Danish* Kings.

ROLLER. See ROLL.

ROLLING, REVOLVING, in Mechanicks, a kind of circular Motion, wherein the Moveable turns round its own Axis, or Centre, and continually applies new Parts of its Surface to the Body it moves upon. See MOTION, REVOLUTION, AXIS, *&c.*

Such is that of a Wheel, a Sphere, or the like.—Such, particularly, are the Motions of the Earth, the Planets, *&c.* See WHEEL, PLANET, EARTH, *&c.*

The Motion of *Rolling* is opposed to that of *Sliding,* wherein the same Surface is continually applied to the Plane it moves along. See SLIDING.

It must be noted, that in a Wheel, 'tis only the Circumference that properly *Rolls*; the rest proceeds in a compound, angular Kind of Motion, and partly *Rolls,* partly Slides.—The not distinguishing between which two, occasioned the difficulty of that celebrated Problem the *Rota Aristotelica, Aristotle's* Wheel. See ROTA *Aristotelica,* and ANGULAR-*Motion.*

The Friction of a Body in *rolling,* or the Resistance made to it by the roughness of the Plane it moves on, is found to be much less than the Friction in Sliding. See FRICTION.

Hence the great use of Wheels, *Rolls,* &c. in Machines; as much of the Action as possible being laid thereon, to make the Resistance the lesser. See WHEEL, MACHINE, *&c.*

For the Laws of Bodies rolling *on inclined Planes,* see *Inclined*-PLANE, DESCENT, *&c.*

ROLLING-*Press-Printing.* See PRINTING.

ROMAN, something belonging to the City of *Rome.*

The *Roman Commonwealth* lasted from the Expulsion of the *Tarquins,* to the Battle of *Pharsalia,* 460 Years.—The *Roman Empire,* from *Julius Cæsar* and the Battle of *Pharsalia,* to *Constantine,* and the taking of *Constantinople* by the *Turks* in 330. lasted 378 Years. See COMMONWEALTH, EMPIRE, *&c.*

A *Roman Citizen,* at first, was only a Citizen of *Rome*; at length the Right of Citizenship was given to other Cities and People, both in *Italy* and the Provinces.—'Twas thus St. *Paul* was a *Roman* Citizen, *Acts* xvi. 21. 37, 38. xxii. 25, 26, 27. xxxiii. 27. the City of *Tarsus* in *Cilicia,* a Native of which he was, having the Right of *Roman* Citizens. See CITIZEN.

For the *Roman Senate,* their *Magistracy, Consuls, Soldiery, Tribes, Courts, Names, Weights, Measures, Coins,* and other Matters relating to the Antiquities of that People, their *Policy, Religion, Law, Customs,* &c. see the respective Articles in this Work.

The *Roman Purple* is the Dignity of a Cardinal. See CARDINAL.

The *Roman,* or *Romish Church,* that whereof the Pope is Head; in opposition to the reformed Churches. See CHURCH, POPE, *&c.*

The

The *Roman Law* is the Civil Law, or the written Law, as compiled by the Emperor *Justinian*. See CIVIL *Law*.

A *Roman Charity*, among Painters, is a Picture of a Woman suckling an old Man.—*Roman Knight*, &c. See KNIGHT, *&c.*

King of the Romans, in our Age, is a Prince elected, and design'd Successor to the *German* Empire. See KING, EMPIRE, and ELECTOR.

ROMAN *Games*, *Ludi Romani*, were solemn Games held in antient *Rome*. See GAME.

They were thus call'd by way of Eminence, and on Account of their Antiquity; as having been instituted by *Romulus*.—They were also call'd, sometimes, *Magni Ludi*, from the great Pomp and Expence thereof; sometimes *Consualia*, because perform'd in Honour of the God *Neptune*, who was also call'd *Consus*, in his Quality of God of secret Councils. See CONSUALIA.

They also bore the Denomination of *Ludi Circenses*, because held in the *Circus*. See CIRCENSES *Ludi*, &c.

