THE CONTRIBUTION OF BRITISH ENGINEER ARCHITECT COLONEL SAMUEL SWINTON JACOB, (1867 – 1902): PROPONENT OF EUROPEAN INDO ISLAMIC ARCHITECTURE IN COLONIAL INDIA.

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ABSTRACT: Lahore is an ancient historic city and possesses a remarkable architectural heritage. The city served as regional capital of many empires but owes much of its architectural developments to Mughal and British. The Mughals laid the physical and social framework of Lahore, while the British transformed the city into modern times by introducing new institutions and technologies. The British government, proceeding to colonize India, constructed many governmental and public building in European classical styles. However, towards the end of 19th century, they assimilated and adopted the native Indian styles in architecture leading to the development of European Indo Islamic style. This paper explores the architectural achievements of the British Executive Engineer and Architect, Sir Samuel Swinton Jacob in India who was intricately involved in the revival of traditional building crafts in Punjab, particularly, in Jeypore state (now Jaipur) in the late nineteenth century. During his tenure of three decades in India, (1867-1902), he constructed many important buildings both for the Government and the private sector. The buildings he designed were a testimony of a mixture of European and Indo Islamic features, The paper highlights his design philosophy and architectural contributions which have never been discussed in any scholarship with the major focus on Punjab, Lahore as well as Jaipur. The information has been gathered from different sources; site visits, Punjab Archives, British libraries, Annual reports on public works and his portfolio of Jaipur. This research paper will surely open up new avenues for the future researcher in this area.

Keywords: Lahore, Jaipur, Mughals, British Colonial, Anglo-Indian

INTRODUCTION

Col. Samuel Swinton Jacob, the Chief Engineer in Jaipur State, is generally known as one of the main movers for the revival of Indian building crafts during the Colonial period. Being the chief promoter of the "European Indo Islamic" style, he strongly advocated on the revivalism of indigenous architecture of India. As given in the preface of "Jeypore Portfolio of Architectural Details, London 1890-1913," according to Samuel Swinton Jacob, "the architectural works being carried out by the Public and Works Department were mundane, standardized and unsympathetic to Oriental architecture and were steeped in stereotyped conventionality." (Jacobs, 1890). Jacob was deeply influenced by the Rajput and Mughal architectural styles (Metcalf, 1989). His fascination centered on the ornamental details of historic buildings of these styles, his view being, that though the buildings themselves had been "designed to meet the requirements of an age that had passed (Jacobs, 1913), the elements could be incorporated successfully in modern buildings".

Professional Education and Career: Born on 1841, Samuel Swinton Jacob got his primary education from Cheam and was trained from the Military Seminary, East

India Company at Addiscombe (Bourne, 1979). After that he joined Bombay Artillery, qualified as a surveyor and engineer in 1863. To start his career, his first job was in the Public Works Department. He took up the post of Executive Engineer to the Maharaja of Jaipur in 1867, and stayed there until beyond his retirement in 1902. Working as a Chief Engineer in Jaipur State, he thereby, executed many irrigation projects. During his career, he designed and supervised construction of several monumental buildings in India. His monumental work, specifically in Jaipur is recognized in the Government and private sector.

The buildings designed by him are described by many in India today as a mixture of Indo Islamic and European architecture, as he integrated Indian classical architectural elements in his designed buildings. He also worked as advisor for development of plans for New Delhi. After the post of Lieutenant-Colonel he was upgraded to a post of Knight in Commander with an honour title 'Sir' for recognition of services in British Army during world War-1. After retirement, Samuel came back to his native town Weybridge (Tillotson, 1987)



Fig. 1: Map showing the cities in India where Col Swinton practiced.

METHODOLOGY

In this research paper an in depth study has been conducted on the buildings designed by Col Samuel Swinton Jacob during his tenure in India as Executive Engineer and Architect. He constructed variety of buildings, including religious, royal and educational buildings, in and around Punjab during 1867 – 1902. The study starts from his early education leading towards his professional career in India. The outstanding buildings designed by him have been tabulated in chronological order, and a study has been conducted regarding their use, architectural elements, planning and materials of construction. This information has been collected through archives, drawings, site visits, photography, journals and books. Lastly, the qualitative study of the buildings in chronological order has been transformed into tabular form and then based on these, the results and conclusions have been derived regarding the design approach and architectural philosophy.

