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ARCHITECTURAL EFFECT OF ISLAMICIWAN AND TRIPLE ARCHED FACADE ON THE PLANNING OF HISTORICAL HOUSES, (JEDDAH, SAUDI ARABIA AS EXAMPLE)

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Abstract

This paper deals with architectural planning characteristics of the houses of Jeddah, and patterns that reflect mainly for planning models of houses, in terms of the number of interfaces each house, which can vary from a home with a single interface to the home of all four interfaces, where the pattern is a single facade house number (507), style houses with façades Bakhsh number (508-509) and Al-joukhindar, Waqf Al-Shafi'i, the style with three interfaces Nour and all Ba'eshen, and style with four interfaces as house AalNassif and Al-Sharbatly. Also, elements of architectural planning, triple-planning unit and triple arched façade.

The importance of research is to highlight the importance of houses of Jeddah as a ring of architectural evolution of Islamic houses, in terms of the spread component of the planning witch Iwan and triple arched façade.

Search follows the analytical method, to study architectural planning for these houses, to get to identify the cultural and architectural role of Jeddah.

Keywards:Frist Keyward; Iwan,Second Keyward; architectural elements,Third Keyward; triple arched façade,Fourth Keyward; Jeddah,Fifth Keyward; Islamic houses

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1 Introduction

Residential architecture is one of the words that are not urban, and construction is not complete without them, they are the most stability and the nucleus of the city's landmarks, a standard that reflects the stages of growth and the level attended, [1], [2].

Jeddah has many buildings, [3], [4], [5], [6], which is an asset culturally, important episode in the evolution of architectural planning, architectural elements of Islamic architecture housing in general, and the cities of the coasts in particular, where there was the architectural style of Islamic houses, including similar - to a large extent - with archaeological homes Ottoman Egypt, particularly the city of Rosetta, and where they reflect the architectural heritage properties to the coast of the Red Sea, which is found in other cities such as Maswa' in Eritrea, and Swakin in Sudan, which houses characterized by the multiplicity of roles and details of architectural elements and wooden balconies and oriels.

Therefore, historical Jeddah represents a unique model of comprehensive urban configuration, [7], when left untouched homes, mosques and palaces, has spread narrow the streets, and that separates the dense blocks of buildings, [8], [9], [10], [11], [13], [14], it took into account the architects - in the interior design of their homes - care to be included amenity, depending the standards of society and culture, environmental and climatic factors and human nature, [5], [11], [15], [16], [17], [18], [19], [20], [21].

Natural factors that are based on the climate and building materials appearances, played a major role in urban planning for the city of Jeddah, as well as economic, cultural and social ties, [6], [22], [23], [24], between them and the neighboring areas, and characterized by a privileged position has enabled it to become one of the commercial stations between East and West, and the main gateway to the holy cities (Mecca and Medina), and a major economic hub of the Arabian Peninsula, [26], [27], rather than Shu'aiba port, which was used by merchant ships to the states of the Romans and Abyssinia in trade with Mecca, attracting the traders from all over the world, [28], [29], [30], [31].

Trade with the country of India and Abyssinia and Persia and neighboring countries such as Egypt, Iraq and Syria, helped contact and cultural exchange between the civilizations of the

Middle East, Asia and Europe, [32], [34], and the stability of large numbers of builders and craftsmen, thus reversing transmission habits foreign and traditions, and the spread of architectural styles expatriate, [30], and mixing the construction and features of architectural styles local art, [35], and the movement of the Egyptian architectural techniques by Egyptians architects, [31], which infused the local architects and artisans a lot of skills and methods of architectural and artistic different, as a result of mixing with them, [31], [36].

Climate dimension has become a key element in architectural design, in accordance with the requirements and needs to be met, to find a balanced housing thermally at all times, [37], and then, spaced houses were built as much as possible, interspersed with narrow streets, [38],[39], and winding alleys and high buildings, which stand out - gradually - to the outside in the upper floors, to assist in the streets shading and refraction interfaces and not spill a straighter one helped create interfaces with shades, for protection from the sun's rays, and to limit the temperature rise, allowing air movement, ensuring cold currents between the buildings and inside them, which helped to soften the temperature, [32], and missed the yard because of the internal vertical expansion was replaced by stairwell, [40].Thus, interfaces are designed around the outside, to provide maximum light and ventilation of houses through large windows, [41], [42], and used Rawshans and Mashrabyas, which helps to adjust the airflow and tempering temperature and ventilation and natural lighting.

The construction materials used in construction, is the most prominent is reflected in the natural environment on the architecture in the city of Jeddah, where the houses have undergone environmental factors and natural resources, and resulted in the occurrence of the city on the Red Sea coast to the ease of access to marine stones like coral limestone, which has been used as a basic material for construction, keeps the house from cold or heat with its ability to absorb moisture, sand, lime and silt deposits from the floods as mortar,[42], and used palm fronds and timber, which represents a good buffer to heat.It was the outer surfaces of the walls of the coating with a layer of white mortar, which reflect sunlight and absorbs moisture, and that the use of white limestone prevents erosion of the limestone, [43].

Wood ceilings were used, and the architect was keen to contrast rise Bishop architectural units to

form shaded areas, helped by rising Bishop interior spaces to get rid of excess heat to be replaced by cold air, [31], and reflect the modus operandi and the establishment of the bishop how rain resistance to the implementation of buffer layers composed of wood and burlap or allies and dirt and crushed plaster and lime, clay, [40], and is keen to implement a tendency allows the flow of rain water into the gutter or tank-conducted to the bottom of the house, [28].

In closets distribution, architect took into account that some of them winter in the south and east and the other summer in the north and west, winter cabins characterized by small and low ceilings popups, summer cabins feature large multiple windows and high ceilings, and spread summer councils towards the north, and all the closets and put on external interfaces, with put the bedroom and living senior roles, and spread Almlaagaf for ventilation.

There was a clear impact of economic factors on Jeddah housing planning, as the architectural and artistic influences moved between various countries, including the Mamluk and Ottoman effects, [5], [6], which was a major role in commercial activity played its transition, which emerged importance of Jeddah in the Mamluk era, as, the concerns of the rulers of the Mamluks represented the protection of the Two Holy Mosques, and in securing pilgrimage routes, this is in addition to that grandmother was considered a vital commercial marina, however, the city is undergone to the Ottoman influence, as they are a vital and strategic location, as the station naval mission to supply commercial ships and water intake, and facilitate the importation wood used in house building helped, [22], [31].

Houses of traders spread out, and went to five or six floors, and characterized by moldings, (Rawshans), rich architectural motifs and crafts related to architecture and plaster decorations and others, reflecting the economic boom, [44], traders and allocated some floors for commercial transactions.

The mixing of Jeddah residents of different races is one of the social aspects that influenced architecture in which, also, the Islamic religion in the lives of the population to take into account the sanctity of women and family cohesion Generous and differentiate between the boys, as well as the Islamic concepts of right of way and the rights of the neighbor and privacy in mind, and

these concepts ruled Building houses that influenced the architectural configurations, [28], [45], [46], and architect keen to privacy and non-detection of privacy, through the streets and narrow roads, and cover the wide windows by wooden fences and use (rawshans) and (mashrabias), [47], due to the absence of the inner courtyard and the direction of the interfaces towards the outside, and is keen on driveways should not be on one axis, with the allocation of entrances for men and another for women.

In the houses of Jeddah, the relationship between urban planning concepts and Islamic values[48], legislation clearly show, which affected the layout and shape of buildings, taking into account the preservation of the family, and privacy in the distribution of domestic uses of the house that extends vertically, and necessitated this, think about the architectural solutions, the lack of housing from abroad detection, and privacy of entry and exit, movement and sit at home and blocking women, through the multiplicity of roles and coordination in building height, to ensure that no infringement of the privacy of a single housing unit, and appeared in the coordination between the external doors so they are not opposite, [1], [2], [49], [50].

The shops, open on the facades overlooking the passable roads, so as not to be in the face of the neighboring houses, have been taken into account in the division of the houses vertically, and the allocation of portions of the guests of men and women, and a third of the members of the family, [39], [42], where it was limited to the first floors of rooms and the second to receive guests from men and cabins Maids, and the use of the third round of the guests were women, while the upper floors were limited to specific uses women and children of the household, as the floor of the living, family and special sessions, and the last of the cabins sleep, and set up screens around the bishop, which achieves the protection of the eyes of others, [31], [46].