This Solemnity, *Halicarnassæus* observes, was originally instituted by *Evander*, in Honour of *Neptune* under the Name of ἱππιος; whence the Festival itself was call'd ἱππιοκρατία; and was afterwards renew'd by *Romulus* in Honour of the same Deity, only under another Name.

For *Romulus* needing the Advice of a God to council him in the Design he had to furnish his new Citizens with Wives, applied to the God of secret Council himself, *Consus*; proclaimed the *Consualia*, and invited his Neighbours all a-round to the first Celebration thereof.—The Consequence was, the Rape of the *Sabine* Women, who came to be Spectators thereof.

The great Ceremony in these Games consisted in the Cavalcade of Horses and Asses, adorn'd with Garlands; *Neptune* being reputed the first Author of Horse-riding.

Their Horses, here, were of two Kinds, *viz.* πομπικοι, or such as were merely led up and down for State; and δρομικοι, which were for Race and Exercise.

The other Diversions were Fencing, and that 'till one of the Combatants were kill'd on the Spot; fighting with Beasts, and at *Cestus*, or Whirlbats; Wrestling, Running, Leaping, Sea-Fights, Horse-Races, Chariot-Races, *&c.* See CIRCUS, GLADIATOR, *&c.*

These Games, *Livy* tells us, were improved, and render'd much more magnificent by *Tarquinius Priscus*.—*Manutius* says, they were held on the Eve of the Nones of *September*, i. e. on the 14th Day of the Month.

ROMAN *Order*, in Architecture, is the more usually called the *Composite*. See COMPOSITE.

ROMAN *Balance*, or *Statera* ROMANA, the *Steel-Yard*. See BALANCE and STEEL-YARD.

ROMAN *Indiction*, ROMAN *Year*, &c. ROMAN *Language*, &c. } See { INDICTION. YEAR, *&c.* LATIN, *&c.*

ROMANCE, antiently ROMAUNT, and ROMANT, a fabulous Relation of certain Intriegues and Adventures in the Way of Love and Gallantry; invented to entertain and instruct the Readers. See FABLE, NOVEL, *&c.*

M. *Fontenelle*, calls *Romances*, Poems in Prose; and the great *Bossu* is not averse to their being admitted as poetical Pieces. See POEM and POETRY.

Setting aside the Versification, 'tis certain an Epic Poem, and a *Romance* are almost the same thing.—The just Notion, therefore, of a *Romance*, is, that it is a Discourse invented with Art to please and improve the Mind and to form or mend the Manners, by Instructions disguis'd under the Allegory of an Action or Series of Actions, related in Prose, in a delightful probable, yet surprizing Manner. See EPIC.

A just *Romance* consists of two Parts, *viz.* a Moral, as its Foundation and End; and a Fable, or Action, as the Superstructure and Means. See ACTION, *&c.*

It must have the *Manners*; that is, the Characters must be distinguished, and the Manners must be necessary, and have all the other Qualities of Poetical Manners. See MANNERS.

The Incidents must be delightful, and to that end rightly disposed and surprizing.—The Sentiments fall under the same Rules as in the Drama. See SENTIMENT.

But the Diction is allow'd to be more lofty and figurative; as being a Narration; and not having Terror or Pity, but Admiration for its End. See NARRATION, PASSION, *&c.*

As these Kinds of Compositions have a long Time been little else but Histories of amorous Adventures, and Feats of Knight-Errantry: The Origin of *Romances* is refer'd to that of Love-Histories: And accordingly *Dearchus*, a Disciple of *Aristotle*, who first wrote of those Matters, is usually esteemed the Author of these.—Though *Photius* is of Opinion that *Anthonius Diogenes*'s Book on the Errors and Amours of *Dinias* and *Deocyllis*, gave Birth to most of the Works of this Kind.

