IMAGES AND ILLUSIONS

1. DESIGN SOURCE

THE MAN-MADE WORLD

The world of computer technology provides the designer with a vast range of design sources from simple geometric patterns and grids to complicated linear curves. These patterns grids can be used quite successfully in canvas work as inspiration for stitch variations and diaper patterns.

The illustrations from this design source represent the following:

1. Planetary Motion: Consider a line is drawn from the moon to the earth by a laser. If a series of successive pictures were drawn of this laser line, it would appear as a succession of close lines which, as well as rotating, move along the earth's path.

2. Logarithmic Spirals: Descartes named the curve in the Chambered Nautilus the equiangular spiral. The spiral form is almost universal among snail shells and also occurs widely in nature: in elephant tusks, in the centers of sunflowers, fir cones and sea shells.

"The rotating square gives rise to spiral curves as it increases its size while retaining its proportions. The variations of this design are pleasing and interesting because of the matrix of square designs by replication, and the repeated sides of the square which give an overall wood-out effect. The spiral curves...give an overall Escher-like quality. "

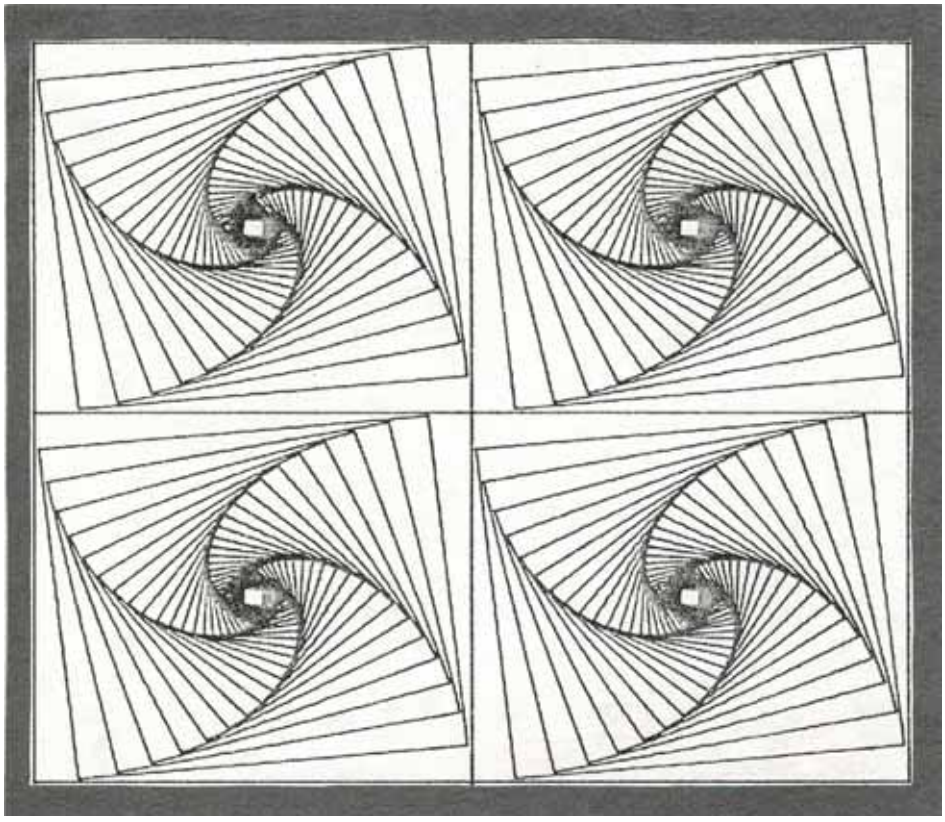
3. Spherical Mapping: Anyone who has peeled an orange knows hat the skin will not lie flat, making it impossible to map the surface of a sphere exactly onto a plane. Maruits Escher used spherical representation frequently in his prints, contrasting the three dimensional spherical world as seen in a reflecting sphere with two dimensional 'flatlands'. Victor Vasarely also used spheres, creating spherical illusions on a flat plane in his geometric-op works.

