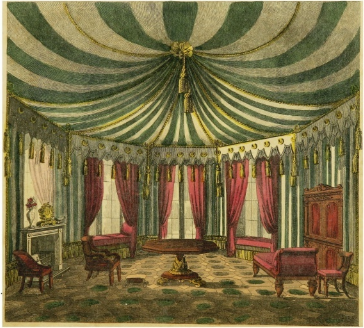
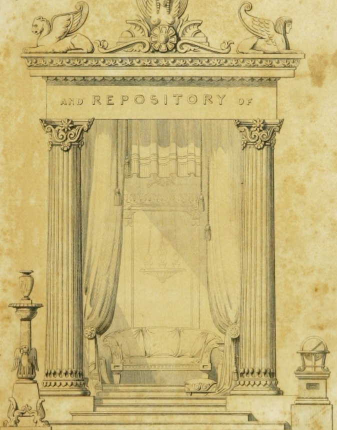
OCTANGULAR TENT ROOM.



CABINET-MAKER'S & UPHOLSTERER'S GUIDE.

DRAWING BOOK.



AND REPOSITORY OF

ND. ORIGINAL. DESIGNS. FOR. HOUSEHOLD. FURNITURE. AND. INTERIOR. DECORATIO
IN. THE. MOST. APPROVED. AND. MODERN. TASTE;
LUDING. SPECIMENS. OF. THE. EGYPTIAN. GRECIAN. GOTHIC. ARABESQUE. FRENCH. ENGLISH
AND. OTHER. SCHOOLS. OF. THE. ART.

BY. GEORGE. SMITH.

...URNITURE. DRAUGHTSMAN...

THE

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BY GEORGE SMITH,

Upholsterer and Furniture Draughtsman to HIS MAJESTY; Principal of the Drawing Academy, Brewer Street, Golden Square; and Author of various Works on the Arts of Design and Decoration.

LONDON:
PUBLISHED BY JONES AND CO.
TEMPLE OF THE MUSES (*Late Lackington's*), FINSBURY SQUARE;
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1828.

INTRODUCTION.

Historical View of the Origin of the Art in this Country.—First Specimens introduced by the Norman Invasion.—Ornaments derived from Cathedrals and Ancient Edifices.—Mr. Cotman's Work.—Reign of Richard II.—The Norman and Saxon Style superseded by the florid Gothic during the Reigns of Henry I, II, and III.—Distinguishing Feature of the Taste from this period to the Reign of Elizabeth.—Progressive Improvement continued.—Age of Louis XIV.—The old system superseded by the Arabesque Style.—Importation into England.—Continued to the early part of George III.—Messrs. Chippendale's and Ince's Works.—A total revolution in Taste, introduced by the Messrs. Adams.—Improved by Mr. James Wyatt.—Perfection in Ornament, &c. reserved for the present time.—Effect produced by Mons. Denon's Work.—The Author's first Work on Furniture and Design superseded by later Improvements.—By what Cause Produced—Intended Object and Plan of the Present Work.

IN a work treating wholly of Domestic English Furniture, it can scarcely be considered irrelevant, to precede it with a short historical view of the earliest style, variations, and progressive improvements that have taken place up to the present period.

As far as research so remote, can enable us to form any judgment on this subject, the Norman invasion of our island appears to have afforded the earliest specimens of what constituted the Domestic Furniture of that warlike age.

It is probable that in proportion as their manners were simple, and luxury was unknown, their Domestic Furniture would comprise utility, divested of ostentation. No doubt the conqueror and his nobles brought with them the taste of their country; for in the very few specimens that time has spared of the style of that age, we can only distinguish the bold projecting mouldings on the legs supporting their tables and seats, and wherever ornament was adopted, it appears to have corresponded with those used in their cathedrals; examples of which may be seen in Mr. Cotman's accurate drawings, made from the ancient edifices, and from which it is evident that their artists were not unacquainted with the Grecian elegance of composition.

From this period to the reign of Richard II, the Baronial castle alone offers any example of domestic furniture. The same simple style seems to have been followed, but with the addition of more enrichment.—During the reigns of the three first Henrys, the Norman and Saxon architecture gave place to the pointed and florid Gothic, changing in a great degree the feature of domestic furniture. The taste of these times down to the reign of Elizabeth, is distinguishable in the light spiral columns in the backs of chairs, the spiral twisted column in the legs of their tables, the variety and beauty of their turned mouldings, and in an excessive use of ornament, no way to be compared in excellence with what preceded.