Be this as it will, 'tis certain the Antients have had their *Romances* as well as we.—Such are the Amours of *Rhodanis* and *Sinonides*, described in *Jambics*: Such is the *Romance* of *Leucippe* and *Clitophon*, composed by *Achilles Tatius*, a *Greek* Writer, afterwards a Bishop: Such are the four Books of incredible things, wrote by *Damascius*: Such are the *Ethiopicks* of *Heliodorus*, wherein he relates the Amours of *Theagenes* and *Chariclea*.—Lastly, under the same Class may be rank'd the Fables of *Parthenius*, *Nicenus*, of *Athenagoras*, *Theodorus Prodromus*, *Eustathius*, and *Longus*.

Indeed Antiquity cou'd scarce be reconciled to such Pieces; and always look'd on them as abuses.—*Photius*, in his *Bibliotheca Cod.* LXXXVII. gives a frightful Account of that of *Tatius*; and the *Ethiopicks* of *Heliodorus*, though one of the modestest and most reserved Pieces of the Kind, met with very severe Treatment.—That Author was Bishop of *Tricca* in the fourth Century. *Nicephorus* tells us, that a Synod, considering the Danger which might accrue to Youth from reading of his *Romance*, authoriz'd as it was by the Dignity of its Author, proposed it to him, either to suppress his Book, or renounce his Bishoprick; and that he chose the latter.—But this History is a little doubtful.

Be this as it will, *Heliodorus* has serv'd as a Model to all the *Romances* wrote since; the Marriage of *Theagenes* and *Chariclea*, has produced a very numerous Issue; even all the *Romances* now extant in the World.

In Imitation of the Archbishop *Turpinus*, who pass'd for Author of the *Romance* of the Feats of *Charlemaign* and *Orlando*, a great Number of Histories of the like Kind were wrote in *France*, in the Time of *Philip the Fair*; the Authors whereof seem'd to improve on each other, contending who should go furthest in the *Merveilleux*.—These Books, being intended for the polite People, were wrote in the Court Language of that Age; which was call'd the *Romans*, *Romant*, or *Roman*; whence the Books themselves were call'd by those Names: And thus by Degrees *Romans*, &c. became the general Name of all Books of this Kind; whence at length our *Romance*. See ROMANS.

Others derive the Word from the *Spanish Romansero*, I invent, as intimating *Romances* to be mere Fictions.—And hence it is that the antient Poets of *Provence*, who were the first great Dealers in *Romances*, are call'd *Troubadours*, q. d. Finders or Inventors. See TROUBADOUR.

The *French*, above all other Nations, have applied themselves to this kind of Writing; whether it be from the natural Taste and Genius of the People, or from the freedom, *&c.* wherewith they Converse with the Women.—They begun chiefly with *Romances* of Chivalry; hence their *Amadis*, in 24 Volumes; *Palmerin de Oliva* of *England*, King *Arthur*, &c. whereof we have an agreeable Critique in *Don Quixot*. See CHIVALRY, *&c.*

The later are much more polite; the best of which are the *Astrea* of *D'Urfe*; the *Cyrus* and *Clelie* of Madamoiselle *de Scuderi*; the *Cassandra* and *Cleopatra* of *la Calprenede*; *Ariane*, *Francion*; and the Adventures of *Telemachus*, of the late Archbishop of *Cambray*, a Work never enough to be applauded.

The *Germans*, too, have their *Romances*; especially *Hercules* and *Herculiscus*; the *Syriaca Armena*, *Aramena*, and *Thusnelda*, *Otbert*, &c.

The *Italians* have their *Eromena*, by *Biondi*; the Works of *Loredano*, *Marino*, &c.—The *Spaniards*, their *Diana*, and *Don Quixot*.—The *English* their *Arcadia*, &c. The *Argenis* of *Barclay* is rather a Satyr than a *Romance*. See NOVEL.

ROMAN-*Catholick-Church*. See PAPIST, RECUSANT, *&c.*

ROMANS, or ROMANT, the polite Language formerly spoke at the Court of *France*; in contradistinction to the *Walloon* spoke by the common People. See LANGUAGE.

