The Stars in the Constellation Serpent, in Ptolemy's Catalogue are 17 3 in Tycho's 19 in the Britannic Catalogue. The Longitudes, Latitudes, Magnitudes, &c., whereof are as follow.

<table>
<thead>
<tr>
<th>Serpent</th>
<th>Constellation Serpent</th>
<th>Ptolemy's</th>
<th>Tycho's</th>
<th>Britannic</th>
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<tr>
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<td>Star Name</td>
<td>Longitude</td>
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<td>1. The</td>
<td>Alcyone</td>
<td>19.3.4</td>
<td>37.15</td>
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<td>2. The</td>
<td>Perfesia</td>
<td>16.1.2</td>
<td>37.15</td>
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<td>3. The</td>
<td>Canopus</td>
<td>17.0.0</td>
<td>38.0.0</td>
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**SermoLogies**, in Church History, Books of Sermons, or Homilies of Popes and other Perions of Eminence and Sanctorality, read at the Feasts of the Confessors, the Purification, All Saints, and on every Day from Christmass to the Epiphany and as follows.

**Sermiones**, the Titre Horace gives his Saryes. The Critics are divided about the Reazon of the Name. The Opinion of Father Boffe seems well grounded. A mere Observation of Fact, such as we find in Terence, Plautius, and in Horace's Saryes, he thinks, is not sufficient to constitute Veri; to determine the Word to be Poetical; or to distinguish it from Prose; it leavesUncle it from Prose; it leaves upon another Air, or Character of Poetry, something of the Fable, or the Sublime. See Poetry. Hence it is, that Horace calls his Saryes, Propo Sermones. His Odes have quite another Air, and are therefore called, Poesies, Carminia. See Formae Poetice, and Versificatce.

**Seronium**, in Old Records, a kind of Interlude or Historical Play, which the Inferior Orders of Clergy, seduced by Boffe, &c.赴 to the Body of the Church, futile to the Solemnity of some Festival or high Procession Day. This is supposed to have been the Origin of the Modern Drama, See Comedy.

**Seronon of Almonz** is the Quantity of Two Hundred Weight; of Mafea-feeds from 3 to 400 of Cake Soap, from 200 a Half, to 200 and 3 Quarters.

**Serosity**, in Medicine, an aqueous Liquor, mixed with the Blood and other Humours. Than it is defined, a Sharp, bilious Juice, approaching nearly the Nature of Blood; but which, being extraneous, does not coagulate like the Blood. See Serum. Disorders of the Spleen are attended with Serotonin. The Kidneys help to purge of Serotonin.

**Seriens**, in Astronomy, a Constellation in the Northern Hemisphere, called Serfus Ophiuchus.

<table>
<thead>
<tr>
<th>Name and Stations of the Stars of the Serpent</th>
<th>Latitude</th>
<th>Longitude</th>
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</thead>
<tbody>
<tr>
<td>1. Alcyone</td>
<td>37.15</td>
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**Serpent**, a Musical Instrument, serving as a Baffe to the Corner, or small Shovel for serving a Chorus of Singers in a large Veil. It has its Name from its Figure; as consisting of several Folds of Wreaths, serving to take off its Length, which would otherwise be Six or Seven Feet. To its united Power of Water; and consists of Three Parts; a Mouth-piece, a Neck; and a Tail. It has Six Holes, by means whereof, they give it the Compass of Two Octaves. SERPENTARIUS, in Astronomy, a Constellation of the Northern Hemisphere, called also Ophiuchus, and anciently Asclepiades. See Constellation.

The Stars in the Constellation Serpentarius in Ptolemy's Catalogue are 29, in Tycho's 35, in the Britannic Catalogue 49. The Longitudes, Latitudes, Magnitudes, &c., whereof are as follow.

[Q]
SERENTYPUS, a Medicinal Plant, called by the Ancients Philopsichus, and Drimocystis, and now by the People, Snake Root, and Drimocystis. The Ancients were only acquainted with Two Kinds of this Plant; the Great and the Small: But since the Discovery of America, the Botanists have added several others: As, The Serpentine, or Snake Root, of Virginia, that of Canada, and that of Ascal. They are all supposed to be Alcaliphomacs, or Counter Poisons, and as such are Ingredients in Treccele, The Great Serpentine, called by the Ancients Drimocystis.
S E R

Pope Damasus and Gregory the Great, which last is said to have used it, to check his Myceliotus, the Arrogance of his flesh, by a piece of Confutatorius, who took the Title of the Papacy, by a piece of the Pontifici in 1535. But the Name Servitus is given to the Pope of this number, because they have followed his Footsteps. Servitas may be the Author of the Servitus, and Jesus to use the Two Terms Indifferently. In this Way, in many Things, the ancient Author of Servitas, &c., was in with Servus. As the Books that he wrote against them were very rare, his real Servita are but little known. M. Simon, who is well known, displays them down at length in his Critical History. The Servus uses many of the same Arguments against the Trinitarians, but he also opposes himself very far from their Sentiments. He also corrects them in several Things, and declares his Diffidence from the Opinions of Servitas Sacerdotum, though Servitas militantly charges him with having the same Sentiments. In effect, he does not seem to have any fixed, regular System of Religion, at least not in the first Edition of his Book against the Trinitarians, published in 1535, under the Title of De Trinitatis Erroribus. The Book is anonymous, but the Author is said to be Servitas, &c., &c.

SERVITIUM, in Law. See SERVICE.

SERVITISTS, the Disciples or Followers of Michael Servetus, the Ring-leader of the Antitrinitarians of these last Ages. In Reality, however, Servus had not any Disciples as he was never associated with any Sect. He taught in Geneva in 1535. But the Name Servitus is given to the Pope of this Number, because they have followed his Footsteps. Servitas may be the Author of the Servitas, and Jesus to use the Two Terms Indifferently. In this Way, in many Things, the ancient Author of Servitas, &c., was in with Servus. As the Books that he wrote against them were very rare, his real Servita are but little known. M. Simon, who is well known, displays them down at length in his Critical History. The Servus uses many of the same Arguments against the Trinitarians, but he also opposes himself very far from their Sentiments. He also corrects them in several Things, and declares his Diffidence from the Opinions of Servitas Sacerdotum, though Servitas militantly charges him with having the same Sentiments. In effect, he does not seem to have any fixed, regular System of Religion, at least not in the first Edition of his Book against the Trinitarians, published in 1535, under the Title of De Trinitatis Erroribus. The Book is anonymous, but the Author is said to be Servitas, &c., &c.

SERVITUS, in Law. See SERVICE.

SERVITUS, in Law, a Duty which the Tenant is bound to perform of his Freehold to the Lord. See Pan. It is sometimes also called Service. Our ancient Laws made divers Divisions of Service, viz., into Personal, Real and Most; in Military, and Help; Service and Service, &c., &c. Statute 12. Edward III. Tenants are turned into free and common Soccage, much of that Charging is left aside: Yet may it not be amiss to mention how the free Personal Service is described in our ancient Law Books. Personal Service, that is to be performed by the Perfon; such is that due from a Slave to his Master. The Lord, in a great Measure, is that due from a Tenant to the Perfon, on the one hand, and on the other, that due from a Tenant to the Lord, on the other. The perfon, as a Tenant, has in the Perfon, &c., &c. Statute 12. Edward III. Books tell us of Lands held of the King, by the Tenant delivering a Part before the King on New-Year-Day 3 others, by the Lord of the King, &c. Whores whenever he travelled was that Way; others by the King a Meat of Pastage at his Coronation Feast, &c. Real Service, is eitherUrban or Rural, which two kinds are not in the same Thing, but the Thing first is that due from a Building or House, in which Sense, in any Case, whether City or Country, as the Keeping a Drain, as the Riding a Coach, &c. Rural Services, are those done for the Service, &c., &c. But there is no Service of Pastage through Ways, &c. There are also General Services: For Instance, if a Man can't gather the Produce of his Lands without passing through his Neighbour's Pasteur or Pasture, &c., he is to pay a Neighbour's Pasteur or Pasture, &c. It is a Natural Service. By the Laws Servius, a Service cannot be acquired by Custom and Prescription.

Military Service 3 See KNIGHTS. See 3. VILLAGE.

Forfaire, or Enfranchise, or Legal Service, was a Service which did not belong to the chief Lords, but to the lesser. TWAS called Forfaire and Enfranchise, because done for, out of Doors, and extra Service. We read several Grants in the Manumissions, &c., of all Liberties, with the Apparitions, Servitu forfranensis, &c., &c.

Enfranchise Service, that due to the Chief Lord from the Vassal.

Forfait Service, a Service done by the Vassals, who were called Liberi servavit, and distant from Vassals: As likewise was their Service; for they were not done to any of those Services, as to the Princes of the Land, but only to Man and Horse to attend the Lord into the Army or Court. This was sometimes called Derman Servavit Armamentum.

S E S

SERVITES, an Order of Religion, denominated from a peculiar Attachment to the Service of the Virgin. The Order was founded by Seven Franciscans, who, in the Year 1523, began to live in Community on Mount Soracte, in a Two League Desert. In 1529, they received from the Bishop, the Rule of St. Francis with a Black Habit, in lieu of a Grey which one had works. In 1531, one of the Seven, of simple Prior of Mount Soracte, was named General. The Rule was approved by the Council of the Lateran, notwithstanding the Decree it had paid to prevent the Multipliation of Religious Orders. And it was again approved by Cardinal Ravennates, in the Year 1535, who put it under the Protection of the Holy See. The succeeding Popes have granted it a great many Favours, particularly in the Eras of Sixtus V, and Innocent VIII. It has had some Reforms. At present it is called Tes. It is famous in Italy, by the History of the Council of Trent, of Per, Paolo, a Venetian, who was a Religious of the Order. On the Name of the Annunciation, doublets from this Militia, in some Cities of Italy, they are called Religious of the Annunciation, because in those Cities, their Church is dedicated under that Name. They are called Servites, because they are called Servi, denominating themselves Servi, Servitae, Servitas, Servitus, of the Holy Virgin, from hence; That when they appeared for the first Time in the Black Habit given them by the Bishop, the Sacking Children cried out: See the Servantes of the Virgin. — There are also Nuns of this Order.

SERVITOR, in our Universities, a Scholar who attends on another for his Maintenance there.

SERVITORS of Bills are four Persons, viz., the Cubicular of the Marshal of the King's Bench, as were sent Aboard with Bills or Writs, to Summon Men to that Court. They are also called Exchequer.

SERVITUDE, the Condition of a Servant, or Slave, See SERVICE. Under the Declension of the Roman Empire, a new Kind of Servitus, was introduced, different from the ancient one. The ancient Servitas was the Lands of subjugated Nations to the first Owners, upon Condition of certain Rents, and servile Offices, to be paid in Acknowledgment. Hence the Names of Servitus, or Servitus &c., &c. Statute 12. Edward III. Tenants are turned into free and common Soccage, much of that Charging is left aside: Yet may it not be amiss to mention how the free Personal Service is described in our ancient Law Books.

SERUM, a thin, transparent, watry Liquor, somewhat similar to the Heart's Blood, which a Child would be a Child of Blood. The Blood consists of Two Kinds of Parts; the Grapes, or red Part, and the Serum, or wheyish, limpid Part, See Part. Mr. Boyle, and some others, have taken the Serum to be the principal part of the Venous Blood, in the Physiological Transfusions, from repeated Experiments, affirms us of the contrary. See Blood. The Ule of the Serum is to nourish the Parts of the Body, and to render the Chyle and Blood more Fluid. See Nutrition. Urine and Sweat, are nothing but Serum drawn of their Nutritious Parts, by repeated Circulations, out of the Blood, and passing the Organs, as the Kidneys and Skin. The Redundancy, and other Vices in the Serum, are the Causes of various Diseases. See Disease.

SESAMOIDEA OSSA, in Anatomy, several very small Bones in the Ear, by which the Ears are fixed on the Bones of the Body, and to render the Chyle and Blood more Fluid. See Nutrition. Urine and Sweat, are nothing but Serum drawn of their Nutritious Parts, by repeated Circulations, out of the Blood, and passing the Organs, as the Kidneys and Skin. The Redundancy, and other Vices in the Serum, are the Causes of various Diseases. See Disease.
English, we may say "Suffia-alteral, Suffia-third, Suffia-third", etc. As to the kinds of Triples expressed by the Particles Suffia, they are these: The Greatest Perfect Suffia-alteral, where the Base is three Measures, or Minims, and that without having any Point. The Greatest Imperfect Suffia-alteral, which is where the Base, when pointed, contains three Measures, and without any Point. The Least Perfect Suffia-alteral, which is where the Semic-breve contains three Measures, and that without any Point. The Least Imperfect Suffia-alteral, a Triple, marked C §, where the Semic-breve, with and without any Point, contains three Measures, and two without. According to Bonvini, one may likewise call the Triples § and § Suffia-alteral.

The Suffia-alteral, is a kind of Triple, marked C §, called by the Italians "Nonnale de Cruro", where there are 9 Crochets in each Measure, instead of 4.

Suffia-alteral, in Geometry, and Arithmetic, is a Ratio between two Lines, two Numbers, &c., where one of them contains the other one, with the Addition of an Half. It is called Suffia-alteral Ratio, since contains 6 ones, and 3, which is Half of 6, over: And 20 and 30 are in the same; as 9 contains 20, and half of 20 or 10. See Ratio.

Suffia-alteral, when one of the Two Terms, the greater contains the less twice, with half another over: As 15 and 50; and 20 and 10. See Ratio.

Suffia-alteral, Suffia-ethere, Suffia-quartian, Suffia-serratin.

Sesquisidilionus, in Music, a Concord resulting from the Sounds of two Strings, whose Vibrations, in every Respect, are to each other in the Ratio of 5 to 6. See Ditionus.

Sesquisquadrature, is an Apect, or Position, of the Planets, when at the Distance of four Signs and an Half, or Double of two Degrees.

Sesquiquinque, is an Apect of the Planets, when 180 Degrees distant from each other.

Sesquiquinque, in the Schools, each School, or Assembly, of a Council. In quoting Councils, we say, In such a Sentence, such a Canon, &c. Suffian of Parliament is the Seafon, or Space, from its Meeting to its Prorogation, or Dissolution. See Prorogation.

