



GEOMETRICAL ANALYSIS OF THE ELEMENTS OF ANCIENT GREEK AND PLANT-LIKE (ISLAMIC) MOTIFS

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Abstract

In this article Geometrical analysis of elements of ancient Greek and plant -like patterns, Practical connection of drawing science with natural phenomena the relationship between man and nature, art and work is cited as an example of the science of drawing.

Keywords: ancient image, Grix, plant pattern, Cyclic curves, nature, drawing.

Introduction

Practical art, especially carpentry ancient art one of the types. SHE IS East countries, in particular Medium Asia, Iran, Turkey, Arabia, Afghanistan and in other countries developed. Especially, Medium in Asia the artistry of the created works of art, composite age and development with style difference does. Wood carving, Ganch patterns in Uzbekistan many to monuments beauty, beauty give reached is standing. She IS Bukhara, Samarkand, Kokan, Tashkent, Margilan, Khiva, Shahrisabz and other in cities building sketches in the historical site and in decoration used. Ganch carving the art of niche centuries during developed. This of art long ago medium centuries and XX century development from each other a fundamental difference does. Ancient how much carving in volumetric form, in which realistic image clearly prevails. Them, most of the time people, animals, birds image lang. of our era the first centuries ago people ganch's great to the feature have that knowing castle, Caravanserai and another places those who started decorating.

III in the century Earthen fortress my dear the palace hotels carved ganch with decorated A hanch from Varakhsha dating back to the VII-VIII centuries cooperation moist flour found. Them birds, animals, fishes, plant-like and geometric forms described.

In the X-XI centuries how much carving, painting, wood, stone and more flourished. Complicated abstract image reflection which makes patterns appear it has been.





Ganch carving the affairs of the house internal and wet external tagging in part was also used. Term trace m aqbara how much carving art that's it of the period high peak says will be XII in the century muqarnas appear it has been and many in buildings apply started In the 13th century, the art of goldsmithing rose even more. To this From Afrosiab found great how much carving works example be takes (Figure 1, Figure 2).

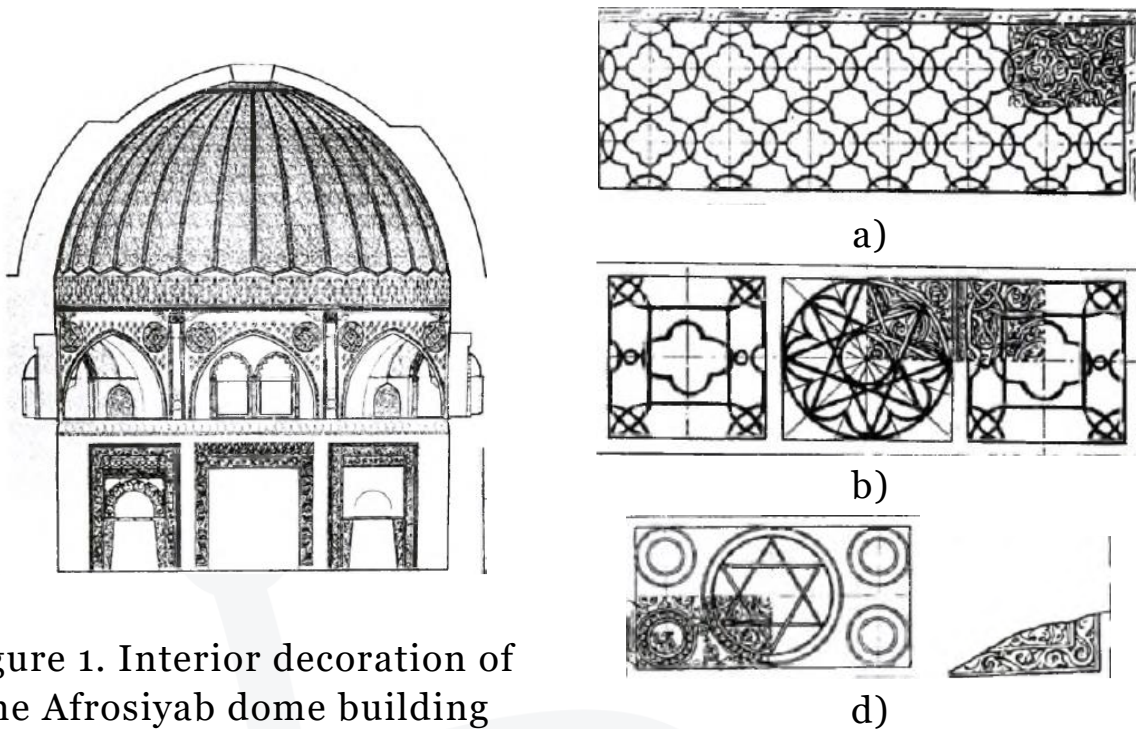
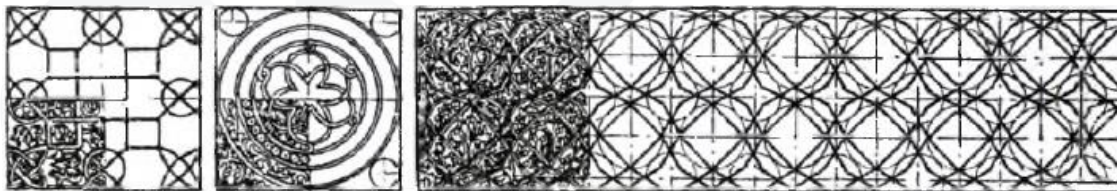