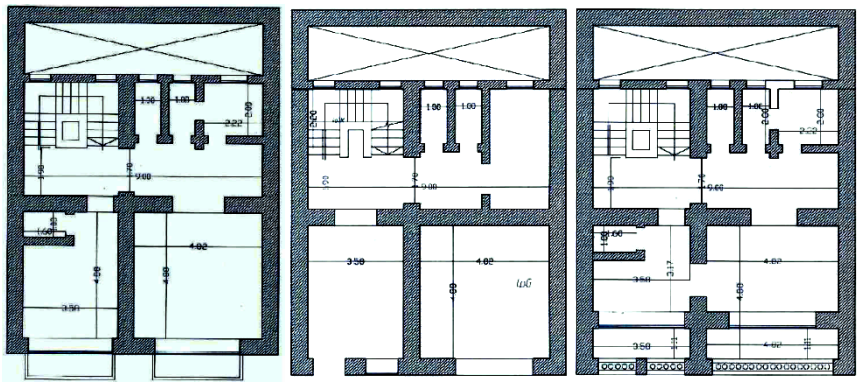
1. Characteristics of architectural planning in houses

Robert Matthew Johnson Marshall, in (1980), conducted a field survey of the old houses in Jeddah, has reached number - according to this survey - to (515) houses, mostly in moderate or poor condition, this number is shrinking as a result of urban expansion of the city, and there are four patterns reflect mainly for planning models for homes Jeddah, [51]: in terms of the number of interfaces each house, which vary between the house and one interface to the house with four

interfaces, consisting each house of uncovered illuminator surrounded by cabins key, and left the units facilities and supplements the service, and is subject to this classification to the impact of location on the planning directly in terms of the number of interfaces.

1. 1. The first type: houses with a single interface

Represented by house number (507), and consists of a single interface, which has had an impact on the entrances slots, in terms of number and place, where he has a single entrance, characterized by window openings are spacious and height, regardless of the direction of the interface, and it was an impact on the woodwork which closes window openings where the widened their shutters area, replacing architecture wide skylights and interior use protrusions private senior roles in abundance, for lack of interfaces, which affected the distribution component of the house architectural units, we find that the main units as reception, living and bedrooms which oversees the interfaces, while overseeing units secondary as servers and storage rooms and facilities on the interior skylights.



A. 1st flour B. 2nd floorC. 3ed floor

Fig. 1. House (507)

2. 1. Type II: houseswith two interfaces

Represented by houses: Bakhsh (508-509), Aljoukindar and Waqf Al-Shafi'i, and every house oversees the facets, which had an impact on the doorways and window openings, but the planning and distribution of interior architectural units, where most of the houses marked by its proximity to entrances or more by the entrance at each interface, to be allocated to the main entrance of the men on the other otherwise allocated to women and is located on the front side.

The architect is forced to implement a single entry if the houses containing shops, and was planning its impact in the window openings which led to either windows or Mashrabias or Rowashen increase their number, and characterized by height and breadth, with the exception of utilities that formed small skylights Wall slots.

Height and breadth in the window openings has been processed using the woodwork, which was the site interface and a clear impact in the composition, where the wooden work shut down on the windows, which lies in the interfaces located in the wind spam, shutters the area as large direction of slots, as the upper region (fanlight) are executed from wood woodwork, while we find different in the case closed on the windows that open slots in the interfaces located in the popular wind direction, as the manufacturer neglects the functional purpose of the sail, where the area of capacity at the expense of shutters area, and implemented Solid fillings.

Facade site had an impact on the slots type, where abounded Rowashen holes in the facade, located in the direction of the wind granulocytes as the northern and western facades, in order to use depth as a distinct seating, while the numerous windows that do not stand out from the designated wall in interfaces located in wind direction slots undesirable as the southern and eastern facades.

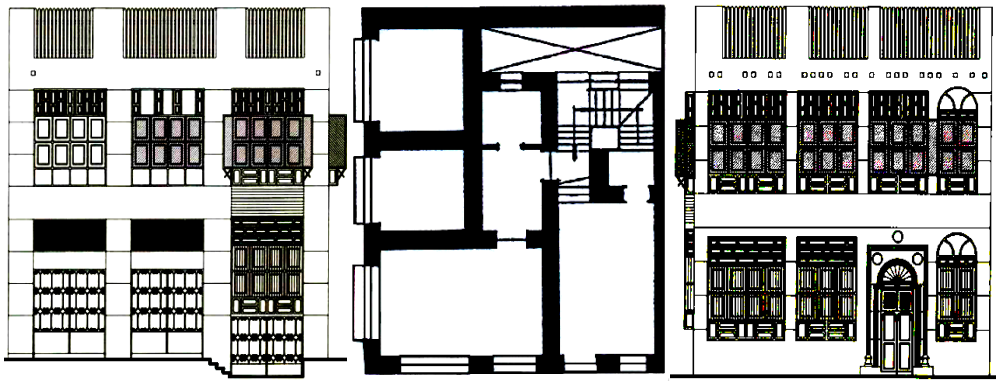
Architectural planning of the houses in this component of the interface style, has had a clear impact on the planning and distribution of interior architectural units, where he helped in the distribution of the major architectural units, according to the importance of each unit and function carried out by these two façades better, we find that he was keen to be overseen and receiver units consisting of councils and seats on the facades home, while, planning of bedrooms and living rooms is characterized by it oversees a single interface, often, sub-end providing the privacy required by those closets, architect embarked on distribution facilities on the internal parties, so they do not supervise the interfaces - as much as possible - and make it oversees the skylights, but if forced to open the interface often opens the sub-interface.

Planning this pattern helped to shrink skylights interior space, where she has a small space, to ensure that the ventilation and lighting to the interior architectural units, which is an opportunity oversee the exterior did not have, while others of the houses - in order to achieve this - based on

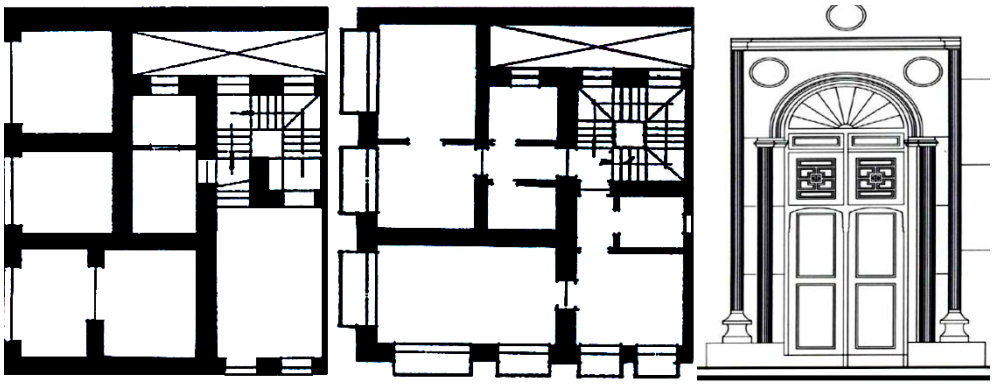
projections in the interfaces.

Houses from the inside retains full main components of: a vestibule entrance and stairwell units Reception (the Council, and the seat) bedrooms, living rooms, facilities, mass surface and area has become the exact number of units of service or subsistence or hospitality, houses marked similarity internal planning, where confined It is formed in the stairwell surrounded by other architectural units.

Hence, it has classified the houses of this pattern into two categories: the first characterized by rich architectural and decorative, and the other characterized by humility and simplicity, and it appears that - clearly - through the wooden respective business, reflecting the presence of two classes of owners: the first with a material richness and second intermediate case.