From this period, and during the fifteenth and sixteenth centuries, under Louis XII, and Francis I, of France, at which time some distinguished artists existed, and until the age of Louis

XIV, the taste in decoration appears to have progressively improved. At this period, the whole system seems to have given place to a style completely Arabesque, although blended with much grandeur peculiar to this taste, and brought to great perfection by the artists then employed in its manufacture.—The importation of it into England changed the whole feature of design, as it related to household furniture, in our houses and mansions. This taste continued almost unchanged through the reign of George II, and the earlier part of George III. The elder Mr. Chippendale, was, I believe, the first author who favored the public with a work consisting of designs drawn from this school, with great merit to himself, however defective the taste of the time might be. To this work succeeded that of Mr. Ince, in the same style. From this period to the time of Messrs. R. and J. Adams, the same species of design continued, with little or no alteration, until the researches of these scientific Gentlemen in architecture and ornament, in Rome, Dalmatia, and other parts of Italy and Greece, were made public. A complete revolution in the taste of design immediately followed; the heavy pannelled wall, the deeply coffered ceiling, although they offered an imposing and grand effect, gave way to the introduction of a light Arabesque style, and an ornament highly beautiful. But the period for the introduction of not only a chaste style in architecture, but likewise of ornament (and which extended itself to our domestic movables), was reserved for the late Mr. James Wyatt, whose classic designs will carry his name to posterity with unimpaired approbation. Here it would appear almost unnecessary for invention to have gone further, but perfection, it appears, was reserved for the present period, in relation to ornament and domestic embellishment. In the year 1804, Mons. Denons' grand publication, detailing the antiquities of Egypt, became public. The novelty displayed throughout these fine specimens of art, calling to recollection so distant a portion of ancient history, gave rise and life to a taste for this description of embellishment. At this period, the author was induced to lay before the public, a Collection of Designs for Domestic Furniture. This work, however highly appreciated at the time, has become wholly obsolete and inapplicable to its intended purpose, by the change of taste and rapid improvements which a period of twenty years has introduced. The travels of scientific men—the publications within the last twenty years—the Elgin marbles, all alike detailing the perfection of Grecian architecture and ornament; the beautiful specimens contained in Sir William Gell's work on the Remains of Pompeii—the inexhaustible resources for beautiful outline in the Vases of Sir William Hamilton, if no other causes had existed, would surely have been sufficient to account for the present elegant and refined taste. In this highly improved state of the fine arts, a work on domestic furniture, comprehending every improvement to the present day, may be considered necessary as well as acceptable to the trade, and has induced the author to compile this volume, containing, not only A LARGE COLLECTION of ORIGINAL DESIGNS, in the various schools of the art, but also to add to it instructions in drawing, sufficient to make any one a draftsman in his own person. For this purpose, a portion of GEOMETRY is of the greatest consequence, and scarcely to be dispensed with; the knowledge it gives of the power of lines is without limit, and the assistance it affords in the practice of Perspective, great and extensive.—**PERSPECTIVE DRAWING** is of equal use to every one, who would wish to place the object of his invention under the most intelligible and natural position before a spectator, and renders a treatise on it a necessary appendage to such a publication.

Some works on domestic embellishment have lately been published, wholly in outline; this kind of design may answer extremely well for the architect, but is of little use to those who cannot readily make out all the projecting parts from a plan; this, perspective will accomplish, and a design made out under its rules, will not only give a natural and pleasing representation of any object, but convey all its projecting and receding parts with clearness to the observer. **ORNAMENTAL DRAWING** is likewise an acquirement every Artisan ought more or less to be acquainted with, and is of peculiar advantage to the Cabinet-Maker and Upholsterer, in the embellishment of his designs. Instructions, therefore, in this elegant branch of Art, should form a component part of the **DRAWING BOOK**, so as to become of general use.

With an experience of forty years devoted to the study of these subjects, both in theory and practical application; and having been honored with the patronage of **HIS PRESENT MAJESTY**, as well as the most flattering testimonies from ***Mr. Thomas Hope***, and other individuals, distinguished by their researches, and liberal patronage of the Arts; the Author trusts he may without presumption, promise to produce a Work at once creditable to his own labors, and combining whatever is of real utility to those connected with the Cabinet-making and Upholstery trade—a work, in short, the most complete in itself, and superior to any that has hitherto appeared on the same subject.