Figure 1. Interior decoration of the Afrosiyab dome building

- a) A drawing of a composition of ancient grikh and vegetal motifs with a circular pattern of leaves, fruits, flowers and leaves.



- b) A drawing of a composition of gris and vegetal motifs with leaves, fruits, flowers and leaves in a circular pattern.

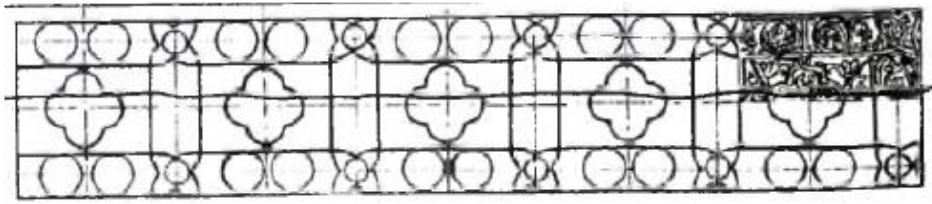


Figure 2. Decorations in the office part of the Somonites palace (9th century drawing by Rempel MI).

XIV-XVIII in centuries too of buildings internal parts hankari in decoration from art used. Wealth flourished period XVIII of the century the end - The beginning of the 19th century's done. XIX - XX a srlard a great how much from the carvers Master Abdufattah, Abdurahim Hayatov, Master Murad, Master Fuzayl, Master Life Nasser, Master pilgrim Hafiz, Master Nasrullaboy, Master Abdujalil, Master Azim, Master Omonullo, Master Shamsiddin Gafurov, Master Abraham, Master Savry and others activity they showed.

Patterns are used in some decorative works, decoration of architectural elements, carving, carving, embroidery, goldsmithing, jewelry, carpet weaving and felting, pottery, incrustation and other types of folk art.

Naqsh means " image " in Arabic, " flower ", i.e. decoration. There are many types of patterns, each of which has its own name and meaning.

According to their content, they are divided into vegetal, floral, symbolic, geometric and other types.