SOME OF THE OUTSTANDING BUILDINGS THAT HE DESIGNED ARE:

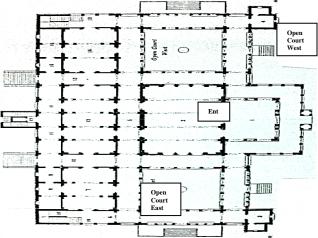


Fig. 2. Ground Floor Plan of Albert Hall Museum India

Albert Hall Museum: It is situated at Ram Niwas Bagh, outside the city wall opposite to the New Gate in Jaipur. Called as the Government Central Museum, was designed in the year 1876 by Colonel Samuel Swinton Jacob just to welcome King Edward VII, the Prince of Wales on his visit to India in Jaipur.



Fig. 3: Arches & columns of Albert Hall Museum India

Albert Hall is the oldest museum in Jaipur. Maharaja Sawai Ram Singh II constructed this museum in the year 1868. Maharaja Madhu Singh had idealized it as a museum that could be known for the art of Jaipur.



Fig. 4: Elevation of Albert Hall Museum India

The idea of creating a museum and library for the city had first arisen in 1876. The Durbar did nothing for some time, and then nearly five years afterwards, the actual building was constructed under the supervision of Samuel Swinton Jacob. In 1890, the work of art was displayed for the public in St. Stephen's College, Delhi. Regarding the foundation stone, as Jacob recorded with a note of relief, "I was asked by the Maharaja to superintend the work," (Metcalf, 1990). Under Jacob's directions, the Museum was constructed substantially in 1883-84 and formally opened in 1887, (Idem, 1987).

Design The main exhibition hall consists of three long halls in one row. Each is with double height and provided with an overhanging, internal balcony for pictures. In front of these halls are two open courts, flanking a large central hall, intended for lectures and seminars.



Fig. 5: Side view of Albert Hall Museum India

The plan of the building shows that it is axial and symmetrical. The vocabulary of Architectural elements used are Indo Islamic, like chatri, dome, cupola, pointed arches, brackets, jharoka jali work etc. The material of construction is red sand stone and bricks.

Daly College, Indore, built 1912: This is the oldest school in India. Sir Henry Daly, founder of the Daly College Indore, was a politician, a liberal Unionist, British Indian Army officer and an administrator. He was appointed as an agent to the Viceroy of Central India from 1871-1881. Having great interest in education, he gave the idea to start a college in Indore for the princes of Central India. It was founded in 1882 to render British education to their princes. In 1876, it was called "Indore Residency College" and in 1882, it was renamed by the Chiefs as "Daly College Indore", to honor the support of Sir Henry Daly.

Main building: Lord Dufferin, in 1885, laid foundation stone of the new building. In 1891, the Maratha rulers of Indore (Maharajas, Holkar) and Gwalior (Maharaja Scindia) provided a piece of land for Construction of hostels. Later on the "Rajkumar School", was amalgamated with the Daly College in 1898. In 1905, Sir Hugh Dufferin occupying the same post as his father, took great interest and flourished it as The Chiefs College. Col. Sir Samuel Swinton Jacob designed the building in the European Indo Islamic style. The material of construction was marble, which had been quarried from Udaipur. In 1906, the Indore Maharaja, donated 118 acres (0.478 km²) of land east of the old campus to construct a residence for Principal of College, two scholar hostels, a mosque and a temple. The first Governor General of India, Lord Hardings, inaugurated the main building in 1912. They

abandoned the old college building, and the new college building was used to educate the sons of the Princes and Chiefs of Central India and the other dignitaries till 1940.



Fig. 6: A view of Daly College Indor.

In 1940 the Board of Governors took an initiative to modernize the Daly College by offering admissions to all sects of India on merit. In 1997, coeducation was allowed in the college. It was declared as the second best school in India in 2005. This building also depicts the Indo Islamic features along with the symmetrical plan. The arches being pointed and Mughal style minarets.

Chiefs College (1886): History: The idea of Aitchison College was floated by Captain Tighe, the then Deputy. Commissioner of Ambala in 1864. The then Viceroy, Lord Dufferin, envisioned it as the Wards School at Ambala and was meant to cater for the sons of government and administrative officials living in different parts of Punjab. The constitution of Aitchison College Lahore still follows the rules framed by Wards School. Only 13 students were admitted initially and the classes were started in three bungalows rented at Abbot Road. The state also granted free land towards Mian Mir, now called The Upper Mall in Lahore. On the 10th day of inauguration the Chiefs College was retitled as Aitchison College (Tillotson, 1989).