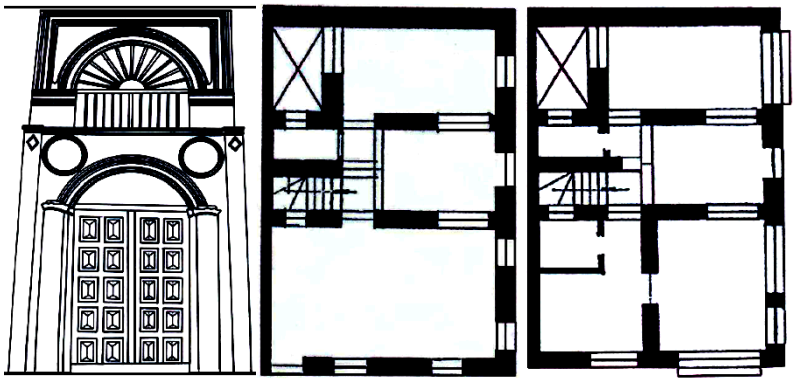


A.Western façade B. Southern façade C. 1st floor



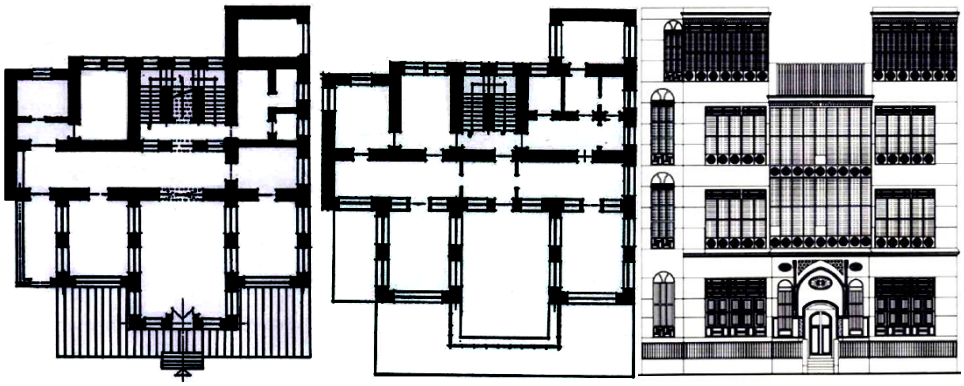
D. 2nd floorE. 3ed floorF. Main entrance

Fig. 2.Bakhsh house 508

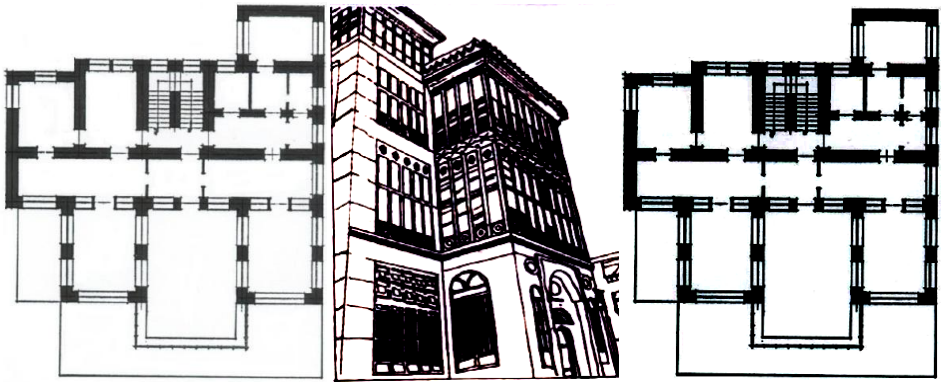


A. 1st floor *B. 2nd floor* *C. Main entrance*

Fig. 3.Bakhsh house 509

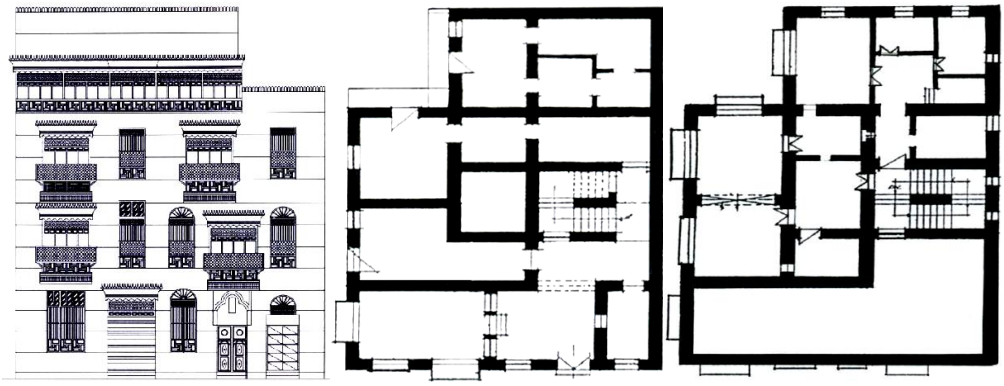


A. Façade *B. 1st floor* *C. 2nd floor*

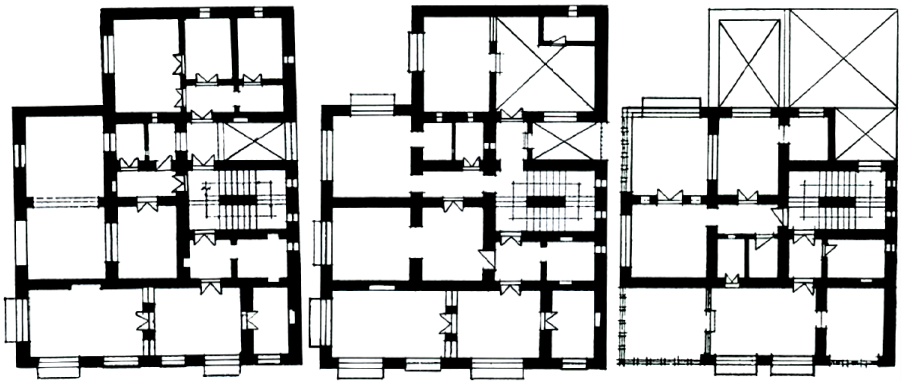


D. 3ed floor *E. 4th floor* *F. western facade*

Fig.4. Joukhandar house



A. Western Façade *B. 1st floor* *C. 2nd floor*



D. 3ed floor *E. 4th floor* *F. western facade*

Fig.4. Waqf al-shafe'I house

3. 1. Type III: houses with three interfaces

This represents style, Noor Wali and all Ba'eshnhouse, each located on three fronts, which had an impact on the planning and distribution of interior architectural units, homes oversees - of course - on the northern and western façades or at least one, which has increased in value, this planning impact on driveways slots in number, as characterized by its proximity to the three entrances or entrances, by the entrance to each interface, the interface main entrance actually allocated as a main entrance to the men and their guests, unlike women entrances located secondary interfaces.

The occurrence of the house on three fronts had an impact on the window openings in terms of increasing their number, as well as on the type of these openings, where abounded Rawashen in the main interfaces and interfaces desired as the northern and western facade, to use depth as

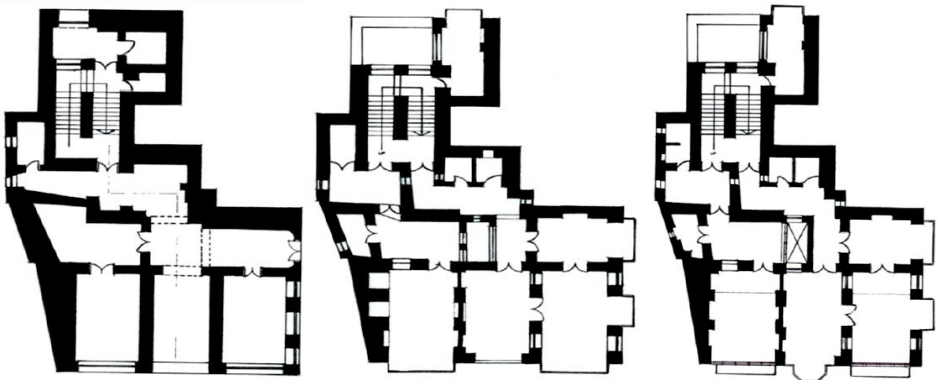
seating, whereas, abounded windows slots that do not stand for wall knighted in interfaces located in wind direction is desired as the southern and Eastern.

All openings characterized by broad and altitude, for the purpose of freeing the walls of the basements of the pressure on them, and the supply of interior spaces ventilation and lighting - private - with no internal courtyard, woodworking used in window openings, which is characterized by the diversity of forms and decorative richness.This layout had an impact on the planning and distribution of interior architectural units, multiple interfaces gave freedom to act in the distribution of the units according to the importance and function of each of them, and architectural elements.