Sessions, a Sitting of Justices in Court, upon Commissions; as the Session of Over and Terminant; Quarter-Session, called General Sessions, or Open Session, Suffian where the Session is called Present Sessions, which are procured upon some special Occasion, for more speedy Diplatch of Justice. See Quarterly Sessions. Ptolemaic, or Present Sessions, are kept by the High Court, of every Hundred, for the placing of Servants.

Sestere, Sestorion, a Silver Coin, in UR among the Ancients, and also Nummior, and sometimes Nummos Sestorion. The Sestor was the Fourth Part of the Denarius, and contained Two A's, and an Half; equivalent in English Money, at One Penny Half-penny Farthing. This Sestor was first marked with L S, and the two L's signifying two Librae, and the S Half. But the Librae, afterwards, converting the two L's into an H, expressed the Sestor by H S. The Word Sestor is the Greek "Sestor", and is derived by way of Interpolation for Sestorriss, which signifies Two, and a Half of a Third; or, literally, only Half a Third; For in expressing Half of a First, the Term is Two, and a Half of Two before. Some Authors make two kinds of Sestors; the Left, called Sestorion, in the Masculine Gender; and the Great one, called Sestorion in the Neuter. The First, that is, Point to Point. The Latter, containing a Thousand of the other, or 7L 15s. 3d. of our Money. Others will have such a Division of great and little Sestors, unknown to the Romans. Sestorion, say, by way of Interpolation, and signifies Two, or Two's, and a Half; And when used plurally, as in Quatuorvigesimo Sestor, or Sestorion, 'twas only by Way of Abbreviation, and there was always understood Million, Thousand, Hundred, or Ten Thousand of them. To be qualified for a Roman Knight, an Emblem of Four Hundred Thousand Sestors, was required; and, for a Senator, Eight Hundred Thousand. And when it contained a Copper Sestor, worth about of a Penny English.

Sestorion, Sestorion, was also used in Antiquity, for a Thing, containing Two Whole and a Half of a Thing; As was taken for any Whole, or Integer. See A.S.
SEX [65] SHA

SIXANCE, for the Life of the one shall have his Misery, and that of the other, the other.

SEVERANCE, in Law, the Selling, or Seizing, two or more Objects of a Property, in the same Time; or, if two join in a Work, the Separation of the Parts, or the Difference of the Parts, that of two is a Mixture of the Parts, or the Difference of the Parts, that of two or more will be afterwards Non-fair; here, Separation is permitted to, as notwithstanding the Non-fair of the one, the other may sever it. The Difference of the Parts, in an Action, when one, two, or more Difference appears upon the Act, and not the other. And Separation in Debt, where two Executors are named Flaimtime, and the one refuses to Prosecute the Action of Court, Separation of Summons; Separation in Account, &c.

SEVERANUS. There were Two Sects of Heretics that were called Severans, as the beginning of the Third Century, were a Branch of the Donatists. Thus calld from their Chief, Severus. The Second, were a Sect of Anarchi or Bishops. Their Leader, Severus, was Bishop of Nola, and died in year 325, where he did his utmost to get off the Council of Nicomedia.

SEVERUS, in the Housefold, an Officer who comes in before the Meet of a King or Nobleman, to place the range it on the Table. The Word is formed from the French, Eteker, Etoque, Gentleman or Usher.

SEWERS, in Building, are Shores or Caudillias, or Conveyors of Rain-Water in the Walls of a House. See Henry Watson advises, that Art imitate Nature in their Iglobe Conveyances, and separate them from Sigh, (where there wants a current of Water,) in the most remote, lowest and thickest parts of the Foundation. The former go up through the Walls, to the wide Air, like Tunnels, which all the Interior Architectures commend for the Discharge of their Waters, those of which the Superstructure.

SEX, anything in the Body, which distinguishes Male from Female, Sex and Male and Female. The Number of Persons, of the two Sexes, are exceedingly well balanced so that every Man may have his Wife, and every Woman her Husband. See Marriage. Hermaphrodites have had the Sex in one, See Hermaphroditus. 'Tis expressly forbid by the Law of Mosaic, to disfigure the Sex.

SEX CAPITULARY, a Collection of Collections relating to the Number Sixty: Particularly, a Person arrived at the Age of Sixty Years. Some Caudills distinguish Sexicenarius for not falling on Saturday. This person is distinguished Sexicenarius from Marriage because, at that Age, the Blood and Humours are frozen. The Word is formed from the Latin, Sexigenarius.

SEXAGENARY TABLES, are Tables of proportional Parts, showing the Product of two Sexicenarius, or Sexiceni, that are to be multiplied, or the Quotient of Two, to be divided.

SEXULI, the Second Sunday before Lent, or the next to Shrove-Sunday: So called, as being about the Sixteenth Day before Easter. Sexulitius is that which follows Sexulitiati, and preceding Sexulitiati. See SEXTUAS.

SEXAGESIMALS, or Sexagesimal Arithmetic, a Method of Computing, proceeding by Sixties: As in the Division of a Line into its Intervals, by the Minute, into 60 Seconds, by the Second, into 60 Seconds, by the Minute, into 60 Seconds, &c. Stericin, which are Sexagesimals, are Fractions, whose Denominators proceed in a Sexagrisphoric Ratio; that is, the First Minute, the Second Two, the Third 3; &c. Decimals, like minutes there are of a Minute, of an Hour, used in Astronomical Operations, and they are still retained in many Cates; though Decimal Arithmetick begins to grow in Use more in Astronomical Calculations. In their Fractions, (which some call Astronomic) the Denominator is usually omitted, and the Numerator only written down; thus, 45' 52", 32' 0", 16' 0", is to be read, 4 De- cessi, 52 Decis, 32 Dossi, 16 Dossi, is a Degree and 10 Minutes, 52 Seconds, 32 Seconds, 16 Seconds, &c. See Fractions.

SEXANTS: The Roman divided their As, which was a Pound of Brass, into 12 Ounces; The Ounce was called a Roman Quinarius. Two Quinarius are Exchangeable, being the Sixth Part of the Pound. Sextans was also a Measure, which contained two Ounces of Liquor: Thus, Sexantiti, Calf, has its Armonious.

SEXANTS, in Mathematics, is the Sixth Part of a Circle; or an Arch, comprehending 60 Degrees, Sextants is particularly used for an Astronomical Infrument, made like a Quadrant, excepting, that its Limb only comprehends 60 Degrees, and for Astronomy, the Sextant, is the fame with that of the Quadrant. See Quadrant. In the Observatories of Greenwich, and Tors are very large and extraordinary Sextants. See Ovum-Variare.

SEXTARIUS, an ancient Roman Measure. See Measure.

SFALSE, is the Politeness, or Aspèft, of the Planets, when at 60 Degrees distant; or at the Distance of two Signs from one another. It is marked thus (°).
The Altitude of the Luminaries being the same in both Cases, the opaque Body A C, (Fig. 15.) will be to the vertical Shadow A D, as the right Shadow E B, to its own Body D E.

Hence, The opaque Body is to its vertical Shadow, as the Altitude of the Luminaries to its Sun, 

Consequently, the vertical A D is to its opaque Body A C, as the right Shadow E B to the opaque Body D E.

Hence, A D : A C :: E B : D E.

If D B = A C : then will D B be a mean Proportional between E B and A D; that is, the Length of the opaque Body is a mean Proportional between its right Shadow and vertical Shadow; and vice versa.

3d. When the Angle C is 45°, the Sun, and Co-ordinate are equal; and therefore the vertical Shadow equal to the length of the opaque Body.

In the next Proposition, we have the vertical Shadow of the same opaque Body, under the same Altitude of the Luminaries, in a Duplicate Ratio of the Co-ordinate, to the Sun of the Altitude of the Luminaries.

Right and vertical Shaddows, are of considerable Use in Measuring, as by their Means we can conveniently measure Altitudes, both accessible and inaccessible, and that too when the Body does not project any Shadow. The right Shadows we use when the Shadow does not exceed the Altitude; and the vertical Shadows, when the Shadow is greater than the Altitude. On this Footing, is made the construction of the Horizons of the Plan and Elevation, by means whereof the Ratios of the right and vertical Shadow of any Object, at any Altitude, are determined. This Instrument is usually added on the Face of the Quadrant. Its Description you will find in the Article of the Horizons of the Plan and Elevation.

**SHADOW**, in Geography. The inhabitants of the Globe are divided, with Respect to their Shadows, into Mediocris, Amphitropi, Heliotropi, and Periplecti. The first are such as are divided into two parts by their Shadow, both under the Sun; the second is such as are divided into two parts by their Shadow, one under the Sun and one out of the Sun; the third is such as are divided into two parts by their Shadow, one part of the Body is under the Sun and one part of the Sun is on the Body; the fourth is such as are divided into two parts by their Shadow, one part of the Body is under the Sun and one part of the Sun is on the Body.

**SHADOW**, in Perspective. The Appearance of an opaque Body, and a luminous one, which Rays diverge, (E. g. as Candle, Lamp, &c.) being given; To find the said Appearance. The Sun is supposed to be a Circular disk of Light; the Light of it issuing in a direct Line from the Centre of it. The Method is this, From the Luminous Body, which is here considered as a Point, let fall a Perpendicular to the Plane, S, upon which the Sun is supposed to lie, and from the Point upon which a Perpendicular drawn from the Middle of the Luminaries, falls on the PerspectiVe Plane S, and from the several Angles, or raised Points of the Body let fall perpen
diculars, to the Plane S, whereon the Shadow of the Body is supposed to fall, and where the Body hides any other thing falling. The shadow of the Body is the Shadow of the Body, and the shadow of the Body is the Shadow of the Body.

**SHAPEN**.
and let down, on Occasion: They are commonly good Sails; and are often used as Tenders upon a Man of War.

SHAMADE, see Chamae.

SHAMOT, or SHAMAE. see Chama.

SHAPE, in N. England, a small Ulcer, which grows and eats the Fibril; usually occasioned by some Viral Disorder. see Carcinoma.

SHARP, in Multi, a kind of artificial Note or Character, (out of which a Note is cut,) by which the Accents in a Note are made to be as well known in a Nest, as it is to be sung or played a Semi-tone, or half a Note higher than the natural Note would be without it. When the Semi-tone takes the Name of the natural Note next above it, the Note is called a Sharp; and is written like a D. To this indifferent, in the Main, which of the Two be used, there are sometimes particular Reasons for the one rather than for the other. In Music, the Use of Flats and Sharp's, is by way of Reference to the Intensities of the fixed Scales of Instruments. see Scale.

SHARPING CORN, is a customary Present of Corn, which are usually promised to the Farmers, in some Parts of England, make to their Smith, for sharpening their Plough- Irons, Harrow tines, &c.

SHEDING, is a Riding, Tything, or Division in the [New] Man; the whole Hold being divided into Six Shedings, in every one of which, is a Cooner or chief Constable.

SHUING OF A Ship is the casting that Part of her Hull, which is to be under Water, with something to keep the Worms from eating into her Planks. It is usually done with laying Tar and Hair mixed together all over the Old Plank, and then mending it on thin Boards; But this hinders a Ship's sailing, and therefore let fast with different kinds of Lead, which is much smoother, and consequently better for sailing, and also more cheap and durable than the others. This was first Invented by Sir Phillip Henrius, and Major Warren.

SHINING, in the Woollen Manufactures, the Sheerin. Man's Craft or Office; or the cutting off, with large Sheers, of the Superfluous Mass of the Wool, in its raw State; Shearing is also the Term for the Motion of a Ship, when she is not tacked or fished; in which case she is said to be at Sea or go Shewing. When the lies at Anchor, near Part. see by reason of the swift running of a Tide Gare, &c. some may Think danger of meeting a Storm, or a wind. See Shewing a shore. — Sheer books, are large Iron Hooks, used when a Ship deigns to Board another. — Sheer-franks, is a kind of Knoe, by which they tie up and thoroent a Runner when he is ashore.

SHEEK, an ancient Hebrew Coin, equal to Four Art. Dirhemens, or Four Roman Denarii; amounting to 2: 6: 5: Sterling. In the Bible, the Sheek is sometimes rendered a Solidus; and sometimes Sterz. The Tenth Doctors are in great doubt of the Weight of the Sheek, and its only by Conjecture, and by the Weight of the Modern Sheek, that the Ancient one is judged equal to Four Roman Dirhemens. see Shekius. Father Sueton, has described several of these Sheek, in his Difertation on the Hebrew Medals. By the Way he observes, that the Third and Fourth Sheek, that is, 3: 3: 34: shekels, by Weights of Mr. Ann. Hoc, are Counterfeits of that Author.

The Hebrew Sheek, according to F. Merf, weige 2:6:2:5: and is composed of 2:6:2:5: each Obolus weighing 2:6:2:5: which being found in the Sheek. He adds, that such as come short of this Weight, have been Ejected. But Bishop Goodwin tells us, he has weight'd several, and found them at the weight of a 2:6:2:5. Half ounce. Some are of Opinion, that the Hebrews had two Kinds of Sheek; The Common, or Phrophe Sheek called Thalea, and the Sheek, or Sheek of the Silver, which ladi they in the Weight of this; and in the Manner of making them, we may get clear of some Difficulties occurring in Scripture, where Things are mentioned as of Incredible Weight; particular of Four, 12: and 56: which are called 2:6:2:5: but the false cast off his Hair, the Weight whereof used to insinuate him, he cut off the Weight of 200 Sheeks. But Falsehood will not hear of it; nor does Bishop Camden, Dr. Burnet, or the Prophets, assent to this; But the Prophets, or Sheek of Four Drachmen, they agree, was the same with the Sacred Sheek; and 'twas only to call 'd, because the Standard thereof was kept in the Sanctuary, by the Priests, 'Tis pretended by others, that the Jews had a Standard Weight of the same Name with the Silver one.

The Sheek is supposed to be first brought into the World, at the Rarre of the 100 to the Artick Mina, weighing 606 Grains of Wheat, and current for 10 Geras or Obol. But afterwards they were made to double that Weight. Some will have the Sheek the oldest Piece of Money in the World, as being in Use in Abraham's Time; but this was not Coin'd, or Stamp'd; nor had any other Value besides that of the Grain of Wheat. Others, as the Sheek, at current in Arabia: Di Congi says the name of England and Germany. The Word is form'd from a Hebrew Term, meaning according to Wight.

