# EASY LESSONS IN PERSPECTIVE: INCLUDING INSTRUCTIONS FOR SKETCHING FROM NATURE

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# ANONYMOUS

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## IN

# PERSPECTIVE.

### INCLUDING

### INSTRUCTIONS

### FOR SKETCHING FROM NATURE.

"The most consummate master is tied to the observation of every one of these rules, on pain of pleasing none but the ignorant."

DISTRICT OF MASSACHUSETTS, TO WIT :

*District Clerk's Office.*

Be it remembered, That on the sixth day of October, A. D.
1830, in the fifty-fifth year of the Independence of the United
States of America, Hilliard, Gray, Little & Wilkins, of the said
District, have deposited in this Office the title of a Book, the
right whereof they claim as Proprietors, in the words following,
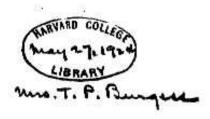to wit:

Easy Lessons in Perspective. Including Instructions for
sketching from Nature. " The most consummate master is tied
to the observation of every one of these rules, on pain of pleasing
none but the ignorant."

In conformity to the Act of the Congress of the United States,
entitled " An Act for the encouragement of Learning, by secur-
ing the copies of Maps, Charts and Books to the authors and pro-
prietors of such copies, during the times therein mentioned;"
and also to an act entitled " An Act supplementary to an Act,
entitled, An Act for the encouragement of Learning, by securing
the copies of Maps, Charts and Books to the authors and pro-
prietors of such copies, during the times therein mentioned;
and extending the benefits thereof to the arts of designing, en-
graving, and etching historical and other prints."

JNO. W. DAVIS, { *Clerk of the District*
{ *of Massachusetts.*

TO

## JOHN RAPHAEL SMITH,

Teacher of Drawing and Perspective,

### THIS BOOK

IS RESPECTFULLY DEDICATED.

# PREFACE.

Iτ is the object of this book to explain the elements of Perspective, together with the art of sketching from nature, in a familiar manner, so as to render them intelligible to the young, and those not skilled in Mathematics and Geometry.

There are many learned and elaborate treatises on Perspective, but they are generally unintelligible to those who cannot command the assistance of a teacher.

The subject is abstract in its nature; an acquaintance with its principles, and a facility in its practice, cannot be gained without attention and labour, but *with* these, it is believed that any one, having a competent skill in drawing, may gain from this book all the knowledge requisite to sketch from nature correctly.

# LESSONS

## IN

# PERSPECTIVE.

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## LESSON I.

### LINES.

A straight line is the shortest which can be made between two given points: it is without curve or bend, as A, Plate 1.

Straight lines are horizontal, perpendicular, or oblique. B, is a horizontal line; C, a perpendicular line; D, E, & F, are oblique lines.

Parallel lines are alike, and keep the same distance from each other. A and B are parallel lines.

### ANGLES.

An angle is formed by two straight lines which meet at a point. G R is an acute angle; H, an obtuse angle; I, a right angle; J, a triangle. A triangle has three sides, and three corners or angles.

An angle is the space included in any of these lines.

The size of an angle is measured, not by the length of its lines, but by the space included in them, and is accordingly that portion of a circle which this space contains.

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A circle, whether large or small, is by geometricians divided into 360 parts, called degrees. A degree, therefore, is not any precise measure, as an inch, a foot, or a mile, but simply the three hundred and sixtieth part of any circle. In a large circle, the parts or degrees are larger than in a small one, but the number is the same (see Plate 2, circles A and D.) A line which passes through the centre of a circle, and divides it in two equal parts, is called a diameter. Thus the half of the small circle A, divided by the diameter B, is 180 degrees, as truly as the half of the larger circle D.

Any straight line drawn from the centre of a circle to the circumference, is called a radius. In the circle A are two radii E and F, proceeding from the centre; one a perpendicular, the other a horizontal line. These two lines include one quarter of the circle or 90 degrees. This is a right angle. If the circle were larger, as D, a right angle would be but one quarter of it. Therefore a right angle is a quarter of a circle, that is, 90 degrees, if it extend a thousand feet, or even to the heavens, for its size is estimated only by the portion of a circle which it includes. This is an idea of proportion, not of actual measured space, and it is important to perceive and maintain the distinction. An angle which includes a portion of a circle less than 90 degrees, is called an acute angle, and may be of any size from 90° to almost nothing. As E G (circle A, Plate 2) which is about 45 degrees, and H F which is not more than 10 degrees.

An angle which includes a portion of a circle larger than 90 degrees, is called an obtuse angle, and may include any number of degrees, from 90° to 180°, as K J (circle D) which is 135°, or K L which 155°.

## LESSON II.

### PLANES.

Planes cannot be so well described as lines and angles. Any even flat surface considered without regard to its thickness, is a plane. A table is a plane, the floor is a plane, the side of the house, &c.

Planes are perpendicular, horizontal, or oblique.

The wall of the house is a perpendicular plane. The floor is a horizontal plane, and so is the ceiling a horizontal plane, parallel with that of the floor.

Any even surface which varies or inclines from the perpendicular, is an inclined plane; as a writing desk.

A perpendicular plane is at right angles with a horizontal plane. Thus, if you place a book upright on a table, the book is a perpendicular plane, and the table a horizontal one, and they make a right angle.

An inclined plane makes an angle less than a right angle, with a horizontal or perpendicular one. For a writing desk, which is an inclined plane, does not make a right angle with the table on which it stands, as the book when placed upright does; but it makes a smaller angle, and this angle is more or less acute (that is, small) according to the greater or less inclination of the desk.

Two or more similar planes are said to be parallel.

Planes may be of any extent, large or small. Some really exist, as the floor or wall of a house, and some are only imagined to exist, for the purposes of science.

If two balls (M and N Plate 2) were suspended from a ceiling by cords of the same length, and were revolving about, they would be said to move in the same plane, though no plane or surface were actually under them; we know that if one were put under them, they would both touch it. Thus objects are said to be in the same plane, when they are neither higher nor lower than each other.