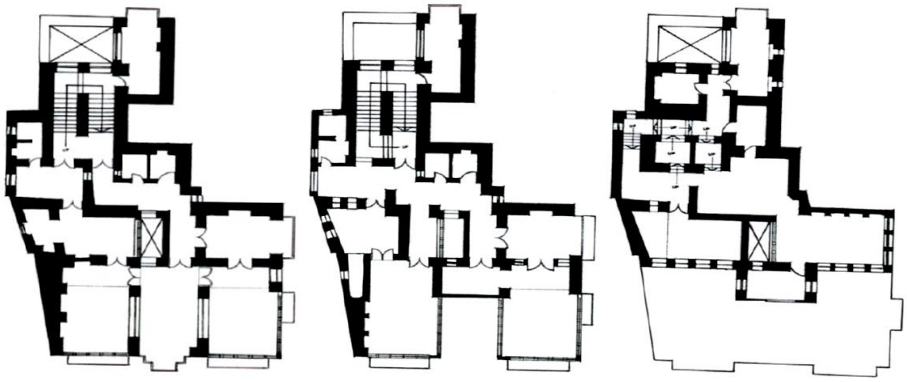
Architect ensured that oversees receiver units consisting of seats and councils on the façades best, while, planned B & living rooms, so that oversees the interface of one or two interfaces in the upper floors, and oversees - often - on the façades bodies, to provide privacy, while utilities and distributed to the parties Interior, and the interior skylights in homes disappeared, and aerobic (malqaf) appeared, drawing heavily on boll wood.

Houses reserves all the main components of: a vestibule and units of reception, living rooms, overnight facilities, service units and the mass surface, also maintained a distributed internal uses between rooms for men and special woman units, became the difference between the houses spaces is to double the units hospitality or subsistence or service, and the similarity in the planning internal terms of each of the stairwell, which is surrounded by different architectural units consists, therefore, the homes of this style characterized by rich architectural and decorative, with varied woodworking interfaces, the severity of the height, the large number of constituents and good location roles, suggesting that they were of a richer class material or for senior traders.

A. North façade *B. West façade* *C. Section*



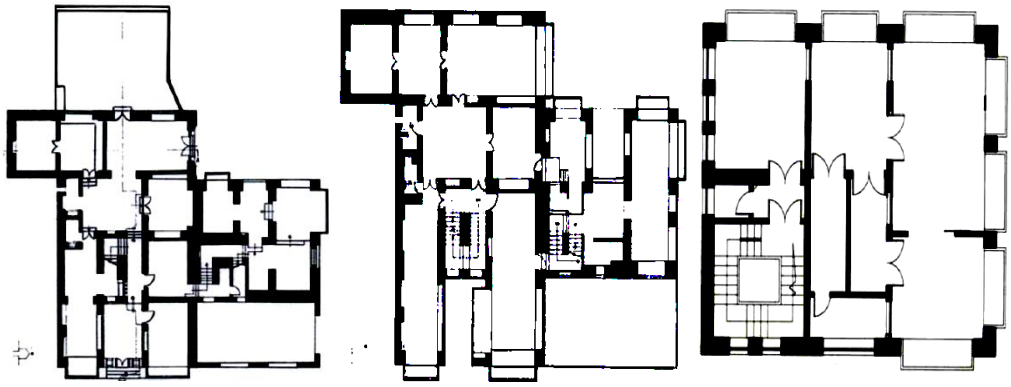
D. 1st floor *E. 2nd floor* *F. 3ed floor*



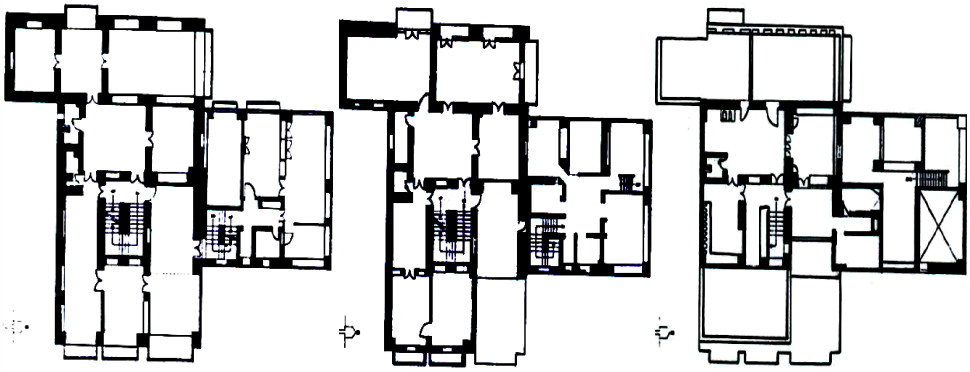
G. 4th floor *H. 5th floor* *I. 6th floor*

Fig. 5.NourWalli house

A. North facsde B. West façade *C. Section*



D. 1st floor *E. 2nd floor* *F. 3ed floor*



G. 4th floor *H. 5th floor* *I. 6th floor*

Fog. 6. AalBae'shn house

4. 1. Fourth-style: houses with four interfaces

It is represented by a house AalNassif and Al-Sharbatly, the location of each of them had an impact on the interfaces and slots doorways and windows type, as well as the planning and distribution of interior architectural units each, in terms of the number of entrances slots, houses

contained more than two entrances, allocates the main facade of the men and their guests entrance, also allocates second entrance for women, is located in the second front in terms of importance.

Planning had an impact on the window openings in terms of increasing their number, where all internal architectural spaces become oversees the interfaces, through the window openings, which is reflected in the increased number, the interface location and type of architectural units, which oversees them had an impact on the type and shape of window openings, where there are frequent rawashen, kiosks and terrace, which recently appeared in the northern and western façades, unlike the windows openings that abounded eastern and southern facades different sizes and shapes.

And the fact that the architect distribution and service units and facilities in some cases, the bedrooms, the holes marked spacious and height to ease the load on the lower walls, and the supply of interior spaces ventilation and lighting in the absence of an inner courtyard, was treated height and breadth using shims and polymorphic shutter doors.

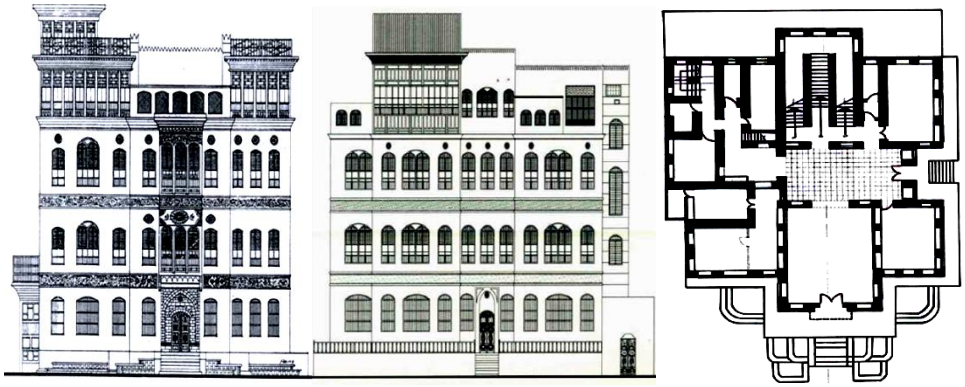
Homes planning had an impact in the planning and distribution of interior architectural units, multiple interfaces gave freedom in the distribution of units and elements of architecture without limitation, especially with the lack of an internal courtyard and the keenness of the architect to direct most of the units of the building, that were not all on the outside.

Also ensured that oversees receiver units (boards and seats) on the facets represented in the main interface and often North and one of the façades lateral, while bedrooms distributed to oversee either on one of the facades lateral, and often the eastern facade or be in the back of the house, to oversee the facets represented at the backend and a lateral façades, while the units of the facilities and the service was overseeing the rear façade

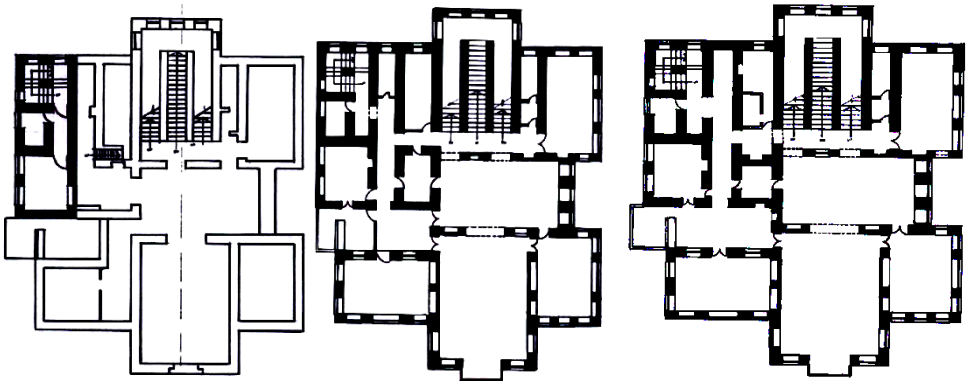
Internal Illuminator is disappeared, and kept on the use of prominent, houses reserves all the main components of, vestibule, compartments reception, living rooms, bedrooms, facilities, service units and the mass surface, also maintained a distributed internal uses of the units for men and units receivers of women and what's differentiate between large or small space is to

double the units of service or subsistence or reception.

