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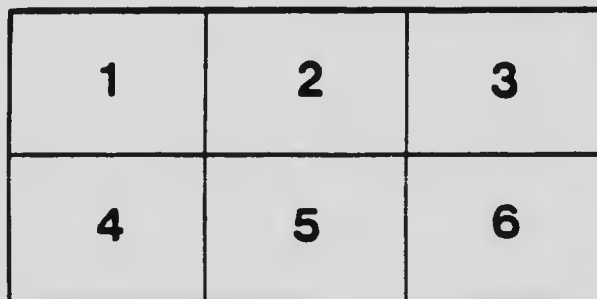
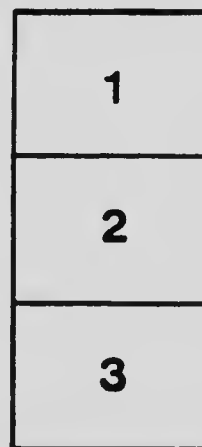
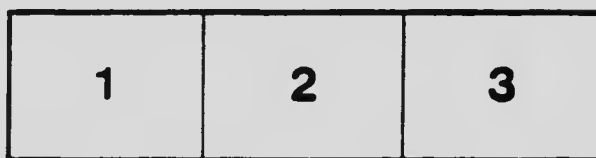
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PERSPECTIVE
ITS PRINCIPLES AND APPLICATION

10
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PERSPECTIVE
ITS PRINCIPLES AND APPLICATION
ACCOMPANYING THE COURSES
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Street scene showing regular perspective lines.

PERSPECTIVE

One of the most necessary items in the education of any artist is a comprehensive knowledge of perspective in its broadest sense. You must understand thoroughly its great general principles, not that we need, nor do we ever intend to apply them in a Geometrical or Mechanical way, but no drawing can possibly possess any great degree of merit, artistic or commercial value, that is not sound in its perspective. Nothing can be truly represented without the application of these rules, whether consciously or not. Every successful draughtsman must understand the science perfectly, and has in nine cases out of ten, studied it most exhaustively in

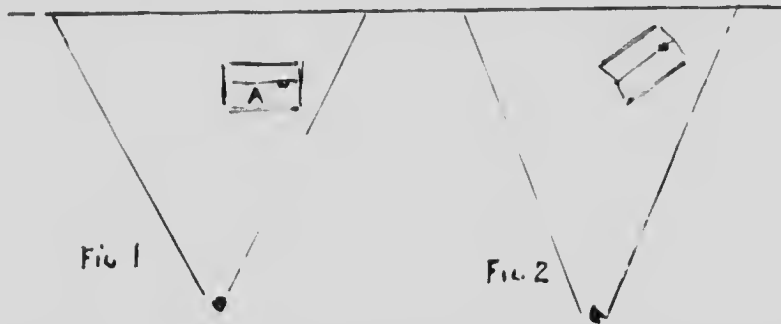


Interior of room seen in angular perspective, with pieces of furniture, etc.

its scientific form, and then by constant practice, developed the habit of its unconscious application in his work. To do this, we must first of all understand just what perspective means and how everything in nature, whether in doors or out, is effected by its laws.

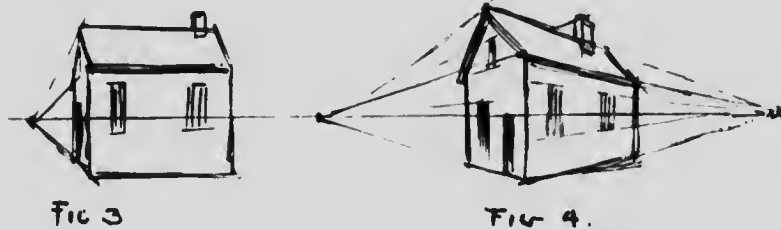
We will take first, the technical terms used and explain them one by one, and then in a direct simple way, demonstrate their application to nature.