SHEEP, the Mines (especially in Tin Mines) call the Fall Country, by which they mean, an imaginary Surface of the Earth, which, at the Concourse of Waters at the Seat, is never reached; and to the Sheff, they think, all the Loads or Mineral Vessels at first lay even, in a general body; thro' the Flood, some were elevated, some depressed. And by Sheff now, they mean that hard Surface or Coat of Earth, from which every thing has been taken, and which, being exalted, or made to a Foot deep, for they suppose, that since the Flood, the Earth hath gotten a new Coat of Vegetable Earth, or such as is made by the Overgrowth of Vegetables and Animals. See Dune.

SHEEP, in natural History, a hard Cattle, serving to cover and incline a kind of Animals, hence call'd Tephecots. None of these have been generally mistaken in the Matter of the Roman Skell; But the modern Sheep, and that known in England, has been always suppos'd to arise from the same Egg. But M. Remanis has flown the Supposition to be false. He has found, that the Shells of Garden Snails, are form'd of a Matter which comes from the Veins, and bodies, and hardens and condenes in the Air. 'Tis certain, that all Animals perish, and are encompass'd with a kind of Cloud or Ooz, which condenes upon them; and hereof we have a fine Example. In the Bubonic, a kind of Bubos, the body, in its nakedness, assumes pretty nearly their external Figure. Snails have nothing peculiar in this respect; 'tis the atmosphere of these Periphrasis, condenes and hardens about them, and forms them into the Moal, or the Model; whereas that of other Animals is evaporated and lost in Air. This difference arises from the different Constitution of the Animal, and is not perish'd; That coming from Snails, is vicious and stony. This is the Province of the Moal, or the Fass, which M. Remanis has well proved by Experiments.

On this Principle, tho' the Sheep serve the Animal as an Universal Cover, it is without a comparison inferior to any of the other Parts, by Vegetation; that is, by a Juice circulating within itself, but by an external Addition of Parts had one over another: as is commonly suppos'd of Stones. But the confidence of the latter is no more than that of the other. 'Tis supposed, that the Snail's Head is always at the Aperture of the Shell, and its Tail in the Tip or Point of the Shell; and it is naturally round into a Spiral Form, without the different Folds. Some have supposed: Take the Snail just hurt h:d, As the Matter it perforis petroleum around, there must be first form'd a little Circle of Cohesion, and next the Bigness of its Body: And as its Body is yet too little to make the Orb of its Shell, it must be form'd whol. This Cover will only be the Centre, or at most, the first Beginning of a little Circle of a Spiral. But the Animal grows; if then, it cept to provide, 'tis evident, all that is added to its Body, would remain'd, but as it continues to perforis, it makes itself a Cover in proportion as it needs it. Thus is an intent Fold of a Spiral found; and thus is a Second and a Third; and fill every new Fold is bigger than the last, in regard the Animal grows in Thickness, at the same Time as it grows in Length. When the Animal ceases to grow, yet it does not cease to perforis, the Shell continues to grow thicker, though not longer.

SHELLS make a considerable Article in the Cabinets of Naturalists. The Shell and rarect are thief that follow as the Pearl Crowns, which takes its Name from its Form, and which is all streak'd with Red on a White Ground. The Feather, Piuma, whole Whiffierus, with its Cavities, is also sufficient to give an Adorable Effect. The Conchus, which, on a Ground white, or yellow, has Opera Back as Jet, much resembling Hebrew Characters. The Clamor Shells, which has a Green and Black Embroidery, on a dark Blue Ground, is also very Beautiful, and the Em_DAYS_ your an Adorable Texture of Yellow, Brown and Black. The Clot of Silver, which does not come behind that of Gold in Beauty. The Leopard, which is all speckled. The Tiger, which is black and yellow, the Black, which has black Grains on a white Ground. The Purl, thus call'd from its Figure; it is embrodier'd with Three or Four Colours, the Dial, The Caterpillar, both deno. of Portraits, White Nuns, Hsagol, Apprentes, Tulc, Galre, &c.
Flavours about Six. The Dutch Shilling also are call'd
Sols de Grivo, because equal to 12 Gros. The Dutch have
Copper Shilling, worth about $; of a Farthing Sterling.
Flavours are made of Brass, by improving the Derivation by several Texts of Law, and among others
by the XXI. Law, De Aunus ligati. See Coin.
SHILLINGS, in Building, are small Pieces of thin Iron, or a certain Scanning; or more usu-
ally cleft to about an Inch thick at one End, and made like Wedges, Four or Five Inches broad, and Eight or Nine
Inches long; used in underpinning chimneys, instead of Tiles, or Slates. This Covering is
dear; yet where Tiles, &c. are very scarce, and a light
Cover required, is preferable to Thatch. If made of good
cork, it will stand a long Time, for it is thin, yet
lare, light, and durable Covering. The Building is first to
be covered all over with Boards, and the Shingles nail'd ther-
on. See COVERING.
Swine, a kind of Hog, call'd also Military Hogs. It consists of innumerable little Pustules,
breaking out in various Parts of the Body, &c. the Neck,
Breast, Lungs, Thighs, &c. The Place may be
sometimes inflamed, and the Pustules a little Fervid. While
Pustules arise and fuppurate, and are succeeded by little round
Scabs returning Milllet Seeds. It is to be attacked with
Dirtiness; and light Night; a Pattesone, or a low
Aire, a Cold of Oil and Wax to be applied. Wiseman ob-
erves, the Shingles come near the Nature of a Poirot, and are
to be cured with Mercurial Catharticks.
Shrivi, a kind of Salt, is very great Value, with Salt,
fix for Navigation on the Sea; exceeding Galleys, which go
with Oars and Smack-Sails. See GALLEY. The Small
Aubin, defines a Ship, A Timber-Building, consisting of various
Kinds of Wood and pines, with round Shot, and Iron and
Wood, in such Form as to be light to float, and to be
conducted by Wind and Sails, from Sea to Sea.
For the most convenient Forms of Ships go that anywhere
to meet with the least Resistance from the Water, See VESSEL.
The Invention of Ships is very Ancient, and, at the same
time, very beautiful. The Egyptians, and the Pharaohs of old,
proposed Ships to transport the dead, and pretend, that the Kings he invented to save
himself from the Labyrinth of Cretes, were nothing
but Sails, which he first gave to Vessels, and wherewith he could
ride with great Safety, and what can be more
honourable to him? on the Credit of some ancient Greek
and Latin Coins, on one Side whereof, is represented his
double Face, and on the Reverse a Ship. Lately, others, and
above others, have taken a Ship on North the first
Ship-bulder. See Ara. See also NAVIGATION.
Suits are usually divided into Three Classes, Shirts of
War, Merchant Ships, and Pattesone, or low Vessels, for
Merchant; being such, as, tho' built for Merchandise,
yet take Commissions for War. Shirts of War are again di-
vided into several Orders, call'd Rates. See Rate. Mer-
chant ships are divided into Three Orders, by the Number of
Tuns they bear, each Tun reckoned to Two thousand
Pounds Weight. The Estimate is made by Gauging
the Bottom of the Keel, which is the proper Place of
Loading. The most celebrated Ships of Antiquity are, that of
Peloponnesus, which was 280 Cubits long, 38 broad
and 48 high. It carried 400 Rows, 400 Sailors, and
60 to give the Chair an idea of the several Nails, we are
sold, was Half a Stadium long. Yet they were nothing in
Comparison with Mem's Ship, built under the Direction of
Archimedes; on the Structure whereof, Abolism, as we are
called by Salles, wrote a whole Volume. There was Wood
enough employed in it to make Fifty Gallies. It had all the
Value of a Dozen of Palace's; Banqueting Rooms,
Halls, Libraries, or even the Temples of Jupiter, Mercury,
and Venus. &c. It was incomparable with an Iron
Rampart, Eight Towers, with Walls and Battlements, furnish-
ed with Machines of War, particularly one, which throw a
Stone of fifteen Pounds, or a Shot of five Pounds, to the
Distance of Half a Mile; with many other Particulars related by
Abras. Among Modern Ships, one of the most considerable is
a Firth Rate Ship of War, built at Holland Delft, on which boat of the fairest Rates may
de be deduced, are as follow: The Length 290 Foot; Number
of Guns 110; Number of Men 1500; Number of Tuns
2300; Weight of Shot at the Piece 14 Pounds, the thickness
of the Sides, Depth 19. Main-mast in Length 59 foot; in
Diameter 58 Inches, Weight of the Anchor 83 Hundred
Quarter 4 Pounds. Cable in Length 200 Yards. Da-
iver.
SHIELD, an ancient Weapon of Defence, made in Man-
ners; the Buckler, and borne on the Arm to defend
Lances, Darts, &c. The Form of the Shield is represented
by the Escutcheon in Coats of Arms. See BUCKLER.
SHIELD, an ancient Weapon of Defence, made in Man-
ners; the Buckler, and borne on the Arm to defend
Lances, Darts, &c. The Form of the Shield is represented
by the Escutcheon in Coats of Arms. See BUCKLER.
Shilling, or Shilling, or Shire-reve, an Officer in each
County of England, whole Burthen is to see to the Execu-
tion of the Laws, with the Convictions of Offenders, and to
Witess directed to be sent out of the King's Courts; To impannel Jurors; to bring Caufes and
Castigants to Tryal; to take Care of the Dispatch of Affairs both Civil and Criminal, to
collect Taxes, and to report on the Condition and
Conduction of Persons in his County, for which he accounts to the Exchequer; and to attend
and assist the itinerant Judges. The Sherry, is, as it were,
the Soul of the Package of a County; and in the History of
his Office only lasts one Year. The Sherry was anciently koched by the People in the Count-
y Court, as Knights now are for Parliament; but he is now
appointed by the Lord Chancellor, and holds it for a
Year; every Year nominate Six Perions for each Country;
whereof, the Lord Chancellor, Treasurer, Privy Council,
&c. assembeled in the Exchequer Chamber, make
Choice of such Officers, which they thought fit. On
which Country, only the County of Middlesex has Two Sherris;
chose, as an-
cently, by the Citizens of London: And Darlum, West-
minster, and Westminster, besides the Ministerial Office, of executing
Proccesss and Precepts of the Courts, and making Returns of
the fame; has a judicial Officer, whereby he holds Two or
several King's Courts, and enforces there the
Debt of a Coffer or Exchequer, from the First Di-
vision of the Kingdom into Counties. In Latin, he is called
Vice-counts.
SHIELD, an ancient Weapon of Defence, made in Man-
ners; the Buckler, and borne on the Arm to defend
Lances, Darts, &c. The Form of the Shield is represented
by the Escutcheon in Coats of Arms. See BUCKLER.
SHU [70] SIE

SHOULDERING, in Fortification, is a Retrenchment, opposed to the Enemies; or a Work call'd up for a Defence on one Side; whether made of Heaps of Earth call'd up, or Gabions of Sticks, Faggots, Earthen, or Stone, sometimes made in the Bastions, on the Flank near the Shoulder, to cover the Cannon of a Caponet. It is also taken for a Demi-Bastion, or Work, consisting of one or two Flanks, with a little Head of an Horn-work, or Crown-work: Neither is it to be understood only of a small Flank added to the Sides of the Horn-work to defend them, when they are too small; but also of the covered way within the Line of the Work.

SHOULDERING-PIECE, in Building. See BRACKET.

SHOULDER-WRENCH, is a Strap in the Shoulder. SHOWER, a Cloud refolded into Rain, and discharged over a part of the Scene. See RAIN.

In Natural History, we meet with abundance of Infants of extraordinary and preternatural Showers: As, Showers of Blood, mention'd by Gide, seen at Livorno, and described by Dr. Willis; Showers of Fire, mention'd by Pley, and even Dr. Plot; A Shower of Milted Sea, in Sylva, mention'd in the Epistle, German. A. 37. A Shower of Aces, frequent in the Archiologie. A Shower of Writing, or of Writing, mention'd in the Pindar. Triunphi. The natural Reactions of many whereof may be seen under the Article Rain.

SIEGE, to hold the Relics of some Saint. See RELICS. The Word is formed from the Latin Sericium, a Desk or Cabinet.

SHROVE-TIDE, the Time immediately before Lent; thus called, because employed in Shrovetide, that is, in confessing their Sins to the Priest; in order to a more devout keeping the fast Lent.—Shrove Tiday is the Day next before the fast of Lent, in which there is no cutting or lopping off the Top-Branches thereof, which is only pruned to Trees that are not fit for Timber, but defoliated for Fuel, or some other present Use. Some Trees the Husbandmen find necessary to Coppa as they need no Fence to secure them, because standing in no Danger of the Brownings and Rubblings of Cattle, which too, have the Benefit of Grasping under them. So for the Shrovetide, its not to be pruned till the Trees have stood three or four Years; or rather at the Beginning of the Spring, or the End of the Fall. The harder foot not to be lopped above, and the Tops not to be lopp'd the Time in the Winter. The pity and sober Woods are best preserved in the Spring. The Stumps left, should always be cut asleap, and timmow, in order to call the Water off, and prevent its sinking in, and suff'ring the Tree.

SHROWS, are great Ropes in a Ship, which come from either Sides of all Mats: They are fastened below by Chaps, and above by a Deck. The Mats, their Pendons, Fore-tackle, and Swivins, being first put under them. They are also fowd there, to prevent their galling the Matting. The Top-mast Shrows are fastened to the Blocks of the Dogknot, and try'd by Dead-Men-Eyes, and Lannis also, as the others are; The Terms are, Ensh the Shrow; that is, Slacken them; Set right the Shrows; that is, Set them faster; The Bolt-Shr't has no Part in it.

SHRUB, a little low Tree, or Dwarf, or a Woody Plant, of a Size less than a Tree; which, besides its principal Stem, and Branches, is frequent to have on the Root, the several other considerable Sors or Stems; Such are Privet, Philoera, &c. Shrubs and Trees put forth in Autumn, a kind of Buttons, or Gums, in the Axes of the Leaves; to so many little Eggs, which coming to expand by the Wirth of the following Spring, open into Leaves, and Flowers. By this, together with the Height, some distinguish Shrubs from inner Shrubs; which are grown both for the Flowers, and for the Leaves; not prod Buttons; as Rosmary, Thyme, &c.