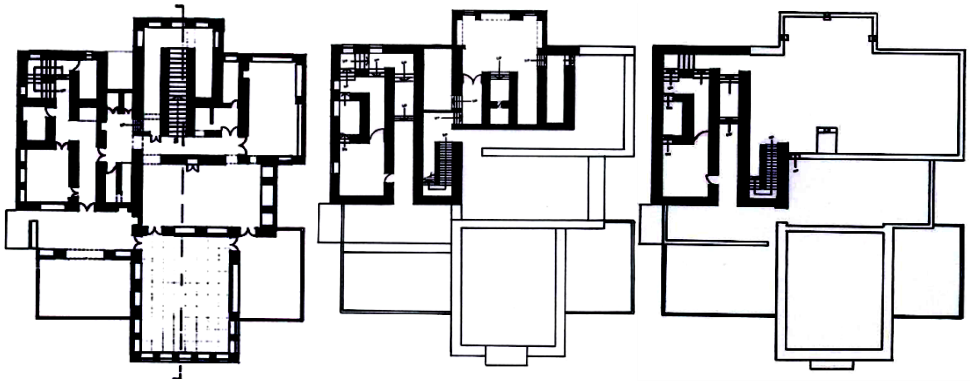
The houses are similar in internal planning, each of which consists of a stairwell, different architectural units are distributed around him, and then, homes this pattern characterized by high taste, architectural richness, intensity high, the large number of roles and good location, which shows that they're devoted to the category of richness the material in large merchants and notables.



A. North façade *B. west façade* *C. 1st floor*



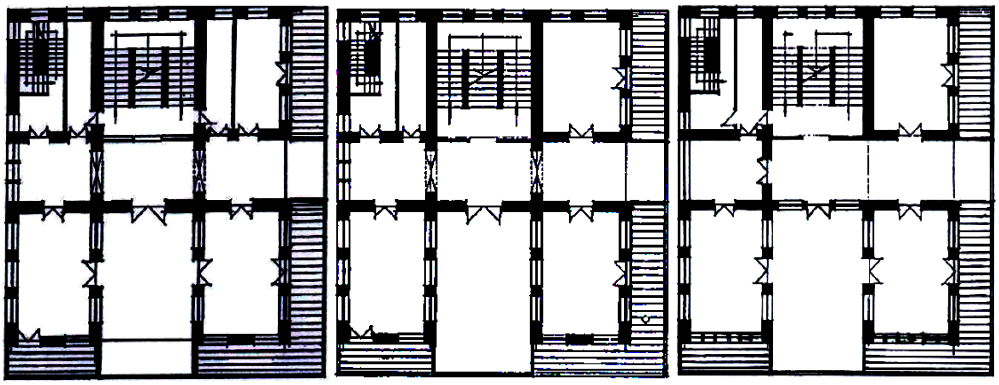
D. Double floor *E. 2nd floor* *F. 3ed floor*



G. 4th floor *H. 5th floor* *I. 6th floor*

Fig. 7.AalNaseaf house

A. west façade *B. east faced* *C. 1st floor*



D. 2nd floor *E. 3ed floor* *F. 4th floor*

Fig. 8. A;-Sharbatly house

2. Elements of Architectural planning of Jeddah houses

Construction process, they are planning the place and digging the foundations that are governed by the nature of the soil, and are digging the foundations to a depth of three meters, according to the height of the house and the number of roles, but in the hard places, are digging up the ground level and then pounded the large stones, to ensure the distribution of loads it evenly, In doing so, lead to alleviate the direct pressure on the upper layers of the earth through the bearing walls.

And building walls are load-bearing walls on the list include the thickness of the walls from the bottom to the top, one of the most important means used by its architect in the city of Jeddah for high buildings.

Bearing walls were built of stone rows a thickness of between (0.85-0.90 m), and so, to be able

to withstand the pressure from the upper floors, while the minimum thickness of the walls with a height of up to (0.55-0.60 m) in the upper floors, architectural keen to increase strengthen the walls using a huge stone blocks, which works to support the walls of the bottom, and small pieces of stone were used in the ranks of irregular sizes and uneven, and replaced by the use of grout layer.

Architect deliberately used Horizontal wooden battens and partitions to adjust the walls of the levels and distribution of loads between all six building blocks, that is, helped to maintain the strengthening of the walls and consolidate and distribute loads evenly, which gave the opportunity for rising house to varying heights in a manner consistent with the poise movement and ease the loads and distributed, and deliberately A lot of window openings and dispense with some of the top floors of the walls, and the replacement of some of the prominent Kdraoa surfaces and wooden barricades.He made interventions in the solid walls of the rooms that do not have openings or windows, in order to ease the load on the walls and be used to implement tanks Wall, and the use of wood ceilings to relieve loads, [52].

Several considerations controlled in house planning including: space, the economic situation for the homeowner, the influence of religious, social and natural factors, the architect focused - when you begin planning - the presence of elements and spaces architectural basic, such as: the elements of movement and communication (corridors and stairways), reception halls (seats and councils) and living rooms and facilities.

Architectural Drawing elements include: architectural configuration, layout, number of floors and architectural spaces. In terms of architectural configuration, it houses Jeddah characterized by vertical expansion, where the floors are varied between two floors to seven innings, depending on the ability of the owner of the physical home and the number of family members, and it is due to be influenced by the methods and architectural styles expatriate by the stability of many of the races out, and it was the Turks and the Egyptians the most impact on the architecture of homes in Jeddah during the Ottoman era.

And the homes of Jeddah are similar to Egyptian homes, whether Mamluk or Ottoman, known

vertical expansion of homes, the phenomenon of vertical expansion homes Jeddah resonated with people of the city, based on religious, social, economic, climatic, environmental factors; house building consisting of several floors, there was the use of special ones for each floor.The architectural planning, which consists of house floors and architectural spaces, home building gone through three stages:

I.Pre-Ottoman era, which is the traditional pattern, where the houses were made up of simple huts which are built from the structure of clay or wood in the shape of a cube from a number of closets and ceiling of burlap, and distributed either single or in groups on open field

II.Represents the first period of the Ottoman era (17-18 A.D), and the houses reflect the transition phase, which consisted of one or two floors on the open arena, characterized by simplicity and small size.

III. The late period from the Ottoman era (18-19 A.D), the buildings under study due to it, as a result of the affection of Jeddah houses by Egyptian houses, which dates back to the Mamluk and Ottoman eras.

Number of roles increased to homes, and included many of the blanks and architectural elements and interfaces with the technical elements, and is made up of small houses to the public and other large (Saray) upper class, but they are similar in layout, the difference is limited in the number of floors, shapes and sizes of (Rawashen)and decorative items.

Jeddah houses are similar in terms of exterior styling, where consists of two floors to seven floors, its designs are similar to a large extent in one home, and each floor is a number of functions defined by its location in the building, and use the first floor of the reception, the second floor participated with him often , to receive guests of the men, while the upper floors, the special people of the house, with the allocation of the surface of everyday uses a substitute for open courtyard.

As for internal uses, it has maintained the internal distribution agree spaces architecture, it is

clear from the projections, where we note the occurrence of the reception rooms (seats and councils) in front of the house, to supervise the main interfaces, especially in the north and west, while the position of B & living facilities rooms came at the rear, away from the receiver units, and filled the interior stairs from the first floor, and usually it was located south-party for the home or the top of the central sector.

Jeddah houses are similar in internal planning, where the main or secondary entrance leads to the first floor, which usually consists of a corridor that leads to the stairs, which leads to the stairs dedicated to sit and receive guests and bedrooms and toilet rooms and servants and seat, have a house over the entrance of the predominantly , one of the men is allocated and the other for women and family members, and there are tank bottom floor, and the upper floors consist of a three-represented in the council's main rooms: receiving room, living room and bedroom, in addition to storage, cooking and toilet compartments.

And homes - four patterns - were similar in the interior and interior design uses and distribution closets and their uses, and the difference is in the size of the house and the number of floors and architectural spaces and the variety of decoration elements and (Rawashen).

The ground floor used in most homes Jeddah reception, and found some of the models in which the ground floor used for purposes other than the reception, as commercial purposes, where there are shops in Bakhsh house, but is such a few models, becoming the exploitation of the ground floor reception is prevailing in the attribute most of the houses, and consists of the first floor layout in the homes of Jeddah: vestibule, reception hall and a range of customized living and sleeping rooms, as well as utilities and stairs rising to the upper floors.