4. Tessellation or Tiling the Plane: Tessellation is a subject studies seriously in geometry and mathematical games. Tessellation is covering a surface with mosaic patterns. The tessera is the unit small square of marble or glass used in mosaic work. Some religions forbid the representation of the human figure and this edict resulted in Islamic artists concentrating on elaborate patterns for ornamentation of homes and buildings.

The computer is the instrument 'par excellence' for performing all of the operations that an artist can perform on a design, and many others that he could not perform or would find extremely difficult or time-consuming.

Understanding of geometric forms, everyday experience and a little imagination and experimentation is all that is required to understand the principles of symmetric geometric design. Quilt makers, embroiderers, carpet weavers, and all kinds of artists use these principles successfully to create their art.

Consider some of the operations that can be performed by a computer on a single line, a part of a design or a complete design. It can alter the scale of the height or width, it can magnify, diminish, distort, stretch or contract. It can reflect in a vertical side, horizontal side or diagonal of a square. It can rotate the design clockwise or counterclockwise and through any angle. It can replicate (repeat the design by shifting or translating it) and do countless other operations the previous was perceived as too difficult or time consuming for the designer.

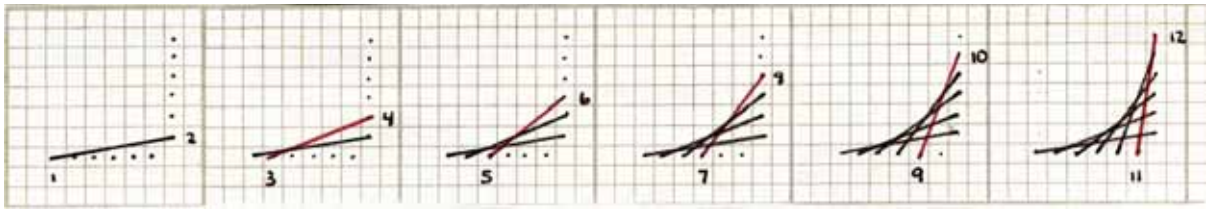


Logarithmic Spiral

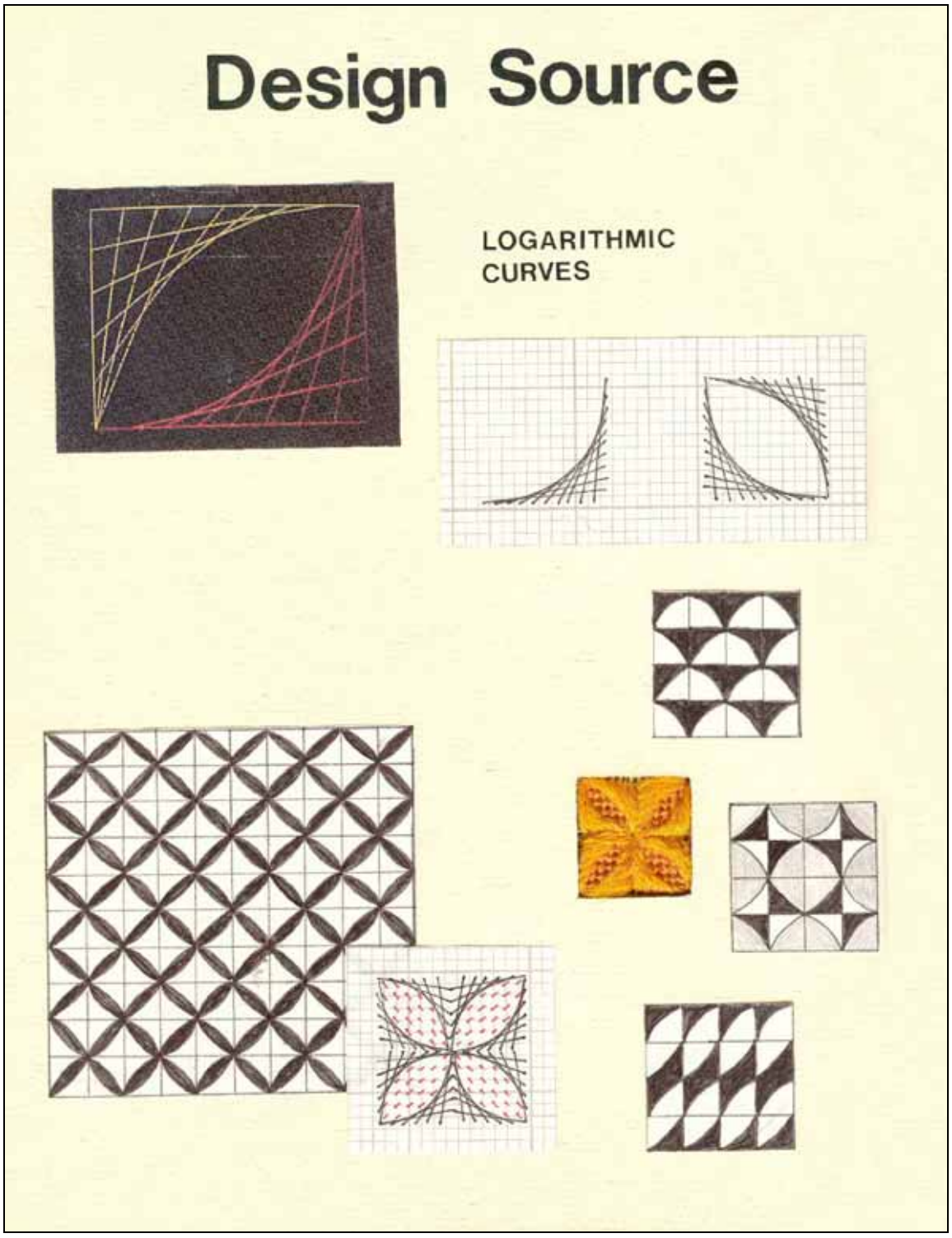
2. PROJECT DESIGN SOURCE

LOGARITHMIC CURVES

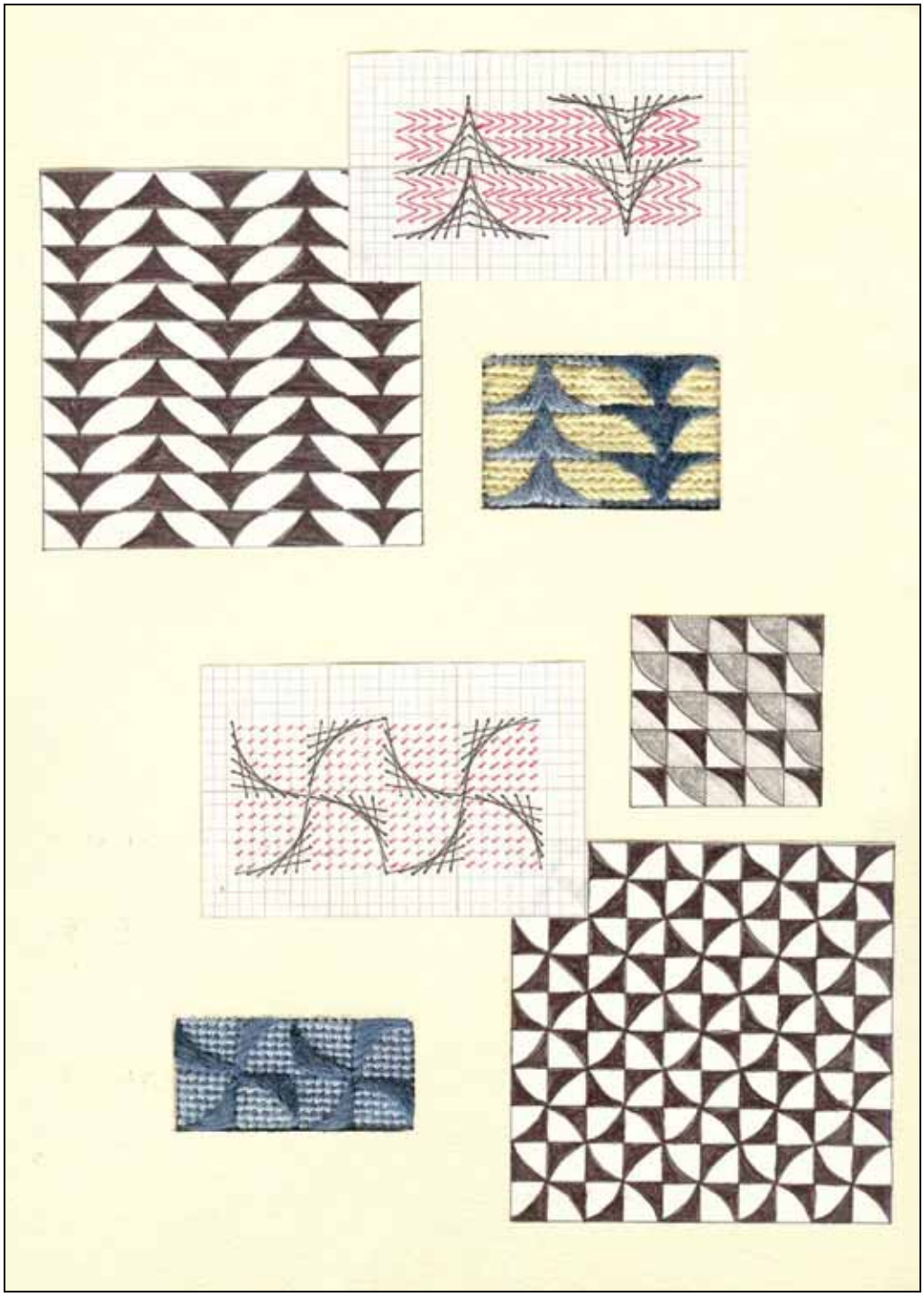
The computer can be used as a tool to produce a vast range of design sources from simple lines to complex patterns. The design source used for *Images and Illusions* - the logarithmic curve - was been adapted to Canvas Work in the form of a stitch unit. The basic stitch unit has been graphed from the computer plotted logarithmic curve and is composed of straight stitches crossing one another at rotating angles until the unit is completed. The stitch begins as a Gobelin Oblique, worked horizontally, over x-number of vertical threads and one horizontal thread. The second stitch comes up to the right of the first stitch and then goes into the canvas above the exit point of the first stitch. Subsequent stitches are taken in this manner - to the right (or left, depending on which direction you are working), then above the previous stitch - until the unit is completed. This sequence is graphed as follows:



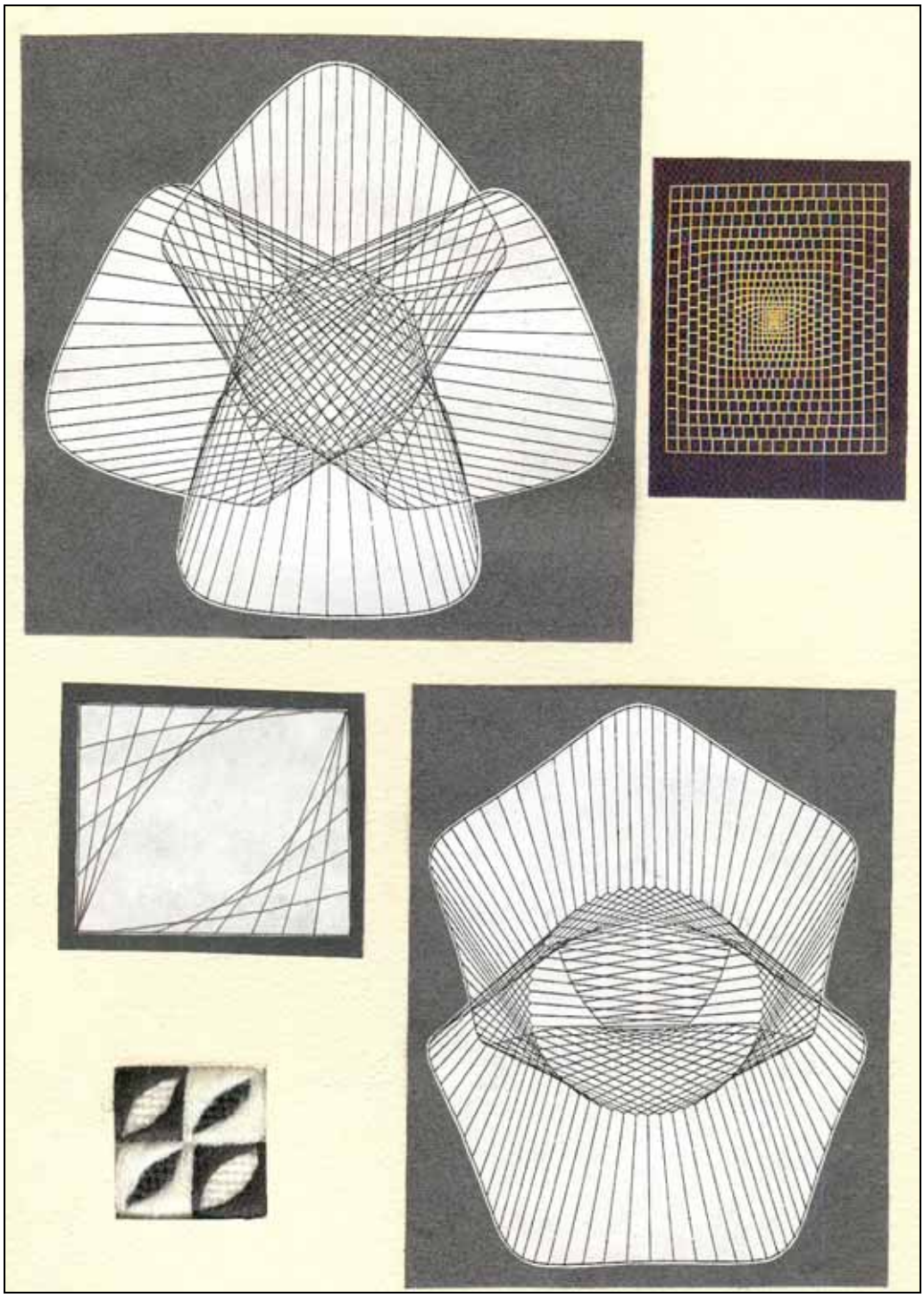
The stitch unit is a very versatile one as it can form squares, circles, pinwheels, lines and other shapes. By varying the placement and color, you can achieve any number of repeat patterns. The illustrations show the patterns worked on a large grid. Each square on the grid is equal to the number of threads in the stitch unit. For example, each grid in the pinwheel pattern is 6 threads x 6 threads. Once the repeat pattern has been established using the larger grids, a more detailed study can be worked out on graph paper.