Selection of Design: An advertisement was placed in six newspapers, inviting designs for the main college building (Home, 1886) to be submitted till 20th April 1886 to the secretary of the committee of the management. For the submission of the drawings of ground floor plan, an elevation and section drawing, a prize of Rs. 2000/ was fixed on the receipt of drawings, estimates and specifications. When the Committee met on 1st May 1886, (Home, 1886) under the chairmanship of Lieutenant Governor, 24 designs were rejected because of various reasons. Only two proposals were selected by the subcommittee. The plan proposed by Col. Samuel Swinton Jacobs was selected whereas the details with Moorish

arches, and intricate decorative details prepared by Bhai Ram Singh was selected. Col Jacob Swinton was asked to adjust the plan according to the elevation proposed by Bhai Ram Singh (Home, 1891).

Architecture of the College: The main building of Aitchison College in Lahore is a combination of two designs i.e a Gound Floor Plan furnished by Colonel Jacob and elevation by Bhai Ram Singh. As a result both men shared the prize in a competition for the design.

Plan: The ensemble of three blocks is symmetrically arranged around a north-south axis. The central block rises in three tiers from arcaded verandahs on the east and west faces to the higher roof of the classrooms on either side of the main hall. The size of the central hall was, 70 ft by 30 ft along the east-west axis. On the two longer sides, north and south, 3 classrooms 24 feet by 21 feet, were arranged, opening into the Hall with 12-foot wide verandas on the outer sides. On the west side, a doublestoried porch, surmounted by a dome, was placed between the Hall and a deep covered terrace that has two additional classrooms at the north and south end. The east side was a double-storey structure with two classrooms on the ground floor, two small staff rooms and a library above the classrooms, and two small rooms for a museum (Home 1890).

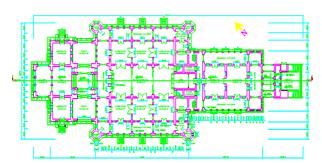


Fig. 7: Ground Floor Plan of Aitchison College

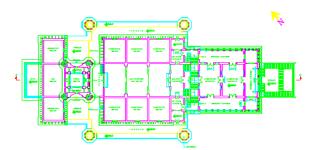


Fig. 8: First Floor Plan of Aitchison College

Structure: The structure is of bricks, with some elements in pink marble and red sandstones. The corners of all rectangular blocks are marked at roof level with arched and domed kiosks (chatris) of various sizes. The "native" detailing in this case are convincing, highly decorative and ornated.

Elevation: The building of the Aitchison College as conceived by Bhai Ram Singh is a three tiered building, the central hall being the tallest with clerestory windows as in the church buildings, the second tier is composed of the classrooms towards the north south directions and the third tier consist of the verandah. There is a high central dome surrounded by octagonal turrets, which marked the central block, while the chatris, cupolas, domes, finials and the cornices mark the corners of the building and created a highly distinctive skyline.



Fig. 9: Elevation of Aitchison College

The porch dome has smaller domes composed around it to control the proportion, symmetry and the visual effect of the building. Eaves and brackets in red sandstone, around the building, the combination of red/pink marble, for the columns and the arches, with the beautiful jharokas finished in white marble details are the testimony of the high aesthetical taste of the designer. This all is enhanced by the elaborate interlacing Moorish arches in red marble that screen the verandas with jalis. Between the central block and the small block to its north is a double storeyed entrance portico with a tall arch towards the east-west direction. Over this portico is a high dome with a clock tower. The third block, to the south of the central block, is double-storeyed and has a wide staircase sloping down the southern facade. The hospital/dispensary, a mosque, and the Gymnasium were added afterwards. Each of these buildings have rich detailing of brickwork, emphasized entrances using intricate jaliwork and brickwork, pronounced cornices, in some cases using sandstone brackets, parapets with patterns in brickwork, while the massing of buildings have the tiered effect of the Main Hall. Three hostels of similar design, planned as a U-shaped building, the house for the young Nawab of Bahawalpur, Dharamsala and the Temple, the house for the headmaster and the Vice Principal are all so much in harmony. The official architecture of the British Raj was essentially a product of these European developments. Even the frequent attempts at building in the Mughal or Hindu manner must, therefore, be seen not as an extension of local traditions but as a part of that particularly European Phenomenon which produced Chinese pagodas in Kew Gardens, Indian

pavilions at Brighton and Gothic steeples in Karachi, with equal felicity. The awkward aloofness of these buildings and their detachment was consistent with the general attitude of the British towards the projection of their image abroad. But they cannot be dismissed as mere curiosities for they mark yet another of the many dramatic influences (Vandal, 2006).