SHUTTLE, in the Manufac' of a kind of Instrument used by the Worriers, which is frequent to be found in the Heaps called Wool, Silk, Linen, or any other Matter, serves to form the Wool of their Streets, Linnen, Ribbons, &c. by throwing the Shuttle alternately from Left to Right, and Right to Left, in between the Threads of the Warp, which is thrown out lengthwise on the Loom. In the Middle of the Shuttle is a Kind of Cavity, called the Eye or Chamber of the Shuttle, wherein is included the Spool of the Wool, Silk, Linen, or any other Matter. If it were wound on a little Tube of Paper, Rush, or other Matter.

The Riband-Weaver's Shuttle is very different from the Shuttle of all the other Weavers, though it serve for the same Purpoze: 'Tis of Box, six or seven inches long, one broad, and as much deep: Shod with Iron at both Ends, which terminates in Branches, is a little strong, the former to the Right, and the latter towards the Left, representing the Figure of an A horizontally placed.

SIE, in Muff, a Seventh Note, added within this Sixty Years, by one in Mares, to the Six ancient Notes; invented by St. John, in the Nativity. But, according to Poems, the Embarks of the ancient Gamit is avoided, So buty a Thing is Jealous, that, for a matter of Thirty Years, that Mares kept preching to the World, that there was no Man; a Man would only do it: But he was no sooner dead, than the whole World came in. See Note.

SIBIL, SIBYLL, in Antiquity, Virgin Prophecie, or Mists supposed to be divinely inspired; and who, in the Height of their Enthusiasm, gave Oracles, and foretold Things to come. See PROPHET. The Word is supposed formed of an Affirmation of the two Greek Words, Sio, and Bil, full, by Reason of the excellele Fury they were agitated withal, when they delivered their Oracles. Authors do not agree about the Number of the Sibyl. Capp. They number between Twenty, in the Books of Troy, called Sibyl Phrygians, and Sibyls of Tarsus, and Sibyls Ethiopia. Silvus mentions Three, v. c. Comes, Dodonae, and Ethiopia. Sibylla makes their Number Four; others, Five; and some Eight. The reason of the Places of their Birth; the Forjnin, Lybion, Dolphi, Two Cannus, Ethiopia, Sannus, Hildicus, or Troy, Phrygian, and Thasius. Of these, the most celebrated are, the Ethiopia, Dodone, and Cannus Sibyl. See Note.

The Sibylines-Oracles, were held in great Veneration by the more credulous among the Antients, as they were much feart of. The Books of the Sibyls; they were written, were kept by the Romans with infinite Care, and nothing of Moment undertaken without considering them. Tarquin first commend it to the custody of Two Persons, whom he willed should carry it to the Pope for further Purposes.

SICILIAN, in Muff, è. A kind of gay point Very bright, or Dance; somewhat of the Nature of an English gig: usually marked with the Characters or

SICKNESS, Good-Sickness, Scurvy, Sickness, Falling-Sickness. See Disease. Scurvy is a Disease;

SICUT ALIAS, a Writ sent out in the Second Place, where the First was not executed. It is thus called from its Beginning, which is in the Writ Strec. It is of the ancient Strec. Precibus nisi (Sicut Alia) 

SIDE, Lat. in Geometry. The Side of a Figure is a Line making Part of the Periphery of any Superficial Figure.

SIDE, in Architecture, is the Number of the Terms of the Architectural Progression, that are summ'd up. See POLYGONAL Number.

SIEGE, is what we otherwise call the Rest, or Radix. See ROOT.

SIEGE-LAYS, is Term made Use of by Huntmen, when Dogs are for the Way, to be let slip at a Deer, as he Puts it.

SIDE-ROYAL, in Geometry, is the Term made Use of by Smiths and Carpenters, to Term the Distance of any Length by its Height.

SIDE-RIGHT, is Term made Use of by Smiths and Carpenters, to Term the Width of any Length by its Height.

SIDE-SLASHING of Trees, Plants, &c. by Eastern Winds, excessive Heat, Draught, or the like. See BLIGHT.

SILK, Sually used for a being suddenly benumbed, and deprived of the Use of one's Limbs, Senses, &c. which the People call being Plague-black.

SILDEN, or Selden, was a Man of the same Name Authors gives the Lead-n. of the Leaden. See MAGNET.

SIDES, Sides of Harmours, &c. in Fortification, are the Ramp or Banks, of which the Ram is carried, a Woman, &c. Note them on the Ramps, &c. Left from the Gate to the Head.

SIDES-MEN, properly called Sides-Men, or Right-Men, Perfons, who in larger Parishes are appointed to side the Ramps, &c. Left from the Gate to the Head.

SIDEWAYS, chiefly used in the Construction of Pinnacles, in the form of Chinese Peppers, and in theled of Lenders, and in presenting Officers at Visitations.

SIDEY, in Warfare, the Incumbrance of an Army around a Place, with Defiles to take it, either in the Way of Defiles or by the Left, or by the Front, or by the Rear, or by the Right, or by the Left, to prevent any Relief from without, or by main Force, as by digging Trenches, and making formal Attacks. The most celebrated
celebrated Signes of Antiquity, are those of Troy, Troy, Asia, Perseus, Numantia, &c. Those of the Moderns are that of Oden, Oden, Germain, &c. The Word is French, and signifies the Place of the Sea.

SIERRA, a Spanish Term signifying Mountain; applied to Mountains, and Mountainous Countries.

SIERE, or SIEVE, an Instrument serving to separate the Seeds of plants from the Fruits or Coarses, Liquors, &c. or to cleanse the Pulp from Dust, Light, &c. It is made of a Rim of Wood; the Circle, or Space whereof is filled with a Tuffle of Silt, Tiffany, Hair, Line, Where the Seeds are washed. The Sieves, when they have large Holes, are usually called Ridelles; such is the Coat or Lion Sieve, Garden Sieve, &c. When Drugs, apt to evaporate, are to be packed thro' the Sive, 'tis usual to have a Cover fitted over a Lid.

SIERU, A Kind of Title of Honour, or Quality among the French; chiefly used among the Lawyers, and in public Acts and Writings of that Kind: As I plead for the Same Mark, &c. The Tite Sieur is properly given by a Superior to an Inferior, in his Letters, and other particular Writings: As, Tell the Sieur such a one, that he pays his Suit, &c. Authors sometimes use it, by Way of Modesty, in laying forth of themselves. Thus at the Heads of Books, we see, Traitement du Sieur d' Albarans, Oeuvres du Sieur d'Avignon, &c.

SIEZEN, is also a Term expounding Screen or Lordship: As Eguyer or Sieur of such a Place.

SIGHT, the Excitement, or Action of the Sense of Seeing. See SEER.

Sight, the nobleft and most useful of all our Senses, Farmer Malletre says, deceives us in abundance of Instances; Nay, almost in all: Particularly with regard to the Magnitude, and Extent of Things; their Figures, Motions, and Shadows; as well as with regard to the Number, the Sound, the Taste, the Smell, and even the Smell, of what is not more than a Mist: Half a Mist is nothing, if we believe their Report. A Mist is only a Mathematical Point, with regard therefore, we cannot do without it, without annihilating it. In Effect, our Sight does not require any other Instrument than the Eye, except is it fisted, but only the Relation and Proportion it has to our Body. Hence, as Half a Mist has no Relation to our Bodies, it cannot produce any Air, but Sight hides it entirely. Were our Eyes made like Microscopes, or were we our selves as small as Mites, we should judge very differently of the Magnitude of Bodies. It may be that some of our own Parts would stand less than a Mist: Half a Mist is nothing, if we believe their Report. A Mist is only a Mathematical Point, with regard therefore, we cannot do without it, without annihilating it.

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SIGHTS, in Mathematics, are Two thin Pieces of Brass called prismatically on the Two Extremes of an Albacde or Index of a Twoedile, Circumferentor, or other like Instrument: Each whereof has an Apyneru or Split up the Middle, thro' which the usual Rays pass to the Eye, and distanced from the Object. And it is for the just Contrivance of the Index to the Line of the Object. See TELESCOPE, CIRCUMFERENTOR, ALBADE, &c.

Plain Sights, Telescopic Sights, &c.
times with Drums and Trumpets. At Sea, Signals are given by Cauns or Musket Shot, by Lights, Sails, Flags, &c.

Signals have been in Use in all Ages. The Ancients who used Signals, of course, had no means of conveying Intelligence of what passed at a great Distance. For which Purpoze they placed Sentinels on the Heights, from Space to Space; some Mention wherein, we find made by Homer. In the Battle of the Poet, the Trojans were commanded by Achilles, whose Talents were great, and whose Aim was to perform great Things. These People thus disposed, lighted Fires, or Flambeaux in the Night-time. In the Ageum, of Oesipatres, that Prince at his Departure for Troy, promised to mach for the Trojans, and to tie the Ships together, and all the other Ships of his Fleet, so that the very Day of the Combat should be taken, this Prince, to avise his of Victory by the Fire lighted Express. He keeps his Word, and Tidings are brought the Princes, that Troy is taken, and that Agamemnon will receive the Signal of Victory from the Walls.

Notwithstanding what has been said in the Arab; and Benavev-

tna Pollinum, in his Schola in Arcanum's Book de Mundo, adds, That while the Moors were Masters of the greatest Part of Spain, the River Guadalquivir was placed on the Coast, an Infinity of Ferries, or Watch-houses, call'd in the Arabic, Aracay, a Word the Spaniards still retain whence, by Fires, they could immediately alarm the whole Kingdom.

Indeed, the term still holds good in Spain, where Curtius observes, Was very frequent among the Altarics, in the Time of Alexander. Livy and Caesar both mention it as used among the Romans. Fabricius Virgin floes was to be shewn to all the Troops, if it was by Day, or in the Night-time. In several Places in England, there are the Remains of great Foles that have served for this Purpose. See BEACON. Signals are, at Sea, Signs made at Sea, by the Admiral, to give the Orders of War to the Troops, and to announce, in the Day or by Night, either for Sailing or Fighting, or for the better Security of the Merchant Ships, under the Con-

voy of Men of War. These Signals are manifest and very great, and all appointed and determined by Order of the Lord High Admiral, or Lords of the Admiralty.

Signals by Day.

When the Commander in Chief would have them prepare for Sailing, he first blows his Fore-top-fall, and then the whole Fleet would be in Motion. When the Skipper would have, Unnoor, he looses his Main-top-fall, and fires a Gun, which in the Royal Navy is to be answered by every Flag-

ship. When he would have them Weigh, he looses the top-
falls, and when all his Ships are afloat, he looses his Sheets: The Gun is to be answered by every Flag-ship, and every Ship to get to Sall as soon as it can. If he with the Lecdard, to put on his Head-mast Ships to Tack, he would have the Weather-mast, and Head-mast Ships to Tack first, he hoists the Union Flag at the Fore-top-mast-head, and fires a Gun; which, when he would have all the whole Fleet Tack, he hoists an Union, both on the Fore, and Head-mast Ships, and fires a Gun also. When he would have Weather, he would have them Wear, and to bring to the other Tack, he hoists a Pendant on the Ensign-flags, and fires a Gun. And then the Lower-mast and Head-mast Ships are to answer the first Signal, and the other Tack is to lie by, or go on with an easy Sall, till he comes a head: Every Flag is to answer with the same Flag-Signal. If they are lyingly, or sailing by a Wind, and the Admiral would have them bear to a Wind, he would have an easy Sall before the Wind, he hoists his Ensign, and fires a Gun, which the Flags are to answer: And then the Lower-mast Ships are to bear up frist, and to give Room for the Weather-mast to Wear, and fall before the Wind, with an easy Sall, till the Admiral comes a head. But if it should happen when the Admiral hath Occasion to Wear and Sall before the Wind, that both Jack and Ensign be abroad, he would have the Skipper of the first Ship to hoist his Ensign, and keep it down, till the Fleet is before the Wind. When they are falling before the Wind, and he would have them bring to, with the Star-board Tacks Aboard, he hoists a Blue Flag on the Head-mast, and fires a Gun. But if they are to bring to, with the Lard-board Tack, he hoists a Blue Flag at the same Place, and fires a Gun as before. If the Skipper of the first Ship discovers Land, he is to hoist his Jack and Ensign, and keep it abroad, till the Admiral or Commander in Chief answer Croft with, by hoisting his; on Sight of which, he is to haul down his Flags, and to fly the Jack and Ensign, and fires a Gun. And bear up from it, and to saw Jack abroad from the Main-

top-mast Groos-trees, and fire two Guns; but if he should strike or flick fast, then, before the sail signal with his Jack and Ensign, and fires a Gun: which he would do, if he saw the Skipper of any other Ship come near him, and endeavour to avoid the Danger: When any fires a Signal or a Ship more than the Fleet, he is to put abroad his Ensign, and there keep it, till the Admiral is out, and then to lower it, as often as he sees Ships, and think in with them, that so the Admiral may know which Way they are, and how many; but if he be at such a Distance, that the Ensign can't be well discovered, he is then to lay his Head to Wind, and fire the Jack and Ensign, and fire two Guns, some Billows, and continue hoisting, and lowering his Top-sails, and making a Weft with his Top-gallant Sails, till he is perceived by the Admiral. When the Admiral would have the Skipper of the first Ship, to bring to, with the Star-board Tacks, he hoists a blue Flag on the Head-mast, and fires a Gun. When the Admiral would have any Ship to Moose to Windward, he makes a Signal for speaking with the Captain, and then, when the Skipper has spoken, he fires the Jack and Ensign, and fires a Gun: But if to Chafe to Leeward, a Blue Flag, and the same Signal is made by the Flag, in whole Division that Ship is. When he would have them give over Chafe, he hoists a White, on the Star-board Tack, at the Top-mast-head, and fires a Gun. Whereof the Skipper is made by the Flag ship, which is nearest the Ship that gives Chafe, till the Chafing Ship fires the Signal. In case of springing a Leaking Tack, or before the Ship is off Company, and the Admirals from Keeping Company, when they are to land their Courses, and fire two Guns. When any Ship would speak with the Admiral, he must speak an English Ensign, from the Head-mast, of the Skipper of the Admiral, or of the Skipper of the Top-sails, lower his Main, or Fore, Top-sail, and firing Guns, till the Admiral obeys him; and if any Ship perceive this, and judge it is a Signal of speaking, he must do the same. And this Signal, and make the beal of his Way to acquiesce the Admiral therewith, who will answer by firing one Gun. When the Admiral would have the Fleet to Prepare to Admiral, he hoists his Mizen-top-mast, and fires a Gun, which the Skipper is made by the Flagship, and fires a Gun, and every Flag-ship makes the same Signal. If he would have the Fleet Moore, he hoists his Mizen-top-mast, with the Clew-lines hauled up, and firing two Guns, till the Skipper is made by the Flagship, and loose both his Top-sails, and fires two Guns; and then the Lead Ward Ships are to cut or slip off, to give Room to the Weather-mast to come to Sall. So if he would have any Ships to come to Sall, he fires before the Weather-mast; and makes the Signal for speaking with that Ship, hoists a Red Flag in the Mizen-broad, and fires a Gun: But if he would have them Moor; he fires a Blue Flag, and is to be done before he would have the Fleet exercise their Small Arms, hoists a Red Flag on the Ensign-tack, and fires a Gun; but if the great Guns, then he puts up a Pendant over the Red Flag.