The *Romans* having subdued the *Gauls*, insinuated Part of their Language among them; a mixture then of half *Latin*, half *Gaulish*, constituted the *Romans*; whereof the modern *French* is only an Improvement. See FRENCH.

The vulgar Language was the *Walloon*, which was the original *Gaulish*. See GAULISH.

Hence, to *Euromance*, was to write in *Romans*, &c. See ROMANCE.

ROME-*Scot*, ROME-*Penny*, } See { PETER-*Pence*.

ROMPEE, or ROMPU, in Heraldry, is applied to Arms, or other Ordinaries, that are represented broken; and to Chevrons whose upper Points are cut: As in the adjoining Figure.—He beareth a Chevron *rompee*, between three Mullets, Or, by the Name of Sault.

RONDEL, in Fortification, a round Tower, sometimes erected at the Foot of a Bastion. See TOWER, BASTION, *&c.*

ROOD, a Quantity of Land, equal to the fourth Part of an Acre; and containing 40 square Perches or Poles. See ACRE, PERCH, *&c.*

ROOF, in Architecture, the uppermost Part of a Building. See BUILDING.

The *Roof* contains the Timber-Work, and its Furniture of Slate or Tile, wherewith a House is cover'd, or that which serves it as a Cover.—Though Carpenters usually restrain *Roof* to the Timber-Work only. See COVERING and RIDGE.

The Form of the *Roof* is various; sometimes 'tis *pointed*, in which Case the most beautiful Proportion is to have its Profile an equilateral Triangle.

Sometimes

Sometimes *Square*, that is, the Angle of the Ridge, is a Right Angle; which, therefore, is a mean Proportional between the *pointed* and

Flat-Roof, which is in the same Proportion as a triangular Pediment. See PEDIMENT.—This is chiefly practiced in *Italy*, and the hot Countries, where little Snow falls.

Sometimes the *Roof* is in the *Pinnacle Form*. See PINNACLE.

Sometimes it has a *double Ridge*.—Sometimes 'tis *cut*, or *mutilated*, that is, consists of a *true* and a *false Roof*, which is laid over the former: This last is particularly call'd a *Mansard*, from its Inventor M. *Mansard*, a famous *French* Architect.

Sometimes 'tis in Form of a *Platform*; as in most of the Eastern Building. See PLATFORM.

Sometimes 'tis *truncated*; that is, instead of terminating in a Ridge or Angle, 'tis cut square off at a certain Heighth, and cover'd with a Terrass, and sometimes incompassed with Ballustrade. See TERRASS.

Sometimes 'tis in Manner of a *Dome*, that is, its Plan Square, and the Contour Circular. See DOME, CUPOLA, *&c.*

Sometimes it is *round*, that is, the Plan is Round or Oval, and the Profile a direct Descent.—Sometimes the Base being very large, 'tis cut off to diminish its Heighth, and cover'd with a Terrass of Lead, rais'd a little in the middle, with Sky-Lights from Space to Space, to give Light to some Corridor, or other intermediate Pieces, which without such an Expedient would be too dark. See HOUSE, *&c.*

ROOF-*Trees*, or RUFF-*Trees*, are the Timbers in a Ship which go from the Half-Deck to the Fore Castle.

The Term is also used for the upper Timbers of any Building; whence in the Northern Counties, it is common to signify a whole Family, by saying, all under such a one's *Roof-Tree*.

ROOM, in Building.—See BUILDING, HOUSE, PARTITION, APARTMENT, DISTRIBUTION, CHAMBER, *&c.*

ROOMER, in the Sea Language, a Ship is said to be a *Roomer*, when she is larger than ordinary. See SHIP, VESSEL, *&c.*

ROOT, RADIX, in Botany, that Part of a Plant which immediately imbibes the Juices of the Earth, aud transmits them to the other Parts, for their Nutrition. See NUTRITION, PLANT, VEGETABLE, *&c.*

The *Root* consists of woody Fibres, cover'd with a Bark, more or less thick.—It arises from a little Point in the Seed, call'd the *Radicle*. See RADICLE.