The art of painting is related to nature and natural phenomena, as well as to other concrete and humanities. If we consider the example of the science of drawing, the geometric analysis of plant-like (Islamic) pattern elements. How to draw the types of flower glue step by step A leaf is a plant-like design element, she is paintings immediately in nature plantleave styling received is an image. Leafpattern in the composition filler and good giver is an element. SHE IS to the structure rather simple and complicated to species is divided. Simple to the leaves ~~the~~ leaf, almond leaf willow leaf and others enters. And there are a lot of compound leaves leaf, sobarg and others enters. Don't leave the following types have: sobarg (royal leaf) – most big leaf, double leaf, many leaves chor (four) leaf, dates leaf willow leaf pomegranate leaf frown leaf, almond leaf, pepper leaf, branch leaf and others. Theirs 50 from more than types (Fig. 3)

Connection d e b refers to the circular arc of a straight line, or the direction of one arc to another . The common point for these lines is called the junction or crossing point . To make a connection, it is necessary to find the center of connection and the point of connection . Connections are often formed by the joining of straight lines and circular arcs .



Algorithms of problems related to making connections are based on the following rules :

in the 1st q o . A straight line that is an attempt to a circle makes a right angle with the radius transferred to the point of the attempt .

in the 2nd q o . The geometric position of the centers of circles that are parallel to a given straight line is the line parallel to the radius of the circle from this straight line .
ri will be a line.

in the 3rd quarter . The intersection point of two circles is located on the line joining their centers .

Connecting two circles with the given arc of radius R_3 .

External connection (Fig. 4, a). Looking for R_3 the center of the radius O_3, O_1 and $O_2 - R_1 + R_3$ respectively from the centers and $R_2 + R_3$ It is found at the intersection point of auxiliary circles drawn with radii .

Internal connection (Fig. 4b) . Looking for R_3 the center of the radius O_3, O_1 and $O_2 - R_3 - R_1$, respectively, from the centers and $R_3 - R_2$ It is found at the intersection point of auxiliary circles drawn with radii .

Mixed (internal and external) connection (Fig. 4.v). Wanted R_3 the center of the radius is O_1 and $O_2 - R_3 - R_1$, respectively, from the centers and $R_3 + R_2$ lies at the compression point of auxiliary circles drawn with radii .

For all the above cases, the points of connection K and M lie on the rays connecting the centers of the circles, which are basically connected by rule 3 .



Figure 3. step by step drawing of types of eliminti

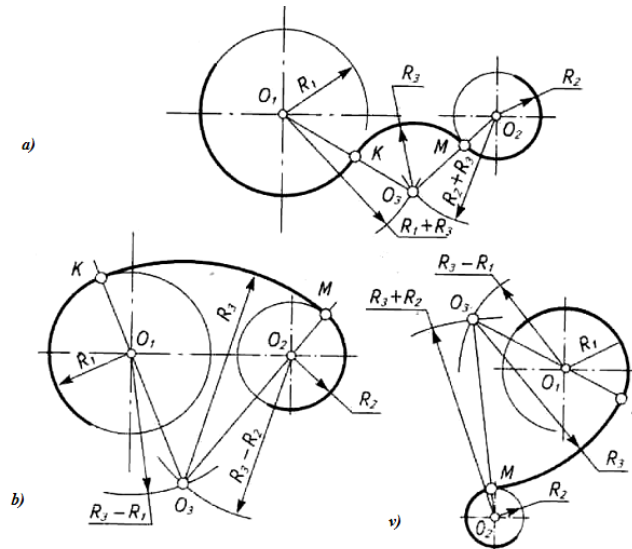


Figure 4. Connecting two circles with an arc of given radius: a) external connection;
b) internal connection; c) mixed connection

The science of drawing (drawing) occupies a special place in modern production. Because every day various machine tools, machines and mechanisms, household goods and many other things are made in our factories. And they cannot be made without drawings. Among the elements of applied art, Grikh and Islamic patterns can be an example of this. Patterns are used in some decorative works, decoration of architectural elements, carving, carving, embroidery, goldsmithing, jewelry, carpet weaving and felting, pottery, **incrustation** and other types of folk art.