Signals by Night.

To be offered at an Anchor, weighing Anchor, and Sailing, are as follow. When the Admiral would have the Fleet to Unmoor, and ride short, he hangs out three Lights, one over another in the Main-top-mast Shrouds, which is to be answered by every Flag-ship, and every private Ship, which are to be answered by Flag-ship, and every private Ship hangs out a Light in the Mizen-Shrouds, which is to be answered with the same Signal. When he would have them fire a Light in the Mizen Shrouds, he must be on the same Side, that they may make a distinction in the Sound. When he would have them Weigh, he hangs a Light in the Main-top-mast Shrouds, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds. When he would have them Tack, he hoists a Red Flag on the Ensign-tack, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds. When he would have them Tack, he hoists two Flags on the Ensign-tack, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds. When he would have them Tack, he hoists a Blue Flag on the Ensign-tack, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds. When he would have them Tack, he hoists a Blue Flag on the Ensign-tack, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds. When he would have them Tack, he hoists a Blue Flag on the Ensign-tack, and fires a Gun, which is to be answered with all the Flags, and all the private Ship must hang out a Light in his Mizen-Shrouds.
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Tacks aboard, he puts out four Lights in the Fore-Showards, and fires ten Guns, which he fires from his Flag-Staff, and fires eight Guns, which are to be answered by the Flag-ship; and every private Ship must fly tow'rs Lights. The Wind-mast Ships must bring to first. Whenever the Admiral sees that the fleet has made 200 Points to the Wind, or have discovered Land, or Danger, he is to fly as many Lanters as he can, to fire one Gun, and to tack, or bear away from it; and, if any one happens to spring a Leak, or any part of the fleet, to fly the same signal, and to continue firing of Guns, unless the Admiral call him off, by steering another Course, and fire two or three Guns; and then he shall follow the Admiral. When the Admiral Anchors, he fires two Guns, and then the same signal. Time one from the other, which are to be answered by the Flag-ships; and every private Ship must fly two Lights. When the Admiral would have the fleet to moor, he puts a Light on each Top-mast-head, and fires a Gun, which is to be answered by the Flag-ships, and every private Ship to fly one Light. If he would have them lower their Top-sails, he puts a Light upon his Ensign-Staff, and fires one Gun; which is to be answered by the Flag-ships, and every private Ship must fly one Light. And when he would have them hoist their Yards and Lower their Top-sails, he puts a Light on every mast, and every Flag-ship must fly a Light, and every other, in the Mizen-top-mast Showards, and fires one Gun; which is to be answered by the Flag-ships, and every private Ship must fly one Light in the Mizen-showards. If any drain should happen coming into the fleet, the next Ship is to endeavour to speak with her, and bring her to an Anchor, and not suffer her to pass through the fleet. And if any one discovers a Fleece, and it blow to her disadvantage, then he must give the Admiral Notice; and, if he is to hang out a great Number of Lanters, and to continue firing Gun after Gun, till the Admiral answers him with one. When the Admiral would have the fleet of Cut out, he puts a Light on every fore-Light, and every yard-arm, and at every Fore-yard-arm, and fires two Guns, which are to be answered by the Flag-ships, and every private Ship to fly one Light.

Signals used, when a Fleet fails in a Foge.

If the Admiral would have them Weigh, he flies ten Guns; which every Flag-ship is to Anser. To make them Tack, he flies four Guns, which are to be answered by the Flag-ships; and then the Leeward-mill, and Stern-mill Ships must make light, and then strike their Topsails, and go with the same Sail they tacked with, and not to lie by, leading the Admiral to come a-head; and this is to avoid the Danger of running them one another in thick Weather. When a Fleet fails in a Foge into the Mizen-mill, he puts the same signal, and fires two Guns, which the Flag-ships must answer, and then the Head-mill, and Weather-mill Ships are to make Sail first. If it grow thick and foggy Weather, the Admiral will continue failing, with the same Sail Set, that he had before it grow foggy, and every Hour, which the Flag-ships must answer, and the private Ships must answer, by firing of Muskets, beating of Drum, and firing of Guns; to make either more or less Sail than he had, when the Fog began, he will fire a Gun every half Hour, that the Fleet may discern, whether they come up with the Admiral, or fall a-head; and if he think he can pull up witb him, till he thinks the riot have avoided the Danger. When the Admiral would have the fleet to Anchor, he fires two Guns, which the Flags are to answer; and after he had been Half an Hour at an Anchor, he will fire two Guns more, to be answered by the Flags, as before; that all the Fleet may know it.

Signals for calling Officers on Board the Admiral.

When the Admiral-pass aboard an Union Flag in the Mizzen-showards, and fires a Gun, all the Captains are to come aboard him; with the same Signal, there is a Wet made with the Ensign, then the Lieutenant of each Ship is to come on board. If an Ensign be put aboard in the same Place, all the Masters of the Ships of War, and all the Officers are to come aboard the Admiral. If a Standard on the Flag-Staff be hoisted and a Gun fired, then all the Flag-Officers are to come aboard the Admiral. If the Ensign Flags only, then a Standard is to be hoisted, and a Gun fired; if the Flag, and Land General Officers; then all the Officers of their Squads are to come aboard the Admiral; if a standard at Mizzen-top-mast head, and a Pendant at Main-mast, and fires a Gun; a Red Flag be hoisted in the Mizen-mill, and a Gun fired, then the Captains of his own Squads are to come aboard the Admiral; and if, with the same Signal, there be also a Weft with the Ensign, the Lieutenant of each Ship must come aboard. If he should hoist a Blue Flag, &c. then the Rear-Admiral, and the Captains of his own Squads are to come aboard; and before, the Lieutenant. When a Standard is hoisted on the Ensign-Staff, and a Gun fired, the Vice and Rear Admirals must come aboard the Admiral's Ship. When the Admiral would speak with Captain, he hoists a Weft in the Mizzen-perk, and fires a Gun, and if with the Lieutenant; a Weft is made with the Ensign, and the same Signal; for whenever he would speak with the Lieutenant of any particular Ship, he hoists the Signal for the Captain, and a Weft also with the Ensign. When the Admiral would have all the Tenders in the fleet come on board, he hoists a Weft, and with him, he hoists a Flag, Yellow and White, at the Mizzen-mill, and a Gun. But if he would speak with any particular Ship's Tender, he makes a Signal for speaking with the Captain of the Ship he would speak with, and a Flag in the Mizen-mill, and a Gun. Pinnaces and Barges are to come on board, maned and armed, the Signal is a Pendant on the Flag-staff, hoisted on the Fore-top-mast-head, and a Gun fired; and if he would have them chafe any Signal, he hoists the Pendant, and fires two Guns. The Signal for the Long-boats to come on board, maned and armed, is the Pendant hoisted on the Flag-staff, and the Mizzen- top-mast-head, and a Gun fired; and if he would have them chafe any Signal, he hoists the Pendant, and fires two Guns. The Signal for the Vice-Admirals, or his Agent, he puts in English Ensign in the Mizzen-top-mast-showards; and when with him that he has the Command of the fleet, he will spread an Ensign at his Main-top-fall-yard-arm.

Signals for making a Sea-Fight.

When the Admiral would have the Fleet come on a Line of Battle, one Ship ahead of another; he hoists an Union Flag in the Mizzen-showards, and fires a Gun, and sets the same Signal, as if the Ship does the like. But when they are to form a Line of Battle, one abreast of another, he hoists a Pendant with the Union Flag, &c. When he would have the Admiral of the White, or in that Commands in the second Pott, to Tack, and endeavour to gain the Wind of the Enemy, he spreads a White Flag under the Flag at the Main-top-mast-head, and fires a Gun; and when he would have the Vice-Admiral of the White, or gain the Wind of the Blue Flag, when he would have the Vice-Admiral of the Red do so, he spreads a Red Flag from the Cap, on the Fore-top-mast-head, towards the Back-yard: If the Vice-Admiral of the Blue, he does the like; and if he would have the Rear-Admiral of the Red do so, he hoists a Red Flag at the Flag-staff, at the Mizzen-top-mast-head; if the Admiral of the White, a White Flag; if the Rear-Admiral of the Blue Flag, a Pendant of the same Colour, with a Gun. If he be to Leeeward of the Fleet, or any Part of it, and he would have them come up with him, he hoists an Ensign, or Union Flag at the Mizzen-perk, and fires a Gun; if he would be Leeeward of the Enemy and his Fleet, or any Part of it be Leeeward of him; in order to bring their Ships into the Line, he would have them hoist an Ensign, or Union Flag under the Union Flag (which is the Signal for Battle) and fires a Gun; and then those Ships, that are to Leeeward of him, must endeavour to get into his Wake or Grain, according to the Signal of the Cast away; but the Signal for the fleet is falling before the Wind, and he would have them, who commands in the Second Pott, and the Ship of the Starboard Quarter, to clap by the Wind, and come to the Starboard Tack, he hoists a Red Flag on the Starboard-mast head: But a Blue one, if he would have Ships of the Lart [T]
board Quarter, come to the Late-board Tack, with a Gun. If the Flag-flips be not chased to the Flag-flip, on the Fore-top-mast-head, and fires a Gun, if the Red Flag be not abroad; but if he then, he lowers the Fore-top-Sails a little; and the Union Flag isSpaced for to keep it; and the Red Flag is set up, and every Flag-flip doth the same. If the Rear be to Tack first, he hoists the Union Flag on the Flag-flip, at the Mizzen-top-mast-head, and fires a Gun; which all the Flag-flips do; when he drives the Wind, he is wounded, his Wake or Grain, he hoists a Red Flag at his Mizen-peak, and fires a Gun; and all the Flag-flips must do the same. If he would have that commands in the Second Poit to do to be so, he hoists a Blue Flag, and fires a Gun; and all the Flag-flips would do the same. Signals however he hoists a Red Flag on the Flag-flip at the Fore-top-mast-head, and fires a Gun; every Ship in the Fleet must all their utmost Endeavour to engage the Enemy, in the Order prescribed them in. When he hoists a White Flag at his Mizen-peak, and fires a Gun; then all the small Frigates of his Squadron, that are not of the Line of Battle, are to come under the Stern. If the Fleet be falling by the Left, the Admiral would have them brace their Head-sails to the Malt, he hoists up a Yellow Flag, on the Flag-flip, at the Mizzen-top-mast-head, and fires a Gun; which the Flag-flips are to do, in the same Order in the Rear to the Left. After this, if they would have them fall their Head-Sails, and stand on, he hoists a Yellow Flag on the Flag-flip of the Fore-top-mast-head, and fires a Gun; which the Flag-flips are to do, in the same Order in the Rear to the Right. And then the Ships in the Van, must fall right, and stand on. If this signal is made, the Red Flag at the Fore-top-mast-head is abroad, he spreds the Yellow Flag in the Rear, and all the Ships must make some manner of stern, and then the Admiral would have all the Ships to tack together, the sooner to lie in a Pothole to engage the Enemy; he hoists an Union Flag on the Flag-flips at the Fore and Mizen-top-mast-head, and fires a Gun; which all the Flag-flips are to do, in the same Order in the Rear to the Right. Signals the Flag-flips are to answer; and then the Admiral would hoist lower, left, or haul up any of his Sails, he spreds a Yellow Flag, under the Fore-top-mast, and fires a Gun; which all the Flag-flips are to answer, by hoisting a lower, left, or haul up the Flag-flips. When the Enemy run, and he would have the whole Fleet follow them, he makes all the Sails he can alter them himself, takes down the Signal for the Line of Battle, and fires two Guns out of his Fore-chase, which the Flag-flips answer, and then every Ship is to endeavour to come up with, and board the Enemy. When he would have the Chafe given over, he hoists a White Flag on the Flag-flip at the Mizen-top-mast-head, and fires a Gun; which all the Flag-flips are to answer, by hoisting a White Flag on the Flag-flip at the Mizen-top-mast-head. If he would have the Red Squadron draw into a Line of Battle, one abreast of another, he puts abroad a Flag, striped Red and White, and Blue, and fires a Gun; which the Red Squadron must answer, by drawing up, with a Pendant under it; and fires a Gun; if the White or Second Squadron is to do so, the Flag is striped Red, White and Blue; if the Blue or Third Squadron is to do so, the Flag is one of Blue, and fires a Gun; which the Blue and Third Squadron must answer, by drawing up, with a Pendant under it; and fires a Gun. If the wind should be such as to prevent the Ships drawing up, the signal is made, by drawing into a Line of Battle, one on a side, and the same Signals are made without a Pendant. If they are to draw into the Line of Battle one a Stern of another, with a Large Wind, and he would have the Leaders go on the Star-board Tacks, a board by the Wind; he hoists a Red and White Flag at the Mizen-peak, and fires a Gun: But if the Fleet be falling by the Left, he hoists a Red and White Flag at the Fore-top-mast-head, and fires a Gun: he hoists a Genorco Flag at the same Place; which Signals, like others, must be answered by the Flag-flips.