'Tis no small difficulty to conceive how the *Root* should always get downwards, and turn up the Stem perpendicularly; considering that in the sowing of Plants the *Radicle* must frequently happen to be upwards, and the Plumule downwards. See SEED, SEMINATION, PERPENDICULARITY, *&c.*

'Tis always found in the Ground in terrestrial Plants, except in a very few Cases: The Ivy and Cuscuta, being perhaps the only Plants where Part of the *Root* lies bare.

The *Root* in Plants has been observ'd to do the Office of the Stomach in Animals; that is, to make the first and principal Preparation of the nutritious Matter.—M. *Reneame* shews that the *Root* does the Office of all the Parts in the Belly of Animals destined for Nutrition; it being the *Root* that receives the Nourishment, that prepares it, digests it, alters and changes it into Sap, to be afterwards distributed to all the Parts. See SAP.

The small Colour, and even Taste, shew how considerable an Alteration the Juices undergo in the *Root*; so that the *Root* may be laid down as the Principle of Vegetation. See VEGETATION.

Plants growing at the Bottom of the Sea have this peculiar to them, that they have no *Roots*; at least the Parts which do the Office of *Roots* have nothing of the usual Figure thereof.—These Plants are usually fastened to some solid Body; adhering to it by a very smooth polish'd Lamina, which does not send forth any Fibre. Add to this, that the Body to which they adhere, being frequently a Rock or Flint, appears very unfit to feed them, in Case they had *Roots*. M. *Tournefort*, therefore, conjectures that they are fed by a Juice afforded them by the thick oily Mud at the Bottom of the Sea, which they receive by the Pores of the exterior Surface of the *Lamina*.

Boerhaave observes, that the *Root* may have any Situation at Pleasure, with respect to the Body of the Plant, nor needs to be either lowest or highest.—Accordingly in Aloes, Coral, Mosses, Fungus's, *&c.* the *Root* is frequently uppermost, and its Growth downwards. See CORAL, MOSS, FUNGUS, *&c.*

Roots are divided by Botanists into 1°. *Fibrous*, which send out only small Strings from the Bottom of the Plant, distinct from each other.

2°. More *thick and gross*, which have a Body Thick and Gross, either branched out into Subdivision or Arms; or else sending out Fibres from it all along.

These last are either *Carnous*, which again are either,

- 1. *Broad* and Swelling, or
- 2. *Long* and Slender, which are commonly harder and more woody.

The Broad and Swelling are,

- 1. *Bulbous*, which consist but of one Globe or Head, and send out Fibres from the Bottom, and are either,
  - *Squammose*, or Scaly, as *Lillies* or *Martagon*,
  - *Coated*, which are involved in Skins or Coats, as *Cepa*, *Hyacinthus*, *Allium*, &c.
- 2. *Tuberous*, which are of a carnous, solid, and continued Consistence, and these either,
  - 1°. *Simple*, with but one Globe or Head, as *Rapa*, *Crocus*, &c.
  - 2°. *Manifold*, as *Asphodelus*, *Pæonia*, &c.

Long *Roots* are either,

- (1.) *Sarmentous*, i. e. twiggy, or branching, which shoot or creep out Transverse or in Breadth: Of these some are *Geniculatæ*, knotty or jointy; as *Couch-Grass*, *Mints*, &c.
- (2.) *Caulifórmes*, i. e. *Stemmy* or *Stalky*, which shoot down deep directly, though often sending out Fibres and Strings from the great Stem; which also it self is sometimes divided or branching.