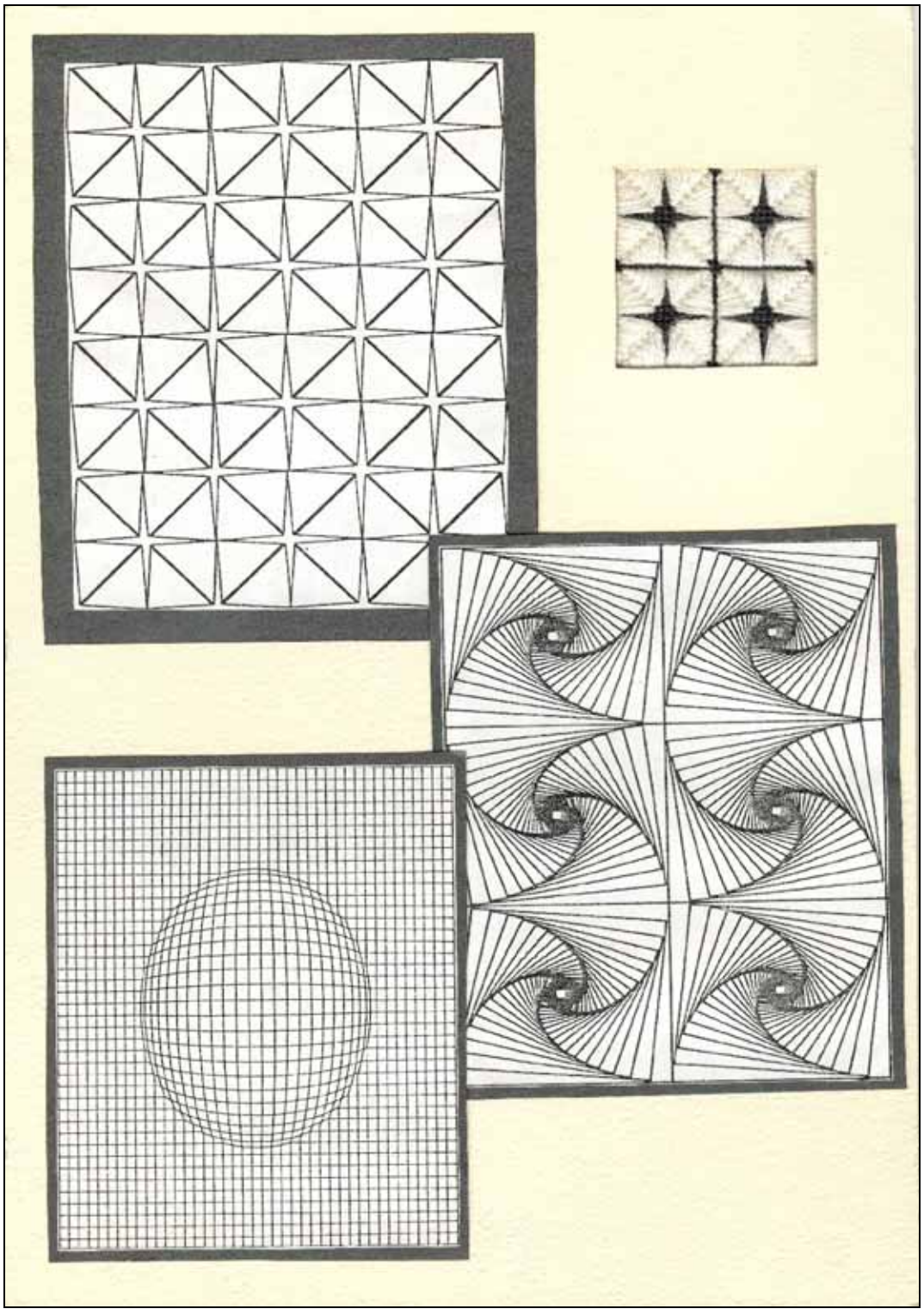
THREADS: The sample illustrations were worked in Ostara, Appleton's Crewel Wool and DMC Embroidery Cotton. Any thread can be used as each texture produces a different effect. Smooth twisted threads such as Matte Cotton, Ostara, DMC #5, tapestry wool, etc. show the pattern of the stitch unit better than fuzzy, plied threads such as Paternayan Persian.