SIGNATURE, a Subscription or putting of cure on a Paper, in Latin Hand Writing. Anciently, when very few People could write, they dispensed with the Use of Signatures; and contented themselves with the Party's Seal; See Seal. - Signatures may be a Symbol of Authority, by the Pope, whereby he grants a Favour, Difpenation, or Collation, to a Benefice, by putting the Fait at the Bottom thereof, usual in Holy and Ecclesiastical Documents, in his Presence. The Signature, at the Bottom of the Signature, gives the name to the whole Instrument. The Signature contains the Clauses, Drogations, and Dispositions, which are to be done or observed in any Case; with a Commission for the Execution thereof, either in Forma PLgatu, or in gracios Form. A Signature of the Pope's own Hand, whereby he answers, That as he preser, is preferred in these Words, Consecratio uti in psalteris D.N. Pop.(8)

The signature is a kind of Red Signature, or an Execution of a Commission, in the Name of the Pope, whereby he grants a Favour, Difpenation, or Collation, to a Benefice, by putting the Fait at the Bottom thereof, usual in Holy and Ecclesiastical Documents, in his Presence. The Signature, at the Bottom of the Signature, gives the name to the whole Instrument. The Signature contains the Clauses, Drogations, and Dispositions, which are to be done or observed in any Case; with a Commission for the Execution thereof, either in Forma PLgatu, or in gracios Form. A Signature of the Pope's own Hand, whereby he answers, That as he preser, is preferred in these Words, Consecratio uti in psalteris D.N. Pop.
deal of Difficulty, as he has Reason; it having no Warrant: He adds, That the Devil invented the Fable of Silenus, to the Necessity of the Way into Idiocy. But it must be a very ignorant Devil, to make him think his, & dere eys je leste algesene, in the Sense he has done; as if the Words signify any Thing more, in the Person of the Devil than his own. But, his Eyes are redder than Wine; His Teeth whiter than Snow; and his Nose, with that No body, before Becchy, neither Christian nor Idolater, ever saw any Thing of Jfei Cerei in the Fable of Silenus.

SILQUA, in Beauxy, is the Seed-Vealil, Huck, Pod, or Shell of Plants, of the leguminous kind. Whence Sili-

SILK, a very fine, bright, delicate Thread; the Work of an Insect, called the Silkworm. The Antients were but little acquainted with the Use and Manufacture of Silk, and it is only in a Work of a Kind of Spider, or Beetle, that spun it out of its External Cover, and that was its Feet about the little Branches of Trees. This Insect they called So, from So, a People in Scythia, who kept it in Captivity, and which had a very little Affinity with our Silk-Worm, Zercilla. The former living Five Years; but the latter dying annually, envelop'd in a yellowish Cover, or Ball; which, wound out of the Cover, forms the Yarn; and the Ball, when it lay in the life of So, that the Art of manufacturing Silk, was first invented; and Pashmilla, Daughter of Phestus, the In-

The Delicacy was not long unknown to the Ro-

So, which was a Native. But so far were they from profiting by the Delicacy, that they could not be induced to believe so fine a Substance was the Work of a Worm; and therefore formed a Thousand Caskets of Silk, which were found deformed at their opening. This Tempest rendered Silk a very scarce Commodity among them for many Ages: Twas even sold Weight for Weight against Gold; infallibly the finest Piece of Silk, so dear was it. The Emperor Aurelian, refuted the Emperors, his Spouses, a Suit of Silk, which the follicled of him with much Esteem: and for its Dearest. At length, Two Monarchs, of the East, from the use of Cloathings, in their Court, brought with them great Quantities of Silk Worms, with Instructions for the hatching of their Eggs, rearing and feeding the Worms, drawing out the Silk, spinning and weaving the Fabrics. These Manufacures were set up at Abens, Thebes, and Corinthus.

About the Year 1550, Roger King of Sicily, established a Manufacture of Silk Worms, and another in Calabria; which was managed by Workmen, who had been brought from Abens, Corinthus, &c. whereas that Prince made a Conquest in his Expedition to the Holy Land. By Degobor, of Belfort, adds, the yield of this Silk 

of the Silk Worms theses and works as well, in all Respectes, in England, as in any Part of Europe.

The Silk-worm is an Insect, not more remarkable for the precious Matter it furnishes for divers Stuffe, than for the many Forms it affumes, before and after its being involv'd in the rich Cod or Ball it weaves it. From a Grain, or Soil, it spins a very fine Squirrel, of a whitish Colour, bordering on a yellow. When a Worm, it fusts it self up in its Cod, and affumes the Form of a kind of greenish Bean, without any Signs of Life or Motion. A little after this, it affumes a second Cod, and begins making it a Palliace out of its Silken Sepulcher. And, at last, dying indeed, it prepares it self, by a Grain, or Seed it calls, for a New Life; which the Wormeth of the Summertime affords in his first Egg.

Ailson as the Silk-Worm is arrived at the Size and Strength necerary for the beginning his Cod, he makes his Web: 'for'tis that they call that tigile Tissue, which makes the Ball of Silk. He spins out his first Soil, as it were, of a whitish Colour, bordering on a yellow. When a Worm, it fusts it self up in its Cod, and affumes the Form of a kind of greenish Bean, without any Signs of Life or Motion. A little after this, it affumes a second Cod, and begins making it a Palliace out of its Silken Sepulcher. And, at last, dying indeed, it prepares it self, by a Grain, or Seed it calls, for a New Life; which the Wormeth of the Summertime affords in his first Egg.

Ten Days time, the Cod is in its Perfection; and is now to be taken down from the Branches of the Mulberry Tree, where the Worms have hung it. But this Point requires a little Care, for in this Time there are some Worms; more lazy than others; and 'twas very dangerous to make them hang too much, or too long, to make them fall, or to make them fall from the Trees, which usually happens about the Fif-teenth Day of the Month.

When the Worms are full, and the Cocoon is strong, Cod or Balls, are kept for the Grain; the reat are carefully wound up; or, 'tis desired to keep them all, or if there can be more than can be well wound at once; they lay them for some Time in an Oven, to dry them, and to expose the Silk-Worm to a Sun, and to a Wind, to draw out the Moisture, and to make the Cocoon more perfect. Those that are double, or too weak, or too coarse, are laid aside; not as altogether useless, but that, by an improved Farmer, a Wind, the Cocoon may be drawn out into skeins. The Cocoons are of different Colour; the most common are Yellow, Orange-Colour, Ixabella, and Fifth-Colour.

Some are more or less of a Sea-green, others of a Sulphur Colour, and others White. But there is no Necessity for separating the Cocoons and Shakes to wind them apart; as all the Cocoons are to be sold in the future Scooring and Preparing of Silk.

To wind the Silk from off the Cores, two Machines are necessary; one a Furnace, with its Copper; the other a Bike or Diffuser. 

The Winder, then, sees near the Furnace, throws the Cocoon or the Reel over the Furnace (first heated and boiled to a certain Degree which Custom alone can teach) A Handful or Two of the Worms, which gives great Pleasure to the Farmer, as it is more easy to handle, and in a Furry Substance. He then fills the whole briskly about with Birchens Rods, bound and cut like Buffets: and when the Head, and Arthritis have detach'd the Ends of the Silks, the Gudgeon, or the Bar, which are got to catch on the Reels, he draws them forth; and joining Ten or Twelve, or even Fourteen of them together, he forms them into Threads, according to the Quantity required to the Works they are destined for: Eight Ends, Sixteen Rods, or even Twenty, according to require no less than Fourteen. The Ends thus joyed into Two or Three Threads are first parted into the Holes of the Reels, which runs, when the Reels are then upon the Bobbins, or Pallies, and at last are drawn out on the Reel it self, and then fatted, each to an End of an Arm or Branch of the Reel. Thus diffused, the Workman, giving the Ends to the Reel, by turning the Handle, guides his Threads; substitutes new ones, when any of them break; or any of the Cores are wound out; strengthens them where necessary, by adding others; and takes away the Cores when wound out. Thus completed, the Silk is spindled off, and wound upon the Bobbins, or upon the thread, by reason the Cocoons have been perforated by the Silk-Worms themselves, or because they are double, or too weak to bear. Persons the same that form them, join them or bundle them together, they make a particular Kind of Silk called Filature: Which being carded, or even spun on the Diffuser, or the Wheel in the Condition it comes from the Core, makes a tolerable Silk.

As to the Cores, after opening them with Stillars, and taking out the Beens (which are of some Use for the feeding of Fowl) they are steeped Three or Four Days in Thunder, the Water whereof is changed every Day to pre- vent their spoiling. When they are well处分 by this Scooring and cleared of that gummy Matter, the Worum had lined the Infinite withal, and renders it imperceptible to the eye; these, after drying, are half an Hour in a Line of Athes, very clear and well dried; and after washing them out in the River, and drying them with暴露, they card and spin them on the Wheel, &c. and thus make a new Kind of Ink, somewhat inferior to the former.

The several Preparations which Silk undergoes, to fit it to the Uses of Man, are as follows: Dicing, Spinning, Reeling, Milling, and Dying. The Two first we have already spoke of, as they are concerned in drawing the Silk from off the Cores. As to the Spinning and Reeling of the Silk, this is done with the Card, as they are called in Italy, the Levant, &c. first it is chiefly performed on the Spinning-wheel; and the latter, either on Hand Reels, or on Reels mounted on Machines, which serve to reel several threads into one, and to make them pass over the Mill composed of several Pieces, which may Mill Two or Three Hundred Bobbins at once, and make them into as many Skins. See SPINNING, REELING, MILLING, and DYING, each under its proper Article.
S I L [ 7 6 ]  S I L

**Raw Silk**, is that taken from the **Cocoon**, without Fire, and would not be carried off by the Mosquito-bug, if not, that is brought from **England** from the **Leccinum**, in the French Silk-worms, the greater Part of this Silk puts better for little more than a Kind of very fine Feathers; yet, when spun, it makes a bright Thread, and is the best quality of the **Manx** Shrugs, of great Value, and Luster; But the **Raw Silk** of the Leccinum, which is the second of our Companys, are exceeding fine and beautiful. This Difference arises hence, That in France the best Cos are spun and drawn out of the Shrugs, that this is done in Europe, and only in one Silk, that is, in Raw Silk; Whereas, in the Leccinum, there is no such thing as Spinning or Winding in the Fire; but the Silks are all lent in Bals or Naphtha, as they are drawn from the Cos, and thus are very much inferior to the Quail of their Value, of Mending, and Coarse.

**Tweedled Silk**, is that boiled in Water, to facilitate the Spinning and Winding in the Fire; it is much used in making Impey's Shade, and is seldom used, but in the richest Stuff, such as Vellies, &c. in Taffetas, Damasks, Brocades, &c. There is also another Kind of **Baled Silk**, which is prepared by boiling, to be milled, and which cannot receive that Preparation, without being first pasted through boiling Water. By the Laws of France, 'tis prohibited to mix Raw Silk with Baled Silk, both as such a Practice spoils the Dyers, and as the Raw Silk comes quite free from the Filling, so that their Work is much injured by it. The Tweeled and Tressed Silks are such, as before their Spinning and Winding, have had their Miling or **Tressed**. They have this in a different Degree, as they are pasted through the Miling, and upon a Press, or other Device. The Serried, or Tressed Silks, are those wherein the Threads are prettily threaded, and are twisted several times. — *Black Silk* is such as are not twisted, but are prepared in a different Maner, and are drawn very fine in a Needle. See THRESHER.

**Efvery Silk**: That particularly thus called, is not the Work of the Silk Worms, but comes from a Plant that produces a Needle with an ugly Needle, and is called the **Efvery**, and is of black Colour; nor is it made of silk, but is as thick as a Stiff Piece of Cloth. This Product this Cot contains is extremely white, fine, and moderately bright: It spins easily, and is made into a Kind of Silk, that enters the Manufacture of several Indian and Canton Cloths and Coats. The Silk-Worms.

**Spider-Silk**. Within a few Years the Secret has been found in France, of procuring and preparing Silk of the Webs of Spiders; and using it in several Manufactures, particularly of Lining and Wadding. The late Dr. Hufeland published a Dissert. on the Subject; whence what follows is extracted.

**Spider-Web**. The Spiders' Web are distinctly distinguished, either with regard to their Colour: as, in Black, Brown, Yellow, White, &c.; or with regard to the Number, or Arrangement, of their Eyes; some having 6, others 8, others 10. But with regard to the Silk of the Spider's Web, one finds all kinds, some with long Legs, and these with short; which last, are those which form the Raw Silk. The Silk-Spider makes a Silk, every whit as beautiful, fine, and strong, as the Man-Silk: It spins it out of the **Anus**, around which are Five Papilles, or small Nipples, and behind these, two others; all mucilaginous, and fur- nished with Spirinodes, which move continually, to form and mould a Liquor, which, when dried in the Air, after being drawn through them, is to be the Silk. Each of these Nipples, M. Ramonier obligates himself, that have been perfumed and loden for the Loom, which one may be convinced of, by pressing a Spider's Belly between the Fingers, to oblige the Liquor to flow into the Nipples; for by this Means, applying the Finger against the Anus, M. Ramonier declares, that these Threads will be drawn out through the several Perforations of the Nipples. The Threads are too fine to be told with any Certainty; but M. Ramonier reckons, each larger Nipple may send forth a different, of 1, 2, 3, or more Threads, which make their Threads bigger, or smaller: For as, before they begin to Spin, they always apply more or fewer of their Six Nipples, to form the Liquor, which, when dried, is become a Thick Substance, they apply more or less firmly, so as more or fewer of the Intensitive Nipples come to take the Thread that spins, will be a Compound of more or fewer Nipples; and M. Ramonier saw, when several Nipples came from the Anus, all joined together, they appear to be single; but M. Bov has distinguished one of the single ones to consist of 15 or 20 distinct Threads. The Web is of the Night; the Spider is weak, and only serves for that kind of Web whereby they cast Flies. The Second is much stronger, and serves to wrap up their Eggs in which, by another Nipple, they make their own Nest, which might otherwise guess and spoil them. These Threads they wind very lightly round the Eggs, referring the Cos of Bags of Silk-Silk, that have been perfumed and loden for the Loom and Dyer. The Spider-Bags are of a Grey Colour when new; but turn blackish when long exposed to the Air; Indeed, one might find other Spider-bags of other Colours, and which would afford a better Silk, but their Scarcity would render the Experiment difficult; for which Reason we confine our selves to the Bags of the commonest Spiders, which are the lower-legged Kind. These are, to the best of my Knowledge, a Small Plague of the Woods and Woods, and make their Bags as, Sallow, Gallery, or Yellow Wood, or various Sorts of Trees, or in the Eaves of Houses. By collecting a Quantity of these Bags, a new Silk is made, inferior to nothing but the common Silk; It takes all Kinds of Dyes, and may be made into any Web of any Sort or Colour, and is much cheaper, and made of it, which he prefaced to the Academy; and others to the Royal Society.