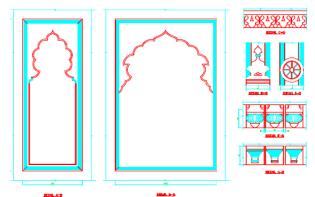


Fig. 10. The Interior Decorative Elements

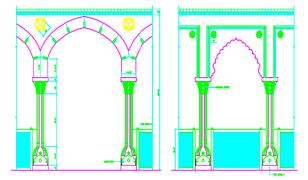


Fig. 11. The decorative columns of Aitchison College

Bikaner House, Mount Abu, (1893): Executive Engineer/Achitect Sir. Samuel Swinton Jacob built the Bikaner House in 1893 to serve the purpose of Summer Residence of Maharaja. A ceremony was held to lay foundation of the palace in 1896 for which an empty land was acquired at a distance of 5 miles from the Junagarh Fort. The palace was built around two courtyards. Firstly the Laxmi Niwas Palace was built in 1902, and in stages accomplished in 1926 by the addition of three more wings. The person to enter as a first notable guest was Lord Curzon. The palace was used for the hunting preserve at Gajner. A large number of dignitaries such as Georges Clemenceau, King George-V, Queen Mary and Lord Irwin boast had the honour to stay in the house. Firstly it was planned to use stucco instead of carved stone so that the construction could be economical and cheap. But later on, the cost increased to as much as one million as they utilized finest carved stone into Palace Hotel.



Fig. 12. A view of Bikaner Palace

Architecture: The building has been constructed in red sand stone which was quarried from Thar Desert. Presently the complex has been adjusted to meet the modern times requirements and the new spaces like, drawing, guest and smoking rooms, numerous grand-halls and cupolas were the new additions. In addition to this, pavilions and a dining room to host about 400 people were added.



Fig. 13. A side view of Bikaner Palace

The Architectural features like pillars, intricate fireplaces, colonnades built in Italian style and beautiful lattice are noteworthy. Another salient feature is a vast Darbar Hall to hold meetings. An indoor swimming pool was also constructed in the Karni Niwas (Arora, 2010) wing.

Lalgarh Palace, Bikaner: It was built between 1896 and 1926 by Maharaja Ganga Singh and was commissioned by the British controlled regency. This palace was named after the name of father of Ganga Singh Maharaja Laal Singh. The palace was built between 1902 and 1926 in European Indo Islamic style. In 1972, Karni Singh, Member of Parliament of India, set up the Ganga Singhji Charitable Trust and a section of the Laalgarh Palace was devoted for the trust.



Fig. 14: The Lalgarh Palace at Bikaner

Ganga Singhji Charitable trust was constructed between two courtyards in 1902. The Laxmi Niwas Palace was built and in the coming years three more buildings were built till 1926. Out of four, two wings of the complex were converted into hotels and the trust was supported by the income of the Heritage Hotel.



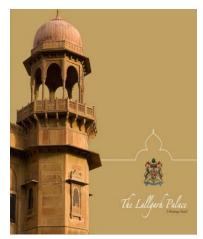
Fig. 15: A view of Lalgarh Palace and its Minaret

The generous act of the Maharaja was a good endeavor to generate employment in his region. Currently, Princess Rajya Shri Kumari owns the complex and hotel. It was a residing and hunting resort for the administrative members of the raj.

Architecture: The building was designed and constructed by Executive Engineer/ Architect Sir Col Samuel Swinton. Being the proponent of Indo Islamic architecture features that have been incorporated in the building like cupola, finial, multi foiled arches, brackets, eaves, filigree work etc. to express eloquently of this specific style. The material of construction is red sandstone. Hence, the minaret shown below as designed by Jacob Swinton, is a typical example portrayed in various Mughal buildings in India.

Laxmi Niwas Palace, Bikaner: It was built between 1898 and 1902 and commissioned by Maharajah Sir Ganga Singh to serve as his royal residence. Designed by Sir Samuel Swinton Jacob, Laxmi Niwas Palace is

constructed in a European Indo Islamic style, a favourable architectural wave in the 19th century in British India.



16: A view of Minaret with Islamic features

Laxmi Niwas Palace is a charter member of Worldwide Historic Hotels since 2013. While driven by his vision of establishing a grand estate worthy of royalty, the Maharajah of the former state of Bikaner was also motivated to build the palace as a means to stimulate employment in the region. As a man of impeccable taste and specific style, Maharajah Sir Ganga Singh carefully supervised the artists, masons, and builders to ensure that his concept was properly executed.