Our vessel now launched, may she encounter prosperous gales during her voyage over the extensive tract she is destined to sail; and that her freight may prove extensively useful, as well as beneficial, is the sincere wish of the author,

GEORGE SMITH.

41, *Brewer Street,*
Golden Square, London,
April 8, 1826.

CABINET-MAKER AND UPHOLSTERER'S

GUIDE,

&c. &c.

GEOMETRY,

Should commence with the definition of terms, and first with that of points, proceeding next to define the nature of lines, angles, surfaces and solids.

I cannot agree with some authors who conclude Euclid's definition of the point to be useless, inasmuch as the thing in itself is self-evident.

There are many reasons for adopting a different opinion; first, a series of points constitute a line, a series of lines produce a surface, and a series of surfaces generate a solid.

There are in perspective, points of intersection, points horizontal, station points, points of distance, and vanishing points, &c. each requiring explanation to render them familiar to the mind, as they pass under consideration in practice.

A POINT, is that which is without parts or magnitude—is the least part of matter, and thus called a physical point.

For example:—such is the point made by the compasses, pencil or ink, as the point A, in GEOMETRY, PLATE 1. a series of points put together, in length form right or curved lines, such are the lines figured 4*x*, 5*x*.

A line of points *a b*, fig. 6, supposed to move from *a* towards *c*, will in its course downwards, generate a plane *a b c d*.

The mathematical point, is the least object possible to be conveyed to the imagination, and consequently invisible; it is without dimension, but is the beginning of every invisible length.

Given point, is a point proposed to be set in some place, whether denoted by compasses or pin. For example: the point B, fig. *a a*, is a point given, for this reason, that on that spot is placed a pivot.

Point of intersection, is a point where many lines cross or meet each other. For example: the point G, fig. 1, is the point of intersection, because the walls H G D, E F C, meet together at the point G.

Horizontal points, are points equally distant from the centre of the earth; such are the points *h h h*, fig. 2, and a series of such points constitute the entire surface of the globe. N.B. Their use will be explained in describing the horizon in perspective.

Point of incidence, is a point where one line meets or touches another line or superfice, and there makes an angle. Example: the point I, in fig. I A, is the point of incidence, because it is the point where the right line K I, meeting the right line L M, makes there an angle.

Point of contact, is where a right line touches a curved line, in such manner, that being produced or extended it will not cut the curve, or it is a point where two curved lines meet together without cutting. Example: the point N, fig. 2, is the point of contact; because it is the place where the right line O N touches the curve, and being prolonged or extended to P, it does not cut the curved line N Q R; for the same reason the point Q is the point of contact.

Station point, is a point where we would place a staff, or the foot of any mathematical instrument in surveying. Example: the point T, fig. 3, is a station point; because it is the place on which we would put the instrument O. N.B. this also will be further explained in the perspective.

Point of distance, or extent, is a point or any other mark observable in some part of an object to be measured. Example: the crossed arrows in the building at V, fig. 3, serve as a point of distance; because the mark, or point V, is one of the points necessary towards enabling us to ascertain the inaccessible height, X W.

LINES.

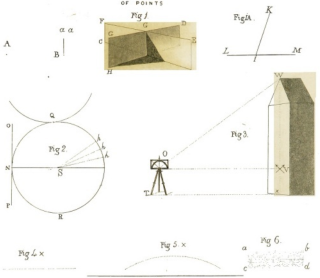
A line, is a length without breadth.

The mathematical or intellectual line, is that which we imagine to pass from one object to another without being visible. Example: the line A B,

GEOMETRY I.

DEFINITIONS.

OF POINTS



OF LINES

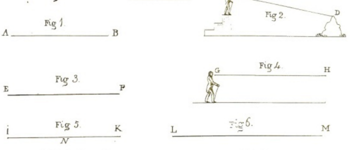


fig. 1, or the line C D, fig. 2, are each mathematical lines; because supposed to be invisible.

The physical or visible line, is that made by the motion of a physical point, and which is drawn with the ink, pencil or any other material. Example: the line E F, fig. 3, is a physical or material line; because it is made by something rendering it visible.

A right line, is that which is equally comprised between its extreme points. Example: the line G H, fig. 4, is a right line, because its points are equally disposed betwixt the extremities G and H, neither rising nor descending one more than another; so that if we view this line G H, from its extreme as at G, that first point G, shall cover all the other points which we suppose to be contained from G to H, for generating the right line G H. Remark, that a right line is the shortest distance betwixt one point and another.

The extremities of lines are points. Example: the extremities of the line N, fig. 5, are the points I K.