For the Manner of preparing the Bags to get the Silk, it is, in this Manner; M. Bov had them well beaten for some Time, with the Hand, and a Stick, to get out all the Dust; He then had them well laced, to dilate them; then put them into the Water very clean; After this, he laid them to steep, in a great Quantity of Water, and after laid, to dry some Days, to fit them for Carding; which was performed by the common Silk-Carders, but with Cards much finer than ordinary. By this Method, M. Bov has Carded particular Sorts of Silk, which was easily spun, and the Thread from it, both stronger and finer, than that of common Silk, which flew, that all Sorts of Work may be made of it; Nor is there any Reason to doubt that the Silk thus prepared may suit the Looms, after having pass'd of that of the Stocking-Worms.

The only Difficulty, now, is in procuring a sufficient Quantity of Spider-Bags to mask any considerable Work of this Nature; for, as M. Bov has shown us, we should not be able to take as much as we might wish to, at all, but we had the Art of Breeding them as they do Silk-Worms. For they multiply much more; and every Spider laying down one Egg, it produces one Hundred and Twenty Eggs; but Silkworms do not; and therefore are set out, as that these do, are set out, and are bred; Old Spiders do not breed; whereas Stockings of common Silk weigh Seven or Eight Ounces; Nor is there any Venom in the Silk, or even in the Spider, as many have imagined. M. Bov has been bit by several Spiders, and never received any harm, and as for the Silk, 'tis used with very good Success, to stop Bleeding and cure Wounds, the natural Gluton thereof acting as a Great Astringent, and a Very strong Bitter, as well as containing several other Efficacies, besides its Stopping the Blood, or making it as if it were a Blood Stopper. It would be an easy Matter to make other Drops of greater Efficacy, which M. Bov calls drops of Montpellier, to be used in all lye Difcrates. M. Ramonier being appointed by the Royal Academy, to make a further Enquiry into this New Subject, he has stopped several Objections and Difficulties against it; which are found in the Memoirs of the Academy for the Year 1728. The Sum of what he has urged, amounts to this; The Spider-Bag is a Web, which might possibly be bred and kept together, Four or Five thousand being distributed into Cells, so much in one, 100 or 200 in others; the Bag being divided into Six Cells, it is not likely that in a Cell, and in the same Cell, there were scarce left one or two in each Cell; And to this Indications of mutually eating one another, M. Ramonier affirms the Scarcity of Spiders, considering the vast Number of Silk-Worms, and that the Spider's Bag is inferior to that of the Silk-Worm, both in Luteur and Strength; and that it produces less Matter to be manufactured. The Thread of the Spider's Web only bears a bright of Two Grams without a least;
the Bag bears 36. The latter, therefore, in all Probability, 18 Times thicker than the former; yet it is weaker than that of the Silk-worm, which bears a Weigh of Two Dollars. So that the five Threads of the Spider’s Carcanet is not one Half as strong as that of the Silk-worm’s Bag. Now, ‘tis impoffible this fhould be applied to fly out over another, as not to leave little vacant Spaces between. There is therefore, in which Light will not be reflected. And of Confecution, a Thread too thin and Part of the Laffle of a solid Thread. Add to this, that the Spider’s Thread cannot be wound off, as that of the Silk- Worm’s Bag; but, must, by the Moth, when they mean being torn in Pieces, its Encements, which contributes much to its Laffle, is deftry’d. In efect, this want of Laffle was taken Notice of by M. de la Hure, when the Spider’s Bags contained only a few Plants, or even Flowers, furnifh much leis Silk, than the Worms. The largef Bags of the latter, weigh Four Grains; the demi-fine Three Grains; fo that 2564 Worms, produce a Pound of Silk. Yet the Master of the Silk, though he hold of the best Spiders; tho' large ones, ordinarily seen in Gardens, and will furnish, as Part of the Silk of the other 280 of their fierce, he flew, would no more do than one more Silk-Furn. and 66532 of them would scarce yeare a Pound.

FFrench Silk. ‘Tis only in the most Southern Provinces of France, that Silk is cultivated, Mulberry Trees planted, and Worms bred. The principal, are tho’ of Languedoc, Dauphine, Province, Agenoy, Stovay and Lyons. This last Province is said to contain very few Silk of its own Growth; but is the great Staple where the Merchants of Parif and the other Cities are to fetch them: at least, they are obliged to have them pass through Lyons; if they bring them from elsewhere, they are taxed by the Custom House there in Lyons, Contravention Annu, 6000 Eales; the Value lauded at 150 Pound Weight; Of which 6000 Bales, there are 1400 from Italy, 1600 from Stovay, 1500 from Italy, 300 from Spain, and the Remainder from Lyons. At the Time the Manufactures of Lyons were in their Prosperity, there were reckoned 18000 Looms employed in the Silk Manufactures, and many of them fell down; that even in 1808, there were not reckoned 4000. The Decay ist not leis notable at Lyons. They had formerly 700 Mills for winding and preparing the Silk; 5000 Looms to weave them, and 2000 Persons and 1500 were manufacturing thereof; which are now reduced to 10 Mills, 1200 Looms, and 4000 Perinns.

Scilicet Sylis. The Commerce of the Sylis of Sicily, is very considerable; and the Genoese and Livorno, are the People who chiefly make it. Great Quantities are yearly brought thence, especially from Messina; part whereof, they use in their own Manufactures, and sell the reft to their Mediterrenean, and particular to the Prince of Savoy, and the Prince of Orange, they have this Advantage, especially the Genoese, over other People. That having large Ediflaments in the Islands, they are represent’d, and pay no Duty for the Export. Part of the Siciliana Sylis is brought to the reft Spun and Missed; of which laft Kind, tho’ of St. Lucia and Messina, are the most valued. The raw, unwrought Sylis are always sold for real Money; the others, fometime, in Exchange for other Goods.

Italian Silks. The Sylis brought from Italy are partly Wrought, and partly Raw, and Unwrought. Milan, Parma, Lucca, Siena, Pisa, Florence, are frequent Makers in England, according to the several Works they are to be done in.

Silks of the Levant, are all Raw. One Advantage we have in the Commerce of the Levant, in Silk, wanting in tho’ of Sylis, is, That the latter are confined to a particular Season, and the former are not; tho’ the Silk of the Levant is more dear, Genoa most of the former; but Genoa offers both Kind.

Spanish Silks are all Raw, and are Spun, Mill’d, &c. in England, according to the several Works they are to be done in.

Silks of a Year, are all Raw. One Advantage we have in the Commerce of the Levant, in Silk, wanting in tho’ of Sylis, is, That the latter are confined to a particular Season, and the former are not; tho’ the Silk of the Levant is more dear, Genoa most of the former; but Genoa offers both Kind. A new Way is established; and as Silk is cheaper, they are not to be done in a Year. They are brought from Algofis, Tripoli, Seide, from the Ile of Cyprus, Candia, &c. and the principal Place of Manufacture, especially for the Silks of Perifia, is Smyrna. The former are brought from Cadiz, the latter in Ships, in the Month of January to September. The Caravans in January, are laden with the finest Syls; those of February and March bring indifferent ones; the reft, the coarfed. They all come from the several Provinces of Perifia, chiefly thro’ of Quilan and Schirman, of which the City of Schirmanche, is situate near the Edge of the Caffien Sea; from where three Places, a Dutch Author affords us, they don’t come less than 10000 Bales of Silk in a Year, and equal Parts of the City of Perifia, not far distant from the Syls Countries, but there the Syls are laid up, and whence the Caravans set out for Algofis, Tripoli, Seide, and the Syls of Smyrna, Caravan to Smyrna, under the Pufhtration of the Governor of Smyrna, to the Prince of Savoy, and the Duke of Holland, in 1613, sent Embassadors to the Court of Perfia purely with the same View: And in 1668, the Car Assay made the same Journey, and brought in them, as appointed by the Rebellion of the Collakks, and the Surprize of Africann. In 1688, the Commerce of Perifian Syls had like wise been removed from Smyrna by an Earthquake, which almost entirely destroyed it; and it is said, that the Materials, the Removal had been effected, but for the vigorous Means used by the Turks to prevent it. Smyrna, however, still remains in her ancient Poftition; and the several Nations of Europe continue to send their Fleets, to fetch away the Silk; and Matters are like to remain so, unles the Conquests made by the late Car, along the Caffien Sea, and the certain he had himself had such a Thing in View, to put this great Scheme in Lieu of them. The Chinese, Japonne, and Indian Syls. Several Provinces of China are to be in Mulberry-Trees, and their Clima to produce Syls of a quality; but the Quants of them, that the Quants of Silk here produced is incredible: The Kings of Japonne might supply all China, and even a great Part of Europe, with this Commodity. The Syls of this Province are generally ordered, though not very good; this Kind will not be so excellent, The Silk Trade is the Principal in China, and that which employs the most Hands. But the European Merchants, who meddle it, in especial, work Silk’s, which is brought thro’ Europe, and are very usual in Europe, is being very usual, as the French Engli-India Company lately found to their Cost. — Japonne would not afford fewer Syls; and if they are not of such a quality, a barbarous and diftrustful People, have interceded in it, and sold to the Dutch Strangers, especialy European, excepting with the Dutch, who are leds to be admitted on certain Terms, related by the England Merchants; the Dutch being very free, but much Horror they raise. Accordingly, the Dutch have endeavoured to vindicate themselves by the Pens of several famous Writers, — The Syls of the States of the Great Mogul, are brought chiefly from their own Manufactures, by a Canal of Fifteen Leagues into the Ganges, by which, they are for-warded Fifteen Leagues further, to the Mouth of the famous River Indus, where is a famous Port, named Kaffennor, as are also thro’ of Perifia and Sicily; there being none, that we know of, naturally White, but that of Patagonia. The Indians, make it with a Lye made of the Alkys of a Tree, call’d Alka-ung; when it is dry, at the Time of the rainy Scarce, the Europeans are forced to take the greatest Part of their Syls in the native Yellow. Kaffennor-bazar alone, is supposed to furnish every Year Twenty-two thousand Bales of Silk, each Bale weighing 100 Pounds. This would buy it almost all up; not to bring into Europe, no more than they do that of Japonne; but to exchange it for other rich Manufacturers, particularly Brazil, and Silver, &c.

SILLON, in Forricaftion, is an Elevation of Earth made in the Middle of the Moat, to forfit it, when too broad: It is otherwise called Envelope, which is the more common Name in France.

SILVER, a White Metal, holding the Second Place among Metals; being of all others, after Gold, the finest, purest, most ductile, and most precious. See METAL.

The Mines of Silver are four, and they are four great Quarters of the World. Europe has its Share; nor is our own Island quite deficient thereof, tho’ it has none of much Value.

The Mines of Peru, and some other Parts of America, are very famous, and abound with it, and are almost inexhaustible: Particularly that of Potosi, which continue to be equal with David as well as firstDIFFERENT with this only Difference, that the latter were then the Seat of the Quivora Mountain, are now foun to prodigious Depths, the Workmen going in to them, to a Painful Defcert of Four or Five Hundred Feet; in which State they remain, and are believed to be no less than four thousand Years old, and prodigious Numbers of Words are destroyed thereby.

The Ores, or Mineral Stones they dig, are not all of the same Quality, Constancy, or Colour; some are white, or with one or more spots with the blue, and called Blue-Blazed. Others are black, and called Phoeto-romas. Two last are the richest and the easiet wrought: No Mercury being
being here needed; nor any thing, but to put them in the Fire; Where the Lead evaporating, leaves the Silver pure.

The Insect, who, till the Arrival of the Spaniards, knew nothing of the Use of Metals, melted and sold it, and, this Kid of Metal, the Sillifero, is another Black Mineral disfigured by whetting and rubbing at it Iron, which turns it red. 'Tis very rich, and the Metal it yields, of the best Sort, and finds very soon a market for it, in spite of those who tell thee it doth not yield much. The Pace is a yel low red, very soft, and found almost broke in Pieces; 'tis not rich. The Carbure is green, and halfuble. Tho' the Sillifero is not very precious, it is found very plentiful, from it, by Reason of the Copper whereby 'tis intermixed, lastly, the Arrumac, which is only found in the Pace, and that only in the Mine of Cuminato, confilts of Threads of pearls, and often intermixed is a Silver Glaizoon, that has been burnt to get out the Silk.

The Silver-Silk, of what Quality ever, are actually richer in the Middle than towards the Extremes. The rich Places are those where the Veins Intersect, This reckoned a great Addition to the Richness of a Mine to be near a River, for the Advantage of Mills to grind Oats. At Lips and Pace, for Influence, the Ore of this most yield Ten Marks to eight Experiences; whereas, at Arumac, there need not above Five.

The most usual Way of separating the Silver from the Copper, is to put it into Water; but, the same Times, however, they effect nothing but Fire frequently repeated; or Agua Fortis.

What renders the Working of the Mines exceedingly dangerous, is the great pains chalked uping from them, which are even felt on the Oat side; and make an Impression on Animals grazing in the Neighbourhood; but in the In-side, starve the Miners, none of whom can bear poisoned Air. A Great Part of them die of it, either by a slow and insidious Fate, that kills on the Spot; and obliges them to stop up the Veins again, whereas it moistens. The Mines of Pace', are much the least subject to them; because, without the Herb Purgador, which is taken from the Miners, as we do that of Tea, thole Mines must be soon abandoned. Tho' the Mines of Pace' and Lips, keep up their Reputation, yet, in the Difference, that the latter is more easy and heated red, than any which is taken from the Miners, as we do that of Tea, thole Mines must be soon abandoned.

The Method of separating Silver from the Ore, in Europe, is the same as that of Gold: That is, by Means of Quick Silver; with this Difference, that the Quantity of Quick Silver, must be much greater than in the former. The manner of doing it, is this: you pour Mr. hundred weight of Rock-Salt, or some other natural Salt; that Curious Operation may be seen at length under the Article Gold.

To separate Silver from a Copper, it is first annealed; they have a Furnace open a top-and the Appearance covered with a Kind of Capital made of Earth, of a Cylindrical Form, that may be clapped up, or taken off at pleasure. The Copper is then melted, and laid in the Furnace, the Capital applied, and the Fire lighted underneath; by this Means, the Quick-Silver ran'd by the Action of the Fire, in Form of Vapour, is caught in the Sealed, and taken thence, to be used in the Second Operation.