And planning roles came - in most cases - is divided into separate or connected housing units, architect keen to plan private rooms with seating and reception on the exterior of the house to oversee outward, while sleeping, living and utility rooms planned to provide them with adequate privacy that required such as blanks architectural, architectural spaces Jeddah homes vary from enclosed spaces, which includes: the elements of communication and movement, reception and living rooms, facilities and services, to open spaces, which includes prominent surfaces.

3. Triple Planning (Iwan) in Jeddahhouses

Homes Jeddah taken consisting of longitudinal and cross-sections of architectural planning, which is derived layout of the triangular layout, in which the house consists of two sectors the first pattern and the second, which is a single-front or facades of houses, which is characterized by its small in size, and three sectors of the third and fourth pattern,and it represents the homes of three and four interfaces, with each layout consists of three longitudinal cross sections and three, we find in the homes of No. (507) and home Bakhsh, the planning consists of two linear sectors and three cross-sections,

The first includes the entrance and vestibule, and the bedroom above, stairs, and by the second shop in the first and in the second room and topped with reception room, utility room and storage.

In Al-Joukandar and Al-Shafi'I houses, each consists of the three sectors is the main of which the central sector, and includes a vestibule in the middle, followed by transept and stairwell, and the two councils on a two aspects, the first and sectors and the third consists of three cross-sections, the middle represents the recipe, shrouded Council Besides, the storage room and bedroom facilities or facilities from the other side.

In Al-Joukandar house, we find a corridor overlooking the central sector the west entrance on the first floor, the Main Board of the Supreme roles surmounted, two councils in South western and north western angles lined, the first and third sectors, who represent the bicameral identical on both sides, each divided into three cross-sections.

In Waqf Al- Shafei houses, the main central sector longitudinally and accidental represents a vestibule entrance, confined between the vestibule entrance in the northwest corner of the main board, and represents the room to the east of the northern entrance vestibule of the third sector.

In AalNassif and Al-Sherbatly houses, longitudinal segments are the vestibule entrance, which is flanked by two councils on the first floor and three boards of the top floors, the minivan knock cross-sectional, East council represents the main ones, and we find that the central sector

stretches from east to west, and leads the three councils, which is the largest of the Council the main on the north façade, flanked by the other two chambers in the north-western and north-eastern corners, the three councils oversee the transept with three entrances, the largest of which is the middle

This architectural planning, influenced - clearly - triple planning (iwan), which is the architectural unit consisting of Iwan, who is beset with two rooms, open up all of the slab cross-sectional, or a shed with three decades overlooking the courtyard or interface, [53], [54], and this unit is the foundation of the by some Islamic buildings, [55], [56], [57].

As for the genesis of this planning, views around it are varied between that derived from the shaped Crusader Byzantine churches in Syria, [53], [58], [59], [60], [61], [62], [63], [64],[65], [66], and some said that quote from the Sasanian palaces that were common in the first Abbasid period, [67], [68], [69]. [70], [71], [72], [73], and it is derived from the housing system, [74], which was the hall and two iwans, [53], [62], [75], [76], [77], [78], [79], [80].

Orientalists built those theories on the basis of planning sometimes without regard to the elements of architecture, or on the basis of architectural elements at other times without planning considering or taking into account the evolution of the job, [81], [82], [83], [84], [85], [86], housing and the role she was originally in the genesis of this system, [87], however, studies have shown that the origin of this planning is Iraq,[88], the planning has continued in the Umayyad and Abbasid, [74],[89], and moved to Egypt in Tulunid era, where the spread Tulunid and Fatimid houses in Fustat, [77], [78], [79],[90], [91], [92], [93], andCairo[53], [58], [59], [61], [94], [95],this pattern tripartite division of the facade is one of the important elements in the graphic interfaces units overlooking the inner courtyard[96], [97].

The idea of the tripartite division was among the architectural vocabulary employed in each facility according to the conditions of use and style and materials creation, which confirms the prevalence of the use of this division, but different formulas and patterns in the windows or doorways, [98] in the internal interfaces, [99], [100], [101], [102], [103], [104].

The existence of the shed or the transept which replaced by casual passage, which progressing councils of Jeddah, has been linked in all cases, the elements and units which are located behind her, which noted that it include main iwan (councils), rooms or other items that surround them, and imposed by the Planning and Survey as entering areas, passages or other, usually, is progressing largest iwan, which reveals the essential link between Iwan and between the presence of a shed or slab cross-sectional spearheaded, posing a planned triple corresponding tripartite contracts for the interface, [74], [76], [91]. [74].

Central planning in the houses, and the units that took the form of a character (T) to Iwan, and transept, which spearheaded, and diversity in the iwan, located two rooms open on the tile under review, on both sides of each of them; the three elements which include: Iwan and two rooms and the tile under review, and we found similar examples these elements in the south-eastern and western two houses in Ukhaydir Palace, and in the public door in JawasaqAl-Khaqani Palace in Samarra, [101], [105], [106], [107].

Despite stated that no such houses Jeddah - and this diverse spaces - that are going to one model, we note - despite this diversity - that the planning elements have been set up to achieve a functional purpose in the first place, it is to councils and chambers of sleep, which is equipped with the means to ensure comfort living by and visitors, and facilities consisted of kitchens and bathrooms and the elements of communication and movement, to ensure mobility between home elements easily, this planning and continued Islamic houses in the Ottoman era, represented in the homes of Rosetta in Egypt, [108], which has moved into the homes of Jeddah, [109].

Conclusion

- Through research, it highlights the importance of the ancient houses in Jeddah, which is architecturally unparalleled heritage, within a loop of urban and architectural development of houses archaeological Islamic.
- The study covered nine houses follow the four patterns reflect mainly for planning models for homes Jeddah,
- The first type: houses with a single interface as house number (507).
- The second style: houses with two interfaces as Bakhsh (508-509), Al-Joukindar and

Waqf Al-Shafi'i.

- Third style: houses with three interfaces as Noor Wali and Ba'eshn.
- Fourth-style: houses with four interfaces as AalNassif and Al-Sherbatly.
- Several considerations controlled in house planning including: space, the economic situation for the homeowner and the impact of the natural, religious and social factors.
- Homes Jeddah characterized - in terms of architectural configuration - vertical expansion, where the different roles between the two floors to seven innings, depending on the physical ability of the owner of the house and the number of family members.
- Homes affected by the methods and architectural styles expatriate, through the stability of many of the races, and the Turks and the Egyptians were the most impact on the home building in Jeddah in the Ottoman era, and shows, the similarity in architectural planning and architectural elements with the homes of the Egyptian city of Rosetta.
- First floor used for the reception, although there is some models that took advantage of them for purposes other than the reception, as commercial purposes and engaged with the second round often to receive guests of the men, while the upper floors were especially the people of the house, with the allocation of surface uses everyday substitute for the yard overdraft.
- Homes Jeddah taken consisting of longitudinal and cross-sections of architectural planning, which is derived layout of the triangular layout, which consists of three segments, and progresses councils knock cross-sectional, be with the main board-shaped (T), which is called iwan planning, affected by the trio of planning, which is the architectural unit consisting of iwan, who is beset with two rooms and open up all of the slab cross-sectional, or a shed with three decades overlooking the courtyard or interface, and this unit is the basis upon which some Islamic buildings, including the homes of the city of Jeddah.
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References

[1] Hariri, Magdi Mohammed Abdul Rahman. *Founded the design house in Islamic architecture*, Mecca, 1, 1989, pp.15-325, (In Arabic).

[2] Yaghi, Mustafa Ghazwan. *Seats in the groves of Cairo in the Mamluk and Ottoman periods*, Master Thesis, Faculty of Archaeology - Cairo University, 1999, p.325, (In Arabic).

[3] Al-Bakri. *Lexicon what Astagam of the country names and placements*, 1, achieved by Mustafa El-Sakka, Beirut, p.17, (In Arabic).

[4] IbnHawqal. *Image of the earth*, Leiden, Brill Press – Netherlands, 1, 1938, pp.31-32, (In Arabic).

[5] Al-Ansari, Abdul Quddus. *Encyclopedia of the history of the city of Jeddah*, 1, Jeddah, 1980, pp.31-60-80-90, (In Arabic).

[6] Al-Ma'badi, Mubarak Mohammed. *The commercial activity of the port of Jeddah during the Ottoman rule (1840-1916)*, Literary Cultural Club – Jeddah, 1993, pp.49-60-89-450:457, (In Arabic).