Indefinite or indeterminate line, is a line drawn of any length we choose, being at liberty to make it more or less extended. Example: the line L M, fig. 6, is an indefinite line, because it is supposed not to be determined, being at liberty to make it longer or shorter at pleasure.

The definite or given line, is that contained in a certain length. Example: the line O P, fig. 7, GEOMETRY, PLATE 2, is a determinate line, because its limits are from O to P.

Perpendicular line, is a right line, which falling on another right line, makes the angles on each side equal. Example: the line Q R, fig. 8, is perpendicular upon the line S T, because falling on the line S T, it makes the angles R Q S, R Q T, both equal to right angles; for the same reason the pillar A, fig. A, is said to be placed perpendicular or plumb to the horizon or ground B, because it makes right angles with the horizon; remark also, that a line charged with a plummet at one of its extremities, as at N, fig. N, makes a perpendicular line, called by workmen a plumb line.

Inclined line, is that which, falling on another line or on some plane, is neither perpendicular nor horizontal to the line or plane on which it falls; but is slopwise. Example: the line V U, fig. M, is inclined in respect to the line W X.

Parallel right lines, are such as being in the same plane, and drawn apart the one from the other indefinitely, will never meet. Example: the right lines *a b*, *c d*, *e f*, fig. 9, are parallel lines, because, being in the same plane and drawn apart, they will never meet or cut each other. Lines are in general called parallel lines, or simply parallels, being such as are equally distant from each other in their extent: thus the curved lines *g h*, *i k*, fig. 10, are called parallels, because the smaller curved line *i k*, is equally distant in its course with the longer line *g h*.

Ordinate lines, are lines parallel to another line serving as a base to a parabolic figure. Example: the lines *o o*, *y z*, *w x*, *v u*, *s t*, fig. 11, are called ordinate lines, for this reason, that they are parallel to the line P Q, the base of the parabola P Q R.

Horizontal Line, called likewise the line of apparent level, is that which touches or cuts at right angles, a line tending to the earth's centre. Example: The line N, N, fig. 12, is an horizontal line, because it cuts at right angles the line C D, tending to the earth's centre at D, and all lines which are parallel to the line N N, such as M M, L L, in the same figure, are called horizontal lines.

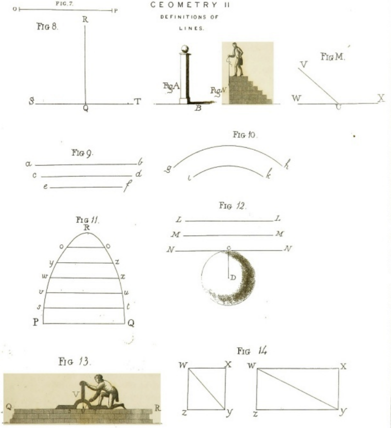
Level Line, is that which is drawn horizontally, by an instrument called the level. Example: the line Q R, fig. 13, is termed a level line, inasmuch as it is level with the horizon, being drawn along the lengthened side, S T o. the level V, adjusted horizontally by the plumb line U.

Diagonal Line, or simply a diagonal, is a right line, which being drawn in a square or parallelogram, from one angle to the opposite, divides them into two equal parts. Example: in the square W, X, Z, Y, fig. 14, the line W Y is a diagonal, because it passes from the angle X, W, Z, to the opposite angle X, Y, Z, and divides the square W, X, Y, Z, into two parts, or equal triangles, W, X, Y, and W, Z, Y. The same applies to the parallelogram W, X, Y, Z in the same figure.

Line of sight or visual ray, is a line formed by the eye in viewing an object, either by means of stakes, the quadrant, or other instruments. For example: the line A B, Geometry, Plate 3, in fig. 15, is the line of sight or visual ray, because it is formed by the eye in viewing the object C, through the telescope D.

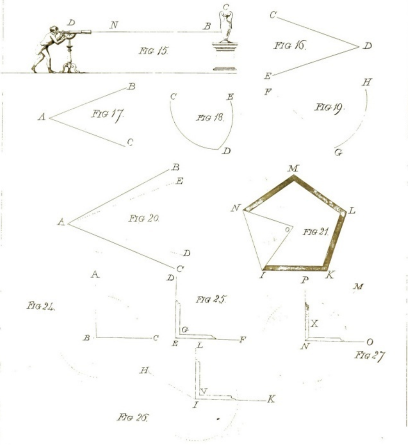
N. B. This line is of great use in perspective.