There are several different kinds of perspective, but in our work there are but two that interest us greatly, namely—parallel and angular. The first term is applied to objects occurring in buildings or out of doors, whose base is parallel with our vision. Fig. 1—The dark round spot represents the spectator, and the two lines the range or angle of vision,



in other words, we cannot see beyond this angle without moving our head or eyes, and as we cannot paint anything in its truth that we cannot see with our eyes stationary, we deal only with those things that occur within this angle. A represents a house or barn that rests within the angle, and the base of it being parallel to our vision, it is seen now what is termed parallel perspective. In fig. 2 we have the same object seen under different conditions, or with one corner much closer to us than the other. It occurs at an angle to our vision. What is the natural inference? It is seen in angular perspective.

Now the difference in these two problems is this: To represent the first house or cube, we require but one vanishing point. Fig. 3, the near end being parallel with our vision, remains the same width all through,



while the receding side become smaller as it goes further into the picture plain. In fig. 4 we find that to represent our cube, we are forced to use two vanishing points, because both sides of the object are receding. Now to demonstrate this point, go to a field or garden that is fenced in, and where there exists two rows of fence posts that you know are all the same height, study them carefully from different angles, and observe how they appear

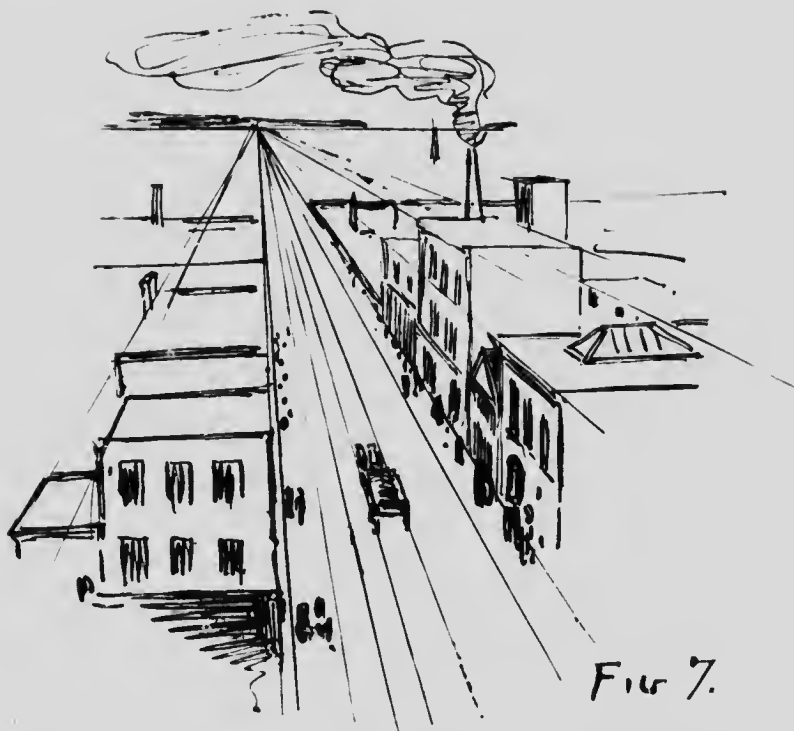
to become shorter as they recede from you. Notice people on the street, how they gradually become smaller as they become further removed from you. This is because the ground gradually slants up to the horizon, which is the line that limits your vision, where earth or sea and sky meet. Now this line invariably occurs just opposite and at the exact height of your eye, Fig. 5. A represents the observer, the dark masses figures occurring in front of him. Now the height of a human figure varies, and we observe that some of the heads are slightly higher than he who is looking at them. But while the top row is uneven, the feet all occupy a plain that gradually approaches the limit of vision on the horizon line.