ROOTS, in Medicine.—The principal *Roots* used in the Practice of Medicine, are, *Rhubarb*, *Rhaponticum*, *Sarsaparilla*, *Ipecacuanha*, *Jalap*, *Zedoary*, *Galangal*, *Cassumenar*, *Gentian*, *Turmeric*, *Liquorice*, *Madder*, &c. See each described under its proper Article RHUBARB, RHAPONTIC, SARSAPARILLA, IPECACUANHA, *&c.*

ROOT, in Mathematicks, a Quantity which is multiplied by it self; or a Quantity consider'd as the Basis or Foundation of a higher Power. See QUANTITY, POWER, *&c.*

Thus if any Number, as 2, be multiplied by it self, the Product 4 is called the *Square*, or *second Power* of 2; and 2 it self, with regard to that Power, is called the *Root*; or particularly the *square Root* of 4. See SQUARE-*Root*.

Since, as Unity is to the *square Root*, so is the *Root* to the Square; the *Root* is a mean Proportional between Unity and the Square.—Thus 1 : 2 : 4.

If a square Number, as 4, be multiplied by its *Root* 2, the Product 8 is call'd the *Cube*, or third Power of 2; and with respect to this Cubic Number 8, the Number 2 is call'd *Root*; or particularly the *Cube-Root*. See CUBE-*Root*.

Since as Unity is to the *Root*, so is the *Root* to the Square; and as Unity is to the *Root*, so is the Square to the Cube; the *Root* will be to the Square, as the Square to the Cube, *i. e.* Unity, the Root, the Square, and the Cube, are in continual Proportion: Thus: 1 : 2 : : 4 : 8. And the *Cube-Root* is the first of the two mean Proportionals between Unity and the Cube.

To *extract the Root* out of a given Number, or Power, as 8, is the same thing as to find a Number, as 2, which being multiplied into it self a certain Number of Times, *v. g.* twice, produces the given Number, as 8.

To *extract the Square* ROOT, } See { EXTRACTION.
To *extract the Cube* ROOT, }

A *Root*, whether Square or Cubic, or of any higher Power; if it consist of two Parts, is call'd a *Binomial Root*, or simply *Binomial*; as 24, or 20+4. See BINOMIAL.

If it consist of three, a *Trinomial*; as 245, or 240+5: Or 200+140+5.—If of more than three, a *Multinomial*; as 2456, or 2450+6, or 2400+56, or 2000+456, or 2000+400+50+6. See MULTINOMIAL.

ROOT *of an Equation*, in Algebra, is the Value of an unknown Quantity in an Equation. See EQUATION.

Thus, if the Equation be $a^2+b^2=x^2$, the *Root* of the Equation is the Square *Root* of *a*, and that of *b*; express'd thus, $\sqrt{a+b}$.

Real ROOT.—If the Value of x be *positive*, i. e. if x be a positive Quantity; *e. gr.* $x=r$. the *Root* is call'd a *real* or *true Root*. See POSITIVE.

False Root.—If the Value of x be Negative, *e. gr.* $x=-5$. The *Root* is said to be *false*. See NEGATIVE.

Imaginary Root.—If the Value of x be the *Root* of a negative Quantity, *e. gr.* $\sqrt{-5}$; 'tis said to be *imaginary*.

The great use of Algebra is to bring Problems to Equations; then to reduce those Equations, or to exhibit them in the most simple Terms. See REDUCTION.

What remains after this to the Solution of the Problems, is to extract the *Roots* of the Equations thus reduced, be they Lines or Numbers. See RESOLUTION.

Extraction of the ROOTS *of Equations*. See EXTRACTION.

ROOTS, RADICES, in Grammar, are the primitive Words of a Language, whence others are compounded or derived. See PRIMITIVE, COMPOUND, and DERIVATIVE.

Thus, the *Latin Fluo* is the *Root* of *fluctus*, *fluxio*, *flumen*, *flustrum*, *influxus*, *refluens*, *fluctifer*, *fluctisonus*, *fluctivagus*, &c.—Thus also the *Greek* θέω, is the *Root* of θεός, ἀθεος ἐνθουσιασμὸς, &c.

And thus also, though in a less proper Sense, the *Danish* *roed* is the *Root* of the *English Root*: The *Latin Radix* the *Root* of the