GEOMETRY II
DEFINITIONS OF LINES.



London, Published by Jones & Co April 5, 1826

GEOMETRY III.



London, Published by Jones & Co July 22. 1826.

ANGLES.

A plain angle, is the inclination of two lines, the one towards the other, and indirectly touching in a plane or surface. Example: the two lines, C D, E D, fig. 16, PLATE 3, form an angle C D E, because the two lines, C D, E D, touch indirectly at the point D; that is to say, the two lines which are drawn on the same plane do not form one right line, and therefore form the angle C D E. Remark, that the middle letter in all triangles expresses the angle; D therefore is the angle formed by the two lines C D, and D E, likewise the angle of any figure is generally expressed by a single letter, as D.

Right lined angle.—The angle, A, B, C, fig. 17, is a right lined angle, because it is formed by the two right lines, A B, A C.

Curvilineal angle, is an angle formed by two curved lines. Example: the angle C D E, fig. 18, is curvilineal, because it is formed by the two curved lines, C D, E D.

Mixtilineal angle, is an angle formed by a curved and a straight line. Thus: the angle F G H, fig. 19, is a mixed angle, being formed by the straight line, F G and the curved line H G.

N. B. The lines forming any angle are called its legs.

An angle is said to be less than another, when its legs are more inclined to, or nearer each other; let there be two lines, A B, A C, fig. 20, meeting in the point A. Now if you imagine the legs A B, A C, to be moveable on a joint at A, it is easy to comprehend that the further they are opened or parted from each other, the greater will be the angle between them; and, on the contrary, the nearer they are brought together, the more they will incline to each other, and so the angle betwixt them will be less, as D E.

The angle of a polygon, or figure of many angles, is that formed by any two sides of the figure. Example: the angle, K, fig. 21, is the angle of a polygon, because it is made by the two sides I K, K L, of the pentagon, I K L M N.

External angle, is that angle which has its point without the figure. Example: the angle, N M L, fig. 21, is an external angle, because its point is without the figure, I K L M N.

Internal angle, is that which carries its point within the figure, such as the angle N O I, in the pentagon I K L M N, fig. 21.

All angles are measured by an arc of a circle, containing a certain number of divisions or degrees of the whole circle. In order to have a clear idea of which, we shall proceed to lay down the divisions, as settled by geometers, in dividing the circle's circumference, and at the same time furnish instructions for making such divisions, before we commence describing figures cf many angles.

The circle by all geometers is divided into 360 parts, otherwise termed degrees. Thus the circumference of the circle, A B C D E F G H, fig. 22, PLATE 4, is supposed to be divided into such a number of parts or degrees. It is evident the divisions will be less in a small circle than in one more extended. Thus the circle, *a b c d e f g h*, though smaller, contains the same number of degrees as the larger circle, in consequence of both generating from the same central point S.

The line A B, dividing the circle into two equal parts, the arc A B C will necessarily contain 180 degrees, the half of 360, and is called a semicircle. The line C D, perpendicular to A B, and passing through the circle's centre at S, will divide it into four equal parts, of 90 degrees each, four times ninety making the whole number 360. If the arcs A C, C B, B D, D A, are subdivided at E, G, H, and F, the circle will then be divided into eight equal parts, of forty-five degrees each; eight times forty-five, making the whole number 360, as before.

The semicircle, A B C, fig. 23, PLATE 4, represents the protractor in a Case of Instruments, (of the whole of which, with the latest improvements, and their proper uses, a description will be given in course of the work), the outermost line A B C, being gradated from A to C, into 180 equal parts or degrees. The angle A I D, is found to contain forty-five of these degrees, and is the side of an octagon. The angle E I F, is found to contain sixty degrees, and is hence the side of a sexagon. The angle G I H, is found to contain seventy-two degrees, and is therefore the side of a pentagon. The angle A I B, contains ninety degrees, and becomes the side of a square. The angle K I L, contains 120 degrees, and furnishes the side of a triangle and thus may be laid down the angle of any figure, from ten degrees and upwards, to within one degree of 180, when it becomes a straight line.

GEOMETRY
IV.

Divison of the Circle.

Fig. 22.

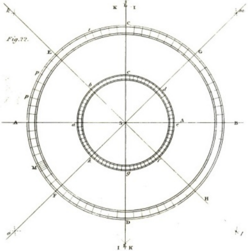
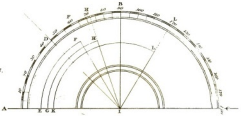


Fig. 23.