In fig. 6 the observer is seated, and the top of the figures are higher than his head, being standing, so you notice the line formed by the top of the heads also incline down to the horizon. Now what we wish to demonstrate to you is this, that all lines in nature gradually converge to one or more spots known as vanishing points, and that these points invariably occur on the horizon line. As your station point, or the place where you stand becomes higher, say by ascending a hill or going up on a building, your



horizon line ascends with you. Fig. 7, and you look down upon smaller buildings and upon the people in the street beneath you. In other words you get a bird's eye view of things, but every line runs to one spot on the horizon, which in this instance is higher than the roof of the tallest building in your sketch, so we know that the building upon which you are standing to observe the scene is higher than any that you show in your drawing. *The horizon line is level with your eye.* In figs. 8, 9 and 10, we have another illustration of this. Let us imagine ourselves on the sea-shore, our eye on a level with that of the first figure with the net on his shoulder. The line that limits our view of the ocean, answers to our line of the horizon. It is on a level with our own eye as well as his, and



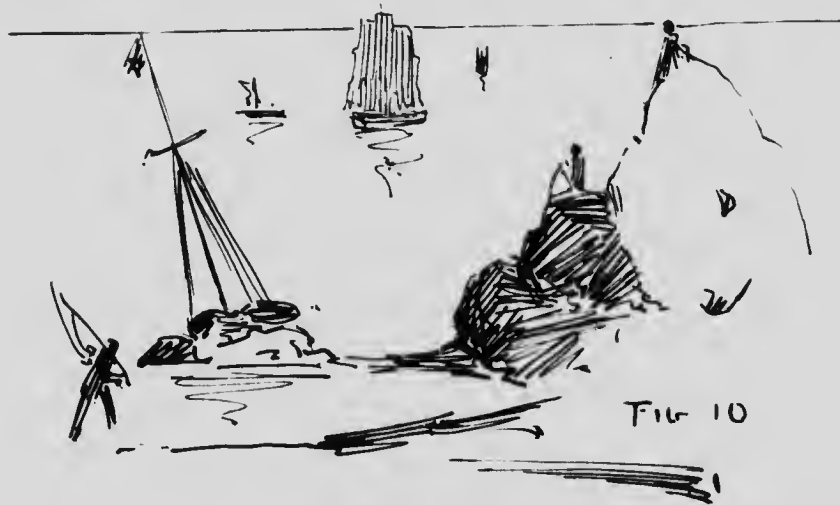
touches all other points or objects of the same height. We cannot see the deck of the small fishing boat ashore and the hull of the distant ship rises above it; but we climb the cliff until we come on a level with the standing figure on the rock in shadow, the line of the horizon follows as it were, our movement. We now see the deck of the small ship ashore and the tops of the larger vessel come level with the horizon. One vessel



Fig 8



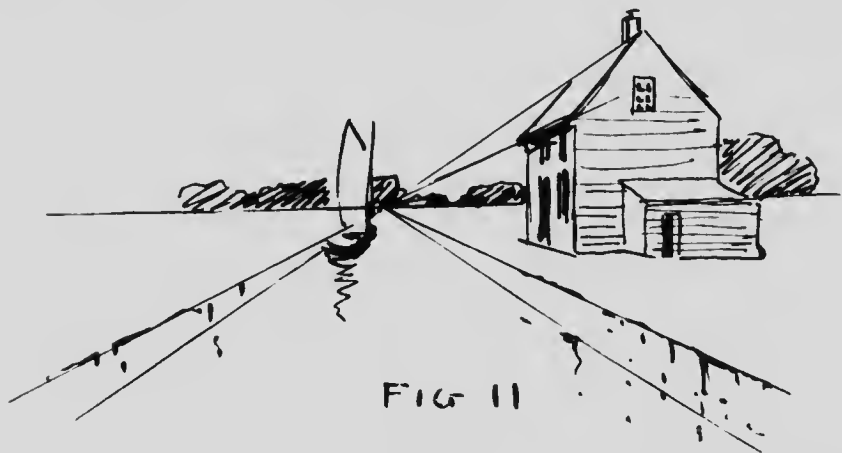
near this again becomes more visible, and another, which was before hidden by the dark rock is seen. We climb still higher, until we reach a point on a level with the highest figure in the drawings. The horizon ascends with us, also the smooth surface of the sea, and we have as it were, a vast perspective plain, defined by a line, which is the line of the horizon, on which line must be our point of sight, corresponding in our perspective picture to our actual point of view, being directly facing