STITCHES: The filling stitches used in the illustrations were the Diagonal Tent Stitch and the Reverse Tent Stitch. Any stitch or variation which will fit the scale of the space between the stitch units without compensation (or very little) can be used to create variations in texture.

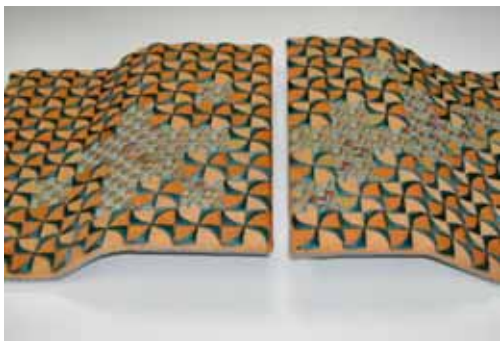


USES: Because this stitch unit is composed of long, loose threads, it would be unsuitable for any article requiring a wear. Decorative (as opposed to useful) pillows, evening bags and wall hangings are several areas in which designs based on this stitch unit can be used successfully.



3. THE DESIGN

Images and Illusions is a design composed of three 11" x 11" panels mounted over curved plexi glass to create movement. The movement of light along the curved surface alters the color and intensity of parts of the design when viewed from different angles and sources of light.



Images and Illusions is a highly textured design that worked on Zweigart 18ct mono canvas using Ostara and Paternayan Persian wool in a vibrant complementary color scheme.

The main stitch unit was worked in a pinwheel configuration in two sizes. A simple Basketweave stitch was used to fill the area between the stitch units, reversing the direction of the slant in each half of the pinwheel.