London. Published by Jones & C° May 19. 1827.

To divide the circle into 360 parts or degrees.

Let the line A B, fig. 22, PLATE 4, be the proposed diameter of the circle, to be divided into two equal parts at S, and describe the circle A C B D, on A, with any opening of your compasses, greater than A S, as A A. Describe two arcs at I I, then on B. With the same opening of the compasses, describe two other arcs K K, cutting the arcs I I at L L; through their intersection, draw the line C D, which passing through the centre S, will be perpendicular to A B, and the circle will then be divided into four equal parts; on A and C, with any radius A *i*, more than half A C, describe two arcs, cutting each other at *k*; and draw the line *k* S, indefinite to *l*; on B and C, describe two other arcs with the same radius, cutting each other at *m*, and draw *m* S, indefinite to *o*, which will then subdivide the arcs A C at E, C B at G, B D at H, and D A at F. The circle by this process becomes divided into eight equal parts. Next proceed and divide any one of these eight parts, as A E, into three equal parts at *p p*, and these three parts again into three other equal parts, and you then have nine divisions in an eighth part of the circle: divide the remaining parts into the same proportions, there will then be 72 divisions round the circle, of five degrees each, equal in the whole to 360. To obtain the degrees, divide any one part, as M, into five parts, and each other part into a like division; the whole circle will then be divided into 360 equal parts or degrees.

The use of the circle so divided, is to enable the student to lay down an angle of any number of degrees he may require, whether for the triangle, pentagon, sexagon, octagon, or any other figure of many sides.

A right angle, is that which is made by a right line, falling perpendicularly on another, or which contains in its opening the fourth part of the circumference of a circle, described from its point, or which contains 90 degrees out of 360, the circle's whole circumfereuce.

Example: the angle A B C, fig. 24, PLATE 3, is a right angle, because the line A B, falls perpendicular on B C, at the point B; or because the angle contains in its opening the fourth part of a circle, described from the point B of the angle A B C.

Remark, the right angle is ordinarily called by workmen a square angle.

for instance; the angle D E F, fig. 25, is a square angle, because it is made by means of the square G.

An obtuse angle is greater than a right angle, or that which contains more in its opening than a quarter of a circle. Example: the angle H I K, fig. 26, is obtuse, because it exceeds the right angle, L I K, or because it contains in its opening more than 90 degrees, or more than a quarter of the circumference of a circle, described from the point I of the angle H I K. Workmen call the obtuse angle, a full angle, because it is more open than the square angle V.

An acute angle is less than a right angle, or that which contains betwixt its lines less than the quarter of a circle, or less than ninety degrees. The angle M N O, fig. 27, is acute, because it is less than the right angle P N O, as it contains between its two legs, less than 90 degrees, or a quarter of the circumference of the circle described from its point N: the acute angle is termed by workmen, a lean angle, because it is less than the square angle X.

TRIANGLES.

A triangle, is a plain figure bounded by three lines, and containing as many angles. Example: the triangle A B C, fig. 28, PLATE 5, is a plain triangle, because it is bounded by the lines A B, B C, and C A.

The triangle A B C, is likewise called a right lined triangle, because its lines are all right or strait.

Mixed triangle is that which has two of its sides curved, or sometimes only one, such are E and F, fig. 29 and 30.

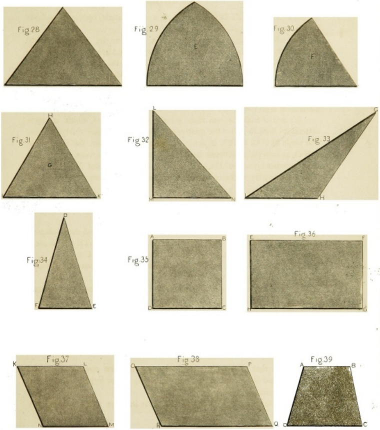
Equilateral triangle, is that which has its three sides equal; thus G, fig. 31, is an equilateral triangle, because its three sides H I K, are all equal.

A right angled triangle, is that which has one right angle. The triangle L M N, fig. 32, is a right angled triangle, because M is a right angle of 90 degrees.

Observe that in all right angled triangles, the line opposite the right angle, is called its hypothenuse; the line L N, is the hypothenuse of the right angled triangle L M N.

Scalene triangle, fig. 33, is one which has its three sides unequal; the

GEOMETRY V.



London Published by Jones & C° Novr 1826.