Special Articles
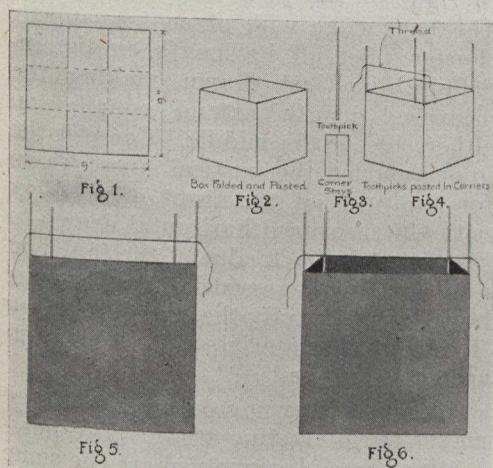
DRAWING, DESIGN AND CONSTRUCTION

Lesson **VI.** A Series of Normal Art Lessons for Teachers.
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The Perspective of Rectangular Objects

Various devices are employed by different teachers in the effort to present perspective principles in ways that shall be interesting and intelligible to children. The device of the pasteboard disc and the hatpin is probably the best means for demonstrating the foreshortening of circular faces. This was illustrated and explained in our last lesson. For the demonstration of foreshortening in rectangular faces, which involves also the apparent direction of retreating horizontal edges, there is probably no device that is better than the cubical

Fig 1. Box Folded and Pasted. Fig 2. Corner Stays. Fig 3. Toothpicks pasted in Corners Fig 4.
Fig 5. Fig 6.

box, with its arrangement of upright corner posts (wooden toothpicks) and the tightly stretched coarse thread or small string. (See Figs. 5 and 6.)

From a nine-inch square of construction paper, fold, cut and paste an open box, following the steps indicated in Figs. 1 and 2. A ruler should be used in laying off the square into nine small squares, and the folding and cutting should be accurately done. In Fig. 1 the dashed lines indicate folds, and the full lines indicate cuts. (For all paper construction and bookbinding exercises there is no paste equal to the Prang "Stixit," which is composed partly of glue, and which does not warp or wrinkle the paper.) Cut four corner "stays," each about 1 by 3 inches. (Fig. 3.) Crease these stays in the middle and cover the entire outside of each with paste. Fit the stays into the corners of the box, on the inside, at the top. While the paste is still wet, slip a wooden toothpick in each corner, between the stay and the box. Now set the box aside to dry. Then tie a stout thread or small string around two opposite toothpicks, pulling it tight so that it does not sag. (Fig. 4.) Now hold the box straight out before you, so that the centre of the front face is opposite your eyes. You will see that the two farther toothpicks appear respectively to the right and to the left of the two nearer toothpicks, and that they appear nearer together, although we know that in reality they are exactly the same distance apart, being at opposite corners of an exactly square box. (See Fig. 5.) If, now, you lower the box so that the string hides from view the farther edge of the top, you will see that the top appears foreshortened, just as the circular face appeared foreshortened when held a little below the eye level. When the box is held in this position, the vertical distance between the string and the upper edge of the front face of the box will measure the apparent width of the top of the box, from front to back. (Fig. 6.) You can slip the string up and down on the toothpicks, measuring the varying apparent widths of the top as the box is held at different levels.

You will observe in Fig. 6 another important perspective fact. The hori-