[7] Farsi, Mohammed Saeed. *The evolution of the urban of the old city of Jeddah*, Saudi Arabia symposium cities, proliferation and installed, Jeddah, 1983, (In Arabic).

[8]Khān, SultānMahmūd. *Jeddah Old Houses: A Study of Vernacular Architecture of the Old City of Jeddah*, Ronald Goodfellow, 1981, (In Arabic).

[9]Al-Lyaly, Sameer Mahmoud Z. (1990). *The Traditional House of Jeddah: A Study of the Interaction Between Climate, Form and Living Patterns*, University of Edinburgh.

[10]Buchan. James (1991).*Jeddah, Old and New*, Stacey International.

[11] Farsi, Hani M.S. (1991). *Jeddah: city of art: the sculptures and monuments*, Stacey International, London.

[12]Kultermann, Udo (1999). *Contemporary architecture in the Arab states: renaissance*, McGraw-Hill. Hawker.

[13], Hawker. Bosworth,Clifford Edmund. *Historic Cities of the Islamic World*, Brill – Leidwn, 2007, pp.355ss, (In Arabic).

[14] William, Ronald (2008). *Traditional architecture of the Arabian Gulf, building on desert tides*, WIT.

[15] Froster, G. S. (1866). *A trip Across the Peninsula - RehlaAbr Al-Jazeera*, Mombai, India.

[16] El-Hage, Badr (1997). *Saudi Arabia, caught in time 1861-1939*, Published by Garnet, Reading.

[17] Al-Harbi, Dalal (2003). *King Abdulaziz and his Strategies to deal with events, Events of Jeddah*, King Abdulaziz National Library.

[18] Al-Khaldi, Ibrahim (2004). *The Bedouin Photographer - Al-Mosawwir Al-Badawi*, Kuwait.

[19] Tarabulsi, Mohammed Yosuf. (2006). *Jeddah, A Story of a City*, King Fahd National Library, Riyadh.

[20] John, F. Keane (2006). *Six months in the Hijaz, journeys to Makkah and Madinah 1877-1989*. Barzan Publishing, Manchester.

[21] Facey, William & Grant, Gillian. *Saudi Arabia by the First Photographers*. Didier, Charles. *SéjourChez Le Grand-Cherif De La Mekke*. Librairie De L. Hachette et Rue Pierre.

[22] Mahmoud, Ali Ali. *Economic life in Jeddah in the era of the Mamluk sultans*, (1250-1517), Cairo, 1991, (In Arabic).

[23] Kabli, Wahib. *Artisans in the city of Jeddah*, Jeddah Municipality – Jeddah, 1996, p.88, (In Arabic).

[24] Ismail, Sabira. *Jeddah during the period (1869-1908)*, historical and cultural study in contemporary sources, the King Abdul Aziz Foundation, 1997, pp.55ss, (In Arabic).

[25] Towaim, Yusuf bin Hamad. *Jeddah, history and civilization*, Jeddah - Saudi Arabia, 1999, (In Arabic).

[26] Al-Batanoni, Mohamed Labib. Hijazi trip, Taif, p.5.

[27] Ali, Jawad. *Detailed in the history of the Arabs before Islam*, 4, the University of Baghdad, 1993, p.115, (In Arabic).

[28] Bukhari, Abdullah Yahya. *Jeddah architecture ancient characteristics and evolution*, Read magazine, a special issue, Jeddah in the early fifteenth century, 1981, pp.38-48, (In Arabic).

[29] Al-Moussawi, Mustafa Abbas. *Historical factors of the origins and evolution of the Arab and Islamic cities*, Baghdad, 1982, p.200, (In Arabic).

[30] Al-Yami, Muhammad Ali. *Jeddah hundred years and the completion of the challenge*, the secretariat of the city of Jeddah, p.15, (In Arabic).

[31] Blocker, Blocker Ahmed. *The story of the city of Jeddah, Saudi Arabia folders day*, 1, Jeddah, pp.63-83-100, (In Arabic).

[32] Taleb, Caesar. *Housing in Saudi Arabia*, tr. by Mohammad Hussein Al Ibrahim, King Saud University – Riyadh, 2001, pp.45-128, (In Arabic).

[33] Al-Shaafi, Mohammed. *The foreign trade of Jeddah during the period 1840-1916*, 1st ed. p.23.

[34] Jeddah historical area preservation department, *The Legacy of old Jeddah, past and present*, Jeddah, Munciqality of Jeddah, (N. D.), 1985,pp.49-53.

[35] Umm Al Qura University. *Housing patterns that were prevalent at the beginning of this century*, Saudi Arabia, the world of construction - the center of planning and architectural studie., 212, 1999, p.12, (In Arabic).

[36] Salim Ahmed Fouad, et al. *Jeddah Municipality experience in the protection and restoration of Islamic cultural heritage of the city of Jeddah*, research presented by the secretariat of the city of Jeddah in a seminar on preservation of historic cities, Jeddah, 1994, p.5, (In Arabic).

[37] Saleh, Yasser Ismail Abdul Salam. *Factors affecting the Ottoman religious buildings in Cairo and Lower schemes*, Master Thesis, Faculty of Archaeology, Cairo University, 2001. p.33, (In Arabic).

[38] Mustafa, SalehLame'i. *Medina evolution of urban and architectural heritage*, Beirut, 1981, p.329, (In Arabic).

[39] Ibrahim, Abdul Baqi. *Rooting civilized values in the construction of contemporary Islamic city*, Center for Planning and Architectural Studies, Cairo, 1982, pp.21-31-34-40-80, (In

Arabic).

[40] Ministry of Municipal and Rural Affairs. *Architectural heritage in the Kingdom of Saudi Arabia*, Riyadh, 2002, pp.101-104, (In Arabic).

[41] Fouad, Tamer. *Openings Kasr Fine governor in the built environment*, Master Thesis, Faculty of Engineering - Cairo University, 1993, p.22, (In Arabic).

[42] Al-Saleh, Nasser Abdullah. *Effects and geographical patterns of traditional architecture in Saudi Arabia*, College of Education - Umm Al Qura University, 1, 1984, p.34, (In Arabic).

[43] Abdullah, Muhammad Ali. *Decoration of gypsum in the Gulf, the folklore of the Gulf Centre*, Qatar, 1985, p.18, (In Arabic).

[44] Al-thagafi, Abdullah bin ZahirAttiya. *Wood Industries architectural city of Jeddah in the Ottoman era*, Master Thesis, Faculty of Sharia and Islamic Studies - Umm Al Qura University – Makkah, 2001, p.23, (In Arabic).

[45] Hathloul. *Architecture between tradition and modernity*, Urbanism and Environment, College of Architecture and Planning - King Saud University, Riyadh, 1985, p.1, (In Arabic).

[46] Hathloul. *Arab Islamic city impact of legislation in the urban environment configuration*, Riyadh, 1, 1994, pp.89-93-94, (In Arabic).

[47] Koshak, Abdul QaderHamza. *Islamic approach in the design of architecture*, magazine Manhal 516/56, 1994, p.4, (In Arabic)5.

[48] Ibrahim, Abdul Baqi. *Islamic perspective of the theory of architecture*, Center for Planning and Architectural Studies, Cairo, 1986, p.61, (In Arabic).

[49] Al-Araby, Nabil Mohammed Hadi Mohammed. *Security and safety in the planning and design of residential areas*, Master Thesis, Faculty of Engineering, Cairo University, 1991. p.22, (In Arabic).

[50] Al-Nowaiser, Mohammed Abdullah. *Architectural Heritage properties in Saudi Arabia*, the Najd region, King Abdul Aziz Foundation, 1999.p.29, (In Arabic).

[51] Matthew, Robert Johnson and Marshall. *The study of the historical area of Jeddah*, the second phase, monitoring construction and civil design guide, Jeddah Municipality, Ministry of Municipal and Rural Affairs, Saudi Arabia, 1980, (In Arabic).

[52] Jomah, HishamAbdelsalam. *The traditional process of producing A house of Arabia during the 18th and 19th centuries, A case Study of Hedjaz*, P.H.D. Thesis, Institute of African

research and studies, Edinburgh Univ. 1992, pp.145-156.

[53] Fikri Ahmad. *Cairo mosques and schools*, the Fatimid era, Cairo, 2, 1965, pp.126-127, (In Arabic).

[54] kuhnel, Ernest. *Islamic art*, tr. by Ahmed Musa, Beirut, 1966, p.6, (In Arabic).