Uzbek folk masters use the following three types of patterns:

- 1) Islima (a pattern consisting of curved plant-like elements).
- 2) Girikh - mainly consists of geometric designs.
- 3) Complex pattern - it is created as a result of combining the forms of gyrix and plant elements.

Islama (Islamic) - i.e. plant-like patterns are the form of stylized leaves, flowers, branches and other things by the artist. For example, when styling a flower, masters try to describe its beauty in what position (from above, from the side or from below). For this, they carefully study the structure, rules of growth, appearance of flowers, leaves, branches, buds, pigeons, peacocks, etc. in nature.

Only after that, they style various elements using connecting elements to work out different pattern compositions. In this case, their image drawings must be preserved even after the stylization of the connecting elements, that is, we must be able to visualize the original of the object through the created pattern.



Mostly simple patterns will be smooth and smoothly connected to each other. But islama (consisting of curved elements) drawings of plant-like pattern samples when performing, their contours are drawn. For this reason, between plant-like patterns we see junctions as connections between lines (Fig. 5). **The purpose of hand-drawing** connecting elements of simple patterns is to give an elementary understanding of composition.

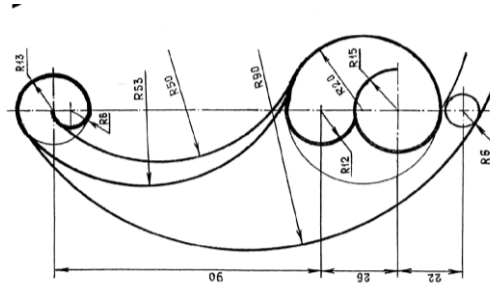


Fig. 5 Application of connecting elements in simple patterns

Islamic pattern is simple and complex at the same time. It is the simplicity of the solution that gives the key to making beautiful creations. The simpler and logical the scheme, the more effective and rich it will be. The complexity of making an Islamic pattern is that the composition and its entire aesthetic value is not created by making many connections, but depends a lot on its artistic level.

In-depth study of connections is provided in "Applied Art" and "Fine Art and Engineering Graphics" undergraduate programs. Using examples of applied and decorative art of Uzbek folk art, students need to make several simple connections, attempts, and design elements using connections.

Along with Greeks, Islamic motifs are also widely used in the architectural monuments that have been preserved and in various buildings and monuments in the national style that are being created anew, and they are their own. They are not inferior to the Greeks in their elegance. Without going into detail about Islamic patterns, we will give some examples of them (Fig . 6) .



Fig. 6.a Islimi pattern

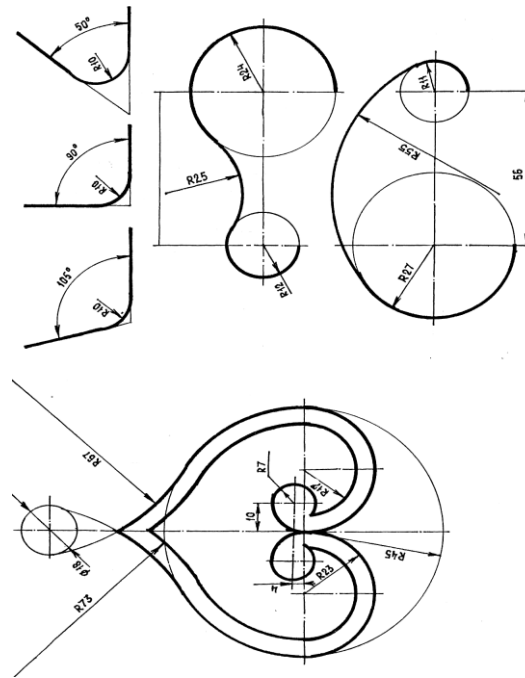


Fig. 6.b. Creating an Islamic pattern element (b) using the Islamic pattern pattern and connections

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