The Standard of fine Silver is 12 Penny-weights, each containing of 24 troy ounces. When this is raised to it by Refining, which is usually performed by means of Lead, in order to this, a Coppel is fill'd with a Mixture of Brick-ashes, and Ashes of a Ballock's and other Bones. The fire on the Fire, and heated red, in which State the Silver and Lead are put together, in the Proportion of a Pound of Lead to Eight Ounces of Silver, and even somewhat more Lead, if the Silver be very coarse. All Copper that is mixed with Metals in a light, or before mixed with the Silver, dilutes in Smoke, or goes away with the Scum, and so does the Lead it self; leaving the Silver in its whole, its proper Degree of Purity. This Method of Refining, whereas 10 Pounds may be refined at once; the Metal is drawn out of the Coppel Two Ways: the one by plunging it in, while fully heated, the other by running in a cold, which crying in a Flask of a Shell, or Cuff; repeating this again and again. The other, is by letting the Coppel stand till 'tis cold; in the Bottom whereof, the Silver lies in Form of a Cylinder.

Befored the Refining of Silver with Lead, there is another Manner of doing it with Salt-Petre; the Manner whereof, see described under the Article Refining.

When this is done, the one and other are readily to be troublesomE; when performed on large Quantities. This occasioned M. Houckaring to endeavour to flouten the Operation, which he effected with. When 'tis done, to calculate the Silver with Half its Weight of common Sul phur; and after melting the whole together, to call a Quadrangle of Steel Filings upon it, at several Times: Upon this, the Sulphur quits the Silver, and joins it self to the Iron, and both are converted into Scoria, which swim on the Silver. Let the Silver it self be found pure at the Bottom of the Crucible.

The Effay of Silver is also made by the Coppel, in the form Manner; but the Lead is more refined. It is this Way: After the Effay, preserve its Weight, 'tis Standard; if it foils, the Grass, or even Penny-weights of its Diminution, are accounted. See Essay: See also Standard.

Silver, the Sillifero, is a natural Glaizoon in the Holes of a Wine drawing-Iron, and by this Means reduced to the Fineness of a Thread or Hair. The Manner of drawing it, see under the Article Gold-Silk.

It is probable that the Gold-beaters have reduced in fine, thin Leaves, to be used by Gilders, See. Gold.

Silver-Leaf, is made of the Shred of Silver Leaves, or of Silver Paper; Used in Painting and Gilding several certain Works. Silver-Leaf is prepared after the same Manner as Silver-Gold. See Gold.

Silvering, in Chemistry, is called Lunn, Moon; and several Preparations are made there of: Particularly, a Tincture of Silver, by diffusing thin Silver Plates, or Silver Shot in Spirit of Nitre; and pouring the Diffusion in another Veil full of salt-water. By this Means, the Plate immersed is precipitated in a very white Powder, which they waff several Times in Spring-Water. This Powder they put in a Mattar; and pour rectified Spirits of Wine, and Vodka mixed together, which eats away all the Powder, and leaves the moderate Heat for Fifteen Days; during which, the Spirit of Wine affumes a beautiful sky-blue Colour, and becomes an Ingredient in several Medicines. This is also called Vapour of Silver, or an Effay of Silver, which is an effay converted into Crystals, by means of the fame Spirit of Nitre; and 'tis this is called Virtuel of Silver. The Lapis Esoterica is nothing but Silver diffus'd in Agua Fortis, and is a Virtuel of Silver.

Quick-Silver. See Mercury.

Silvering, the Covering of any Work with Silver-Leaf. This is performed either by Fire, by Oil, or by Glue. Metal-Gilders silver by the Fire: Painter-Gilders, all the other Ways. See Gilding.

Silver is also used in dye to Dye in Scarlet. The Tree that produces it, is peculiar to the Province of Guatamala in New Spain. 'Tis not unlike the Tree that produces the Cochinelle, only in this, that the Fruit contains the Cochinilla, which is somewhat longer than that of the Cochinel-Tree: When the Fruit of the former is ripe, it opens of it self, and calls out its Seed upon a gentle shaking; and the Leaf expands to the same purpose, as the Parcher, Eight or Ten of these Fruits do not yield above an Ounce of Seed; whereas Four of the Cochinel Fruits, yield an Ounce of Insects. The two Dried together are called Cochineal, and are very different; the Tarbarr of Cochinel being infinitely more beautiful than that of Sileforias; See Cochinelle.

Silver, in Architecture, a Term used by Weitzel, and some other Writers, for what we otherwise call Cymatium or Sopaseum. See Cymatium.

SIMIATUM or SIMASE, in Architecture: See Cymatia, for Note; and Things in A, which are generally confounded together; yet, in effect, they ought to be distinguished: the latter being the Genius, and the former the Species. Simiatum of Silesia, camius, according to Felicien, uppermost; and uppermost Member of grand Cornices, called particularly the great Descens or Galla retia; and by the Greeks, Epikythial. In the Antique Buildings, the Simiatum, a top part of the Ballock, is termed in general in Sici, or Semi-Scota; as we see particularly in the Theatre of Marcellus: This some modern Architectes have imitated; but in the /ate Order, the Simiatum is always covered with a left capital, and proceeds from the other kinds of Cymation, by its being camouflagged.

SIMELUM, a Term purely Latin, signifying a little Table, with Ranges of little Carvices therein, for the Affairs of a Chair, or Couch. This Word is afterwards ill wrote: It should rather be Cymatium, as being formed of the Greek Epykthia, Carvificia, or a Cabine of precious Things. We more usually say, A Cabinet of Metals.

SIMILAR, in Arithmetic and Geometric. Though Things be said to be Similar, or alike, which cannot be distinguished one from another; I mean, that is, in proportion representing the one to the other, or some other Thing to them both. There is nothing, therefore, found in one of the Similar Things, but is equally found in the other. They may be discerned and conceived, without affecting any other; and, in like Manner, not all the Things in B, which be
be thus conceived; and A be Similar to B; all Things in A will be the same with those in B.

SIMILAR Things are those which, by their properties, either in kind or in number, are of the same naturall Element, in the same Proportion, or in the same Quantity. Let us denote by "A" the Elements, and by "B" the Things which are to be compared; and let us denote by "C" the Number of the things in A, and by "D" the Number of the things in B; then A is Similar to B, if C:D, and C:B, and D:A, are to each other as their Wholes B B. See Part.

SIMILAR Rectagles, are those which have their Sides proportional. See Quadrangle.

Hence 1*. All Squares must be SIMILAR Rectangles.

SIMILAR Squares. All SIMILAR Rectangles are, to each other, as the Square of their homologous Sides. See Quadrangle.

SIMILAR Triangles, have all their three Angles respectively equal to each other. See Triangle.

Hence 1*. All SIMILAR Triangles have their Sides about the equal Angles, proportional. — 2*. All SIMILAR Triangles are, to each other, as the Squares of their homologous Sides.

SIMILAR Polygons are those, whose Angles are equal, and whose Sides proportional, and the like of other simial rectilinear Figures. See Polygon, and Rectilinear Figure.

Hence, all SIMILAR Polygons are, to each other, as the Squares of their homologous Sides.

SIMILAR Arches, are such as are SIMILAR, or equal Parts of their respective Circumferences.

SIMILAR Segments of Circles, are such as contain equal Angles.

SIMILAR Conic-Sectors, are those whose Diameters make Angles equal to those of their Ordinates; i.e. those which are equalilateral and equiangular.

SIMILAR Parts of Spheres are those which may be ranged into SIMILAR Rectangles, i.e. into Rectangles, whose Sides are proportional: As 6 multiplied by 2, and 2 by 4; the Product of one whereof is 12, and the other 8, is proportional. See Similar Numbers.

SIMILAR Solid Numbers, are those whose little Cubes may be so ranged as to make SIMILAR Rectangular Parallelepipedal Figures.

In all SIMILAR Figures, the homologous Angles are equal; and the homologous Sides proportional. All regular Figures, and SIMILAR irregular ones, are in a duplicate Proportion to their homologous Sides. Circles, and similar Figures, infuribled in them, are, to each other, as the Squares of the Diameter. See Figure.

SIMILAR Angles, are also equal Angles. In solid Angles, when the Planes, under which they are contained, are equal both in Number and Magnitude, and are disposed in the same Order; they are SIMILAR, and consequently equal. See Angle.

In all STrenuous, and paralelegons, the Altitudes are proportional to the homologous Sides; and the Bases are cut proportionally by those Sides. See Triangle, Etc.

SIMILAR PARTS, in Anatomy, those Parts of the Body which, at first Sight, appear to consist of like Parts, or Parts of the same Nature: Of these we usually reckon Ten, i.e. The Bones, Cartilages, Ligaments, Membranes, Fibres, nerves, Arteries, Veins, Pleth, and Skin: Each of which see under its proper Article. Dr. Greer, in his Anatomy of Plants, observes, that there have, likewise, their Simonilae, or simial canonical Figures: See the Parts.

SIMILE, or SIMILITUDE, in Rhetoric, Etc, a Comparison of two Things, which, though different in other respects, yet agree in some one: As, He shall be like a Tree; For the Difference between a Simile and a Comparison, consists in this: That the Simile properly belongs to what we call the Quality of the Thing, and the Comparison to the Quantity. See Comparison.

SIMILITUDE, in Arithmetick, Geometry, Etc, the Relation of two Things similar to each other; or which are only distinguishable by Com-preference. See SIMILE. The Notion of SIMILITUDE is not the same as that of Equality, or Identity; for nothing is owing to M. Leibniz: Twill be rendered easy by the following Instance. Suppose two Watches perfectly alike; the one belonging to Caesar, the other to Gracianus. If, now, Caesar shall wear it, and Gracianus shall wear the latter will be surprised, and fancy it his own; but he will perceive it different from his own, upon pulling out his own, that is, Gracianus distinguishes Caesar's Watch from his own, by their Correspondence; or, by applying the one immediately to the other.

English, and after him most other Authors, demonstrated all Things from the sole Principle of Conjunction: Woful, in lieu hereof, substitutes that of Similitude; which, he tells us, is a Fine Comprehension of all the preceding, and which he finds of very notable Use in Geometrical Reasoning; for it doth demonstrate many Things directly, which are only demonstrable from the Principle of Conjunction, by an AMBIGUITY.

SIMONIACAL is applied to a Person guilty of Simoniac, or of purchasing a Benefice, or other sacred Matter, with Money. A Simoniacal Person commits, it is infamous, and incapable of all sacred Benefit and Benevolence.

SIMONIANS, a Sect of ancient Hereticks, the first ever disturb'd Christianity; if they might be bid to do mischief, they must be bid to do more than mere Philosophers, and made Profession of Magic. SIMONIANS, Moined in the Att, was their Leader, and died under the Emperor Nero; St. Peter still prevailing: So that Clement Kimcra, in his First Epistle to the Corinthian, makes that Part of this and that Part of this Epistle, as St. Ephraimius says expressly, That the first Heresy was set on foot by Simon the Magician, born in a little City of Samaria, who pretended to be the great Virgin and Power of God, and, from Heaven to Earth, Among the Samaritans he made himselfe pals for God the Father, and among the Jews, for the Son. He pitched up a Kind of melo-dious System, out of the Philosophy of Platon, the religion of Talmud, and the mythology of Polytheism. Particularly, from the Platonic he borrowed abundance of Things relating to the Worship of Angels, which he purposed to instruct with the Magic: pretending, there was no Salvation, but by the acknowledgment of the Angels. If it were, the Mediators between God and Man: To which superstitious Worship of Angels it is that St. Paul seems to allude in his Epistle to the Hebrews. For the tradition, which of the name Simon was the Father, adopted the Practice of worshipping Angles, and even improved on it. See Gnosticks.

SIMONIA, the Crime of trading with sacred Things, particularly of purchasing a Benefice with Money. By the Euseb. Canons, Anno 1229, Simonia is not only committed by an Agreement for Money in Hand, but by any先进 Benefice: the Penalty of Simonia is Excommunication, Reward, Gift, or Benefit, directly or indirectly; or by Reason of any Promise, Grant, Bond, Etc, and this, either in Account to the Ecclesiastical Living, or in an Exchange or Regignation. The Penalty, by our Law, Is, That the offender shall first the next Peculation to the King, and two Years Value of the Living; and the corrupt Incumbent, be for ten Years sedan to the Bishop's Place, or to another Ecclesiastical Living.

SIMONY is committed by the Buying or Selling the Sacrament, Baptism, Ordination, Abolition, as well as of the Nomination and Collation to Benefices, a place in a Monastery, &c. A Person is said to be guilty of Simony, if there is no proper Consent or Collation from the Bishop to the Person, and that the Ordination were gratuitous; and that for the reft, the Revenues might be bought and sold as a Temporal Thing: But the Canons of several Councils have condescended to the Business of this Kind, and have both attacked 't to an Ecclesiastical Office purely Spiritual. The Caufains distinguish three Kinds of Simony. Mental Simony, which arises from the abuse of consecration, without ever breaking forth into Act: As when a Pre- fent is made to a Collator, without taking any Notice that we expect a Benefit from him. This Kind of Simony is only punifhable in con Conformity. Corporal Simony is where there is an express Act, and a formal Bargain, though it never come to an Execution. Real Simony, is where the Convenion is executed on both Sides, which latt is almost the most criminal of them all. The Penalty of Simony is Depection in a Clerk, and Excommunication in a Layman: 'Tis a Maxim among the Romish Canons, that there is no Simony in the Court of Rome; in regard, the Pope has a right to sell or lease any Place, to whom he pleaseth. That Regulation, in favour, are not to be admitted but by the Pope, as favouring a little of Simony. On these Occa- sions, however, they favour, That there has been no Deception, or Simony, or other unlawful Agreement, Depreet de, distinguishes three Kinds of Simony; that of Mo- ney, that of the Tongue, and that of Services. Simony of Money is committed by a Person who, for Money only, paid down for a Benefice: He adds, That 'tis likewise committed, by expending Money to live at Court to obtain a Benefice, Simony of the Tongue, or for promises a Benefice, Etc, and neither are to be agreed by Complaisance and Commendation. Simony of Services, or for promises of benefit, consists in the doing them good Offices to obtain a Benefice. The Word is bor- rowed expres from the Greek, where it signifies the Apol- lites, the Dignitaries, or the Apelles, offering to buy the Power of working Mi- racles with Money. It agreed, as well the Jullifians, Tit. O. Tit. d. Paul. That if the Patron prrises any person to a Fice with the Care,