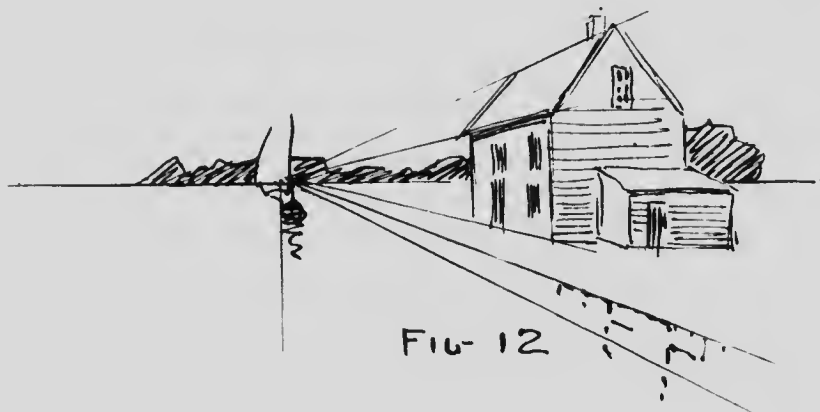
or opposite to it. So much for the horizon, in relation to our station point, or in other words, the place where we are standing to observe our subject.

Now as to the converging ground lines. Let us suppose ourselves in a position looking up the centre of a long canal, fig. 11, our point of sight concentrates on that point which limits our utmost vision, and to it are

directed all lines in the view before us, such as those of the banks of the canal, the sides of the house, etc., while all level lines, such as the boarding on the near side of the house, roof of the shed, etc., are parallel with the horizon. We change our position and stand on the left bank of the canal, fig. 12, note the difference, this line of the bank runs directly from our feet at a right angle to the horizon, and at the junction of these two lines is found our vanishing point, which in parallel perspective



is always directly opposite our station point, on the horizon. *The station point is the term applied to the place where you stand to observe the scene.* Another example—stand at an open window that has a view looking up a street—fig. 13. The houses all become smaller as they recede, the pavement narrower, figures smaller, until, if it should be an unlimited view, everything, buildings, figures, etc. will gradually loose themselves at a point which represents the limit of your vision, or in other words, the



vanishing point. This is well exemplified again in a railway track. Its rails gradually meet and become lost in the distance, fig. 14. Perspective is so easily understood if we just remember *that everything in nature becomes smaller as it becomes farther removed from us, and that all lines converge to a point or points on a level with our eye.*

Now we have dealt pretty well with first—the horizon line, the vanishing points, the station point, etc., now as to their relation to a picture. In planing a picture, we must always realize that while we can see all over a country-side, we cannot possibly include it all in one canvas, hence occurs the terms picture plain as related to our extreme range of vision. We will say for example, that the circle, fig. 15, represents our possible vision without moving our head. Then the square within the circle, fig. 16, is all that we can possibly include in our composition. We cannot go outside the circle without changing our vision, so we must

find our vanishing point in parallel perspective within this square. Our next consideration is our station point. Now you know that you cannot see your feet and the horizon at the same time, so this point must be outside the picture plain. Fig. 17 will give you an idea of what is meant. The long lines represent the range of your vision, the lower of which touches the ground away in advance of the feet of the figure or observer. The horizontal line, the level of your eye, and which at its extremity, represents the horizon, the ground gradually slopes from the feet of the spectator to this level and there are found all vanishing points.

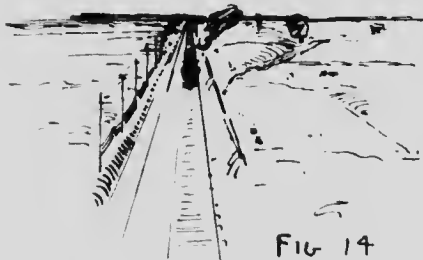


FIG. 14



FIG. 13

This paper is not intended as a scientific treatise on perspective, but simply an explanatory note to impress upon you the great necessity for the study of its principles, and secondly to help you to more readily understand the rules as laid down in the text book that is furnished you with this course. Remember