[55] Hoag, J. (1987). *The Classic Islamic Architecture of Egypt: The Fatimids*. In Islamic Architecture. NY: Rizzoli. pp.67-75.

[56] Ettinghausen, R. and Grabar O. *The Fatimids in North Africa and Egypt:910-1171*, In The Art and Architecture of Islam 650-1250. New Haven: Yale UP. 1987, pp.167-187.

[57] Bierman, I. A. *Writing signs: the Fatimid public text*. Berkeley: Univ. of CA Press, 1998.

[58]Herz, Max. *Index holdings Arab Dar effects*, localization Ali Bahjat, Cairo, 1909 pp.33-34, (In Arabic).

[59] Commission for the Conservation of Arab Monuments. *Pamphlets Committee*, 1904, pp.98-99, (In Arabic).

[60] Maher, Sou'ad. *Egypt's mosques and their guardians righteous*, 2, Cairo, 1979, pp.12-30, (In Arabic).

[61] Van Berschem, M. *Materaux pour un corpus inscriptionumarabicarum*, 1, Paris, 1894,pp.254-269-536. p.40.

[62] Creswell. *The origin of the cruciform plan of Cairene madrasas*, BIFAO, T.XXI, Le Caire, 1959, pp.1-55.

[63]Behget, et Gabriel, A. *Fouilles d'al Fustat*, Le Caire, 1921, p.82.

[64] Wiet, G.etHautecoeur, I. *Les Mosques du Caire*, Paris, 1932, p.226.

[65] Creswell. *Early Muslim Architecture*, 2, Oxford, 1959, p.130.

[67] Briggs, M. *Mohammedan Architecture in Egypt and Palestine*, Oxford, 1924, p.79.

[68] Richmond. *Muslim Architecture*, London,1929, pp.106-109.

[69] Herzfeld. *Studies in Architectur*e, II ,ArsIslamica, X, 1934, pp.14-16-29.

[70] Diez, E. *The Principles and Types*, in Pope, A.U.*A survey of Persian Art*, Oxford, III, 1939, p.916-929.

[71] Godard, A. *L'Originde la Madrasah, de la Mosqueeet de Caravanserairls a quatre Iwans*, Ars islamica, XV–XVI, 1951.

[72] Grabar, O. *Creswell, K.C. Muslim Architecture of Egypt*, in ArsIslamica, IV,1961, pp.426-427.

[73] El-Basha, H. *Herzfeld Theory about the Architecture origin of the Cruciform Madrasa*, Encyclopedia of Islamic Architecture Arts and Archaeology, Maktabat al Dar Al Arabia lilKitab, Cairo, 2, 1999, pp.34-44.

[74] Creswell. *A short account of Early Muslim Architecture*, Revised and supplemented by James W. Allan, The American Univ. Press,1989, figpp.127-129.p.146. figs.85-147-236-240.

[75] Al-Basha, Hassan. *Introduction to Islamic Antiquities*, Cairo, 1979, p.16, (In Arabic).

[76] Shafe'i, Fred. *Arab architecture, the era of the governors*, the Egyptian General Book Authority – Cairo, 1995, pp.125:128-261, figs.231-232-258-263:170, (In Arabic).

[77] Creswell. *The Muslim Architecture of Egypt*, I. Oxford: Clarendon Press. Reprinted by Hacker Art Books, New York, 1978, 1952, pp.104-128-133-134-261-263.

[78] Lézine, A. *Les salles nobles des palais mamelouks*. Annales Islamologiques, 10,1972).

[79] Sayed, H. *The Development of the CaireneQa'a: Some Considerations*, AnnalesIslamologiques, 23,1987.

[80] Sayed, H. *The Rab' in Cairo: A Window on Mamluk Architecture and Urbanism*. Ph.D. diss., MIT, Cambridge, MA., 1987.

[81] Al-Maqdisi. *The best partitions to know the regions*, Leiden, 1906, p.44, (In Arabic).

[82] IbnWasel. *Moufarrej cherub in News BaniAyoub*, achieving Jamal al-Din al-Shayal, Cairo, 1.1953, p.299, (In Arabic).

[83] Al-Na'imi. *The student in the history of schools*, Damascus, 1, 1948, p.299, (In Arabic).

[84] Al-deewa Gee, Said. *Education in Islam, Mousul - Iraq*, 1982, p.74, (In Arabic).

[85] Awad, Bashar. *Boom intellectual movement, in the history of Iraq*, Baghdad, 1983, p.505, (In Arabic).

[86] Sauvaget. *Les Monuments Ayyopides de Damas*, Paris, 1938,pp.15.

[87] Makdisi, G. *The Rise of Colleges Institutions of Learning in Islam and the West*, Eddinburgh, 1981, p.27.

[88] Darwish, Mahmoud Ahmed. Assets of architectural planning of Islamic schools, Journal of Arts and Humanities - Faculty of Arts - Minia University, a series of special editions, January 2001, (In Arabic).

[89] Al-'Ameed, TahirMuzaffar. *Abbasid architecture in Samarra*, Baghdad, 1976, p.167, (In Arabic).

[90]Helmy, Abbas. *Islamic schools and the role of science and ancient architecture*, Journal of the Faculty of Sharia – Mecca, 3, 1977, pp.156-157, (In Arabic).

[91] Osman, Mohammed Abdul Sattar. Archaeological studies in the Abbasid and Fatimid architecture, Faculty of Arts in Sohag, 2003, pp.318:320-322-323, (In Arabic).

[92] Goitein, D. *A Mansion in Fustat: A Twelfth Century Description of a Domestic Compound in the Ancient Capital of Egypt*. The Medieval City, Yale University Press, 1977,pp.163-78.

[93] Jarrar& others. *Resources for the Study of Islamic Architecture*. Cambridge, MA: Aga Khan Program for Islamic Architecture,,1994.

[94] Marçais, G.*Les Monuments Arabe du Tlemcen*, Paris,1903, p.536.

[95]Saladin, H. *Manual d'art Musulman, l'Architecture*, Paris,1907, p.109.

[96] Petersen, A. *Dictionary of Islamic Architecture*. London; New York: Routledge, 1999,pp.44-91.

[97] Williams, C. *Islamic Monuments in Cairo: The Practical Guide*, American University in Cairo Press, 2002, p.37.

[98] Planning and Architectural Studies Center and the revival of the heritage of Islamic architecture. *Architectural design and urban planning foundations in Islamic eras in the capital Cairo*, Islamic Capitals and Cities Organization, Jeddah, 1990, p.36, (In Arabic).

[99] Abu-Lughod, J. L. *Cairo, 1001 Years of the City Victorious* (Princeton University Press, 1971.

[100] Scanlon, George T. *the Pits of Fustat: Problems of Chronology*, The Journal of Egyptian Archaeology,1974, pp.60-78.

[101] Scanlon, George T. &Pinder-Wilson, R. *Fustat Glass of the Early Islamic Period: Finds Excavated by the American Research Center in Egypt, 1964-1980*. Altajir World of Islam Trust, 2001.

[102] Ma'alouf, A.*The Crusades Through Arab Eges*. Al Saqi Books, 1984,pp.159-161.

[103] Kubiak, W. *Al-Futat, its foundation and early urban development*. Cairo, Egypt: American University in Cairo Press, 1987.

[104] Lapidus, Ira M. *A History of Islamic Societies*.Cambridge University Press,1988, pp.41-52.

[105] Mason, R. B.*New Looks at Old Pots*: *Results of Recent Multidisciplinary Studies of Glazed Ceramics from the Islamic World*. Muqarnas: Annual on Islamic Art and Architecture, II, 1995, pp.5-7.

[106] Antoniou, J. *Historic Cairo - rehabilitation of Cairo's historic monuments.*Architectural Review, March 1998.

[107] David, R.*The Experience of Ancient Egypt*. London; New York: Routledge, 2000,p.59.

[108] Bacharach, Jere L. *Fustat Finds: Beads, Coins, Medical Instruments, Textiles, and Other Artifacts from the Awad Collection*. American University in Cairo Press, 2004.

[109]Darwish, Mahmoud Ahmed.*Rosetta monumental buildings and wooden artifacts in the Ottoman era*, Master Thesis, Faculty of Archaeology - Cairo University, 1989, (In Arabic).

[110] Ahmed, Susan Mohamed Abdul Latif.*Building the remaining Ottoman role in Jeddah*, architectural archaeological study, compared with counterparts in Rashid, Master Thesis, Faculty of Archaeology - Cairo University. 2009.