FIG- 15

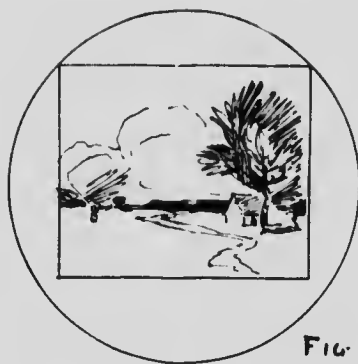


FIG-16

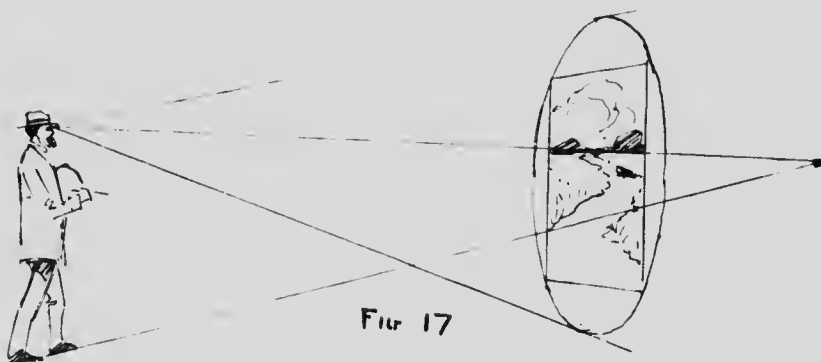
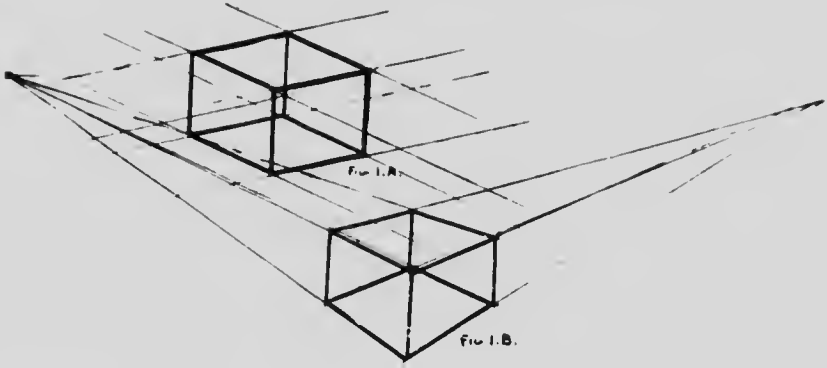


FIG 17

that to everything in nature these rules apply, that the construction of all objects, whether human, animal, architectural, and what their character or kind, when seen by us, are as has been explained earlier, affected by the laws of perspective, and it is impossible to properly represent them except by the application of its simple laws. Take for instance, the drawing of a simple cube in fig. 1 A. In this drawing we have not applied the rules—the result is plain. In fig. 1 B we have done so. Can you not see at once the great difference. Now this cube might be anything, the general character of which is a square, such as a house, the base of a chair, elongated slightly, a book, a box of any kind, a hundred things that are apt to occur in our pictures from day to day, and none of which can be



truthfully represented without the application of the simple laws of perspective. This you do after a time unconsciously. But before you can do this, you must understand the great general principles of the science, and we hope that this paper in conjunction with your text book, will help you to more easily accomplish this.

EXAMINATION.

1. Make freehand drawing of the corner of a room in line. Then on same drawing show your perspective lines and measurements, and explain their significance.
2. Take some drawing from a magazine and explain its perspective lines.
3. Make perspective drawing of a box three feet square, in either parallel or angular perspective. First as seen when sitting on an ordinary chair; and secondly as seen from standing position. Explain the difference.



FIG. XXX.

4. Correct the line in accompanying drawing—Fig. XXX. To do so make drawing twice size and explain all working lines and points.

5. Explain the mistakes that you have found in above drawing.

6. Write a three hundred word letter and tell us what troubles you most in your attempt to master this branch of your work.



The white spot marks vanishing point.



Street scene with figures.



Interior of room. Make drawing in line and show vanishing point.



Another street scene from different point of view.