Fig. 17: Collonaded veranda of Laxmi Niwas Palace

Architecture: Boasting colonnaded corridors, canopied balconies adorned with intricate filigree in wood and stone lattice work, the brilliant craftsmanship of the estate's exterior completed with marble courtyards, fanciful fountains amid clean and tidy gardens is a quality of Maharajah's fantastic artistic vision in the palace's interiors. Equally lively display of carved friezes, ornate ceilings, Usta artwork, expansive golden frescoes and murals depicting cultural scenes substantially display the intricate ornated Indo Islamic style.



Fig. 18: A view of Laxmi Niwas Palace at Bikaner

Palace dominated over Bikaner in all its richness with a flair for hospitality. The Maharajah hosted numerous celebrities and dignitaries in this palace, including King George-V and Queen Mary, King of Greece, viceroys, fellow Maharajahs, and renowned statesmen. At the turn of the 21st century, Laxmi Niwas Palace was converted into a magnificent luxury hotel, celebrating its significant heritage with thoughtfully-preserved historic elements.

Umaid Bhawan Palace, Kota, built in 1904 by Rajasthan Emperors: This palace is located in Jodhpur, Rajasthan, India. It is named after Raja Ummaid Singh, grandfather of the present owners of the palace. It is one of the largest private residences around the world. The construction started in 1929 and was completed in 1943.



Fig. 19: Exterior view of Umaid Bhawan Palace

The construction of this Palace played a vital role for the employment of Rajasthani people at the time of famine. Presently, the complex includes residence of the Raja's family, a hotel containing 347 rooms and a museum related to the Jodhpur family. The hotel works under the umbrella of Taj Hotels.

Architecture of the building is Indo Islamic style. During its construction it was called "Chittar Mahal", meaning the Stone Palace. The Architectural features include multifoiled horse shoe arches, windows with canopies, eaves, iharoka, chhatris and pilasters with the

combination of marble and red sandstone. The intricate filigree work is exceptional.



Fig 20: A close view of Umaid Bhawan Palace

King George Medical College, Lucknow: In 1870, Maharaja of Vijaynagar desired to construct a Medical College in Lucknow. He donated Rs.3 lacs at that time. This money was not enough to begin such a huge project. However, in 1905, in the honour of the Prince of Wales during his visit to India, the Rajas of Jahangirabad and Ayodhia requested Lt Governor of united Provinces to recommend to the then Governor of India to establish a Medical College in Lukhnow. Now it is called Chhatrapati Shahujee Maharaja Medical University.

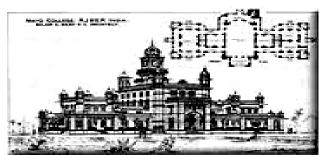


Fig. 21: A plan and view of King George Medical College.

The government of India sanctioned an amount for the building of the Medical College on the condition that the people of United Provinces would also add an amount of Rs. 8 lacs to it through fund raising. The Main contributors of the fund raisers were Maharaja of Balrampur, Maharaja of Ayodhya, ruler of Jehangirabad, Rana Sheoraj Singh and Nawab Yusuf Ali. The Indian Government was requested the Prince of Wales to inaugurate the construction work in 1905. The land donated was at the bank of the River Gumti. This was the land where once stood Macchi Bhawan. The planning of the project was conducted by Lt Governor Sir James Latouche, and the building was designed by Col. Samuel Swinton Jacob.



Fig. 22: King George Medical College

Architecture: The design of the Medical College in the nawabi city of Lukhnow was executed in Indo Islamic style as were most of the monuments around the area. The plan was symmetrical, built in four tiers, having central hall higher than the side rooms as was in Aitchison College Lahore with an architectural vocabulary of chhatris, cupolas, guldastas, finials, domes etc.

St Andrews Church: (1913-1916): Dr. Collin S. Valentine established a Scottish Mission in the state in 1866. In 1912, His Highness Maharaja Madho Singh-II donated a land of 9.6 Kanals at Chandpole as a reward for rendering medical aid to the royal family of Jaipur.



Fig. 23: A view of St Andrews Church at Chandpole.

Executive Engineer Col. Sir Samuel Swinton Jacob started to built a Scottish Presbyterian Mission Church in 1913-1916 on this land. The church was opened in 1917. Maharaja Madho Singh gifted a clock worth Rs.2000/- for the tower of the church in 1922. The cross on the dome portrays success of Scottish missionary. Raja appointed Rev. Yohan Masih as chief preacher for the masses numbering to at least 300 people. A Marble Front, was donated by All Saints Church, Jaipur.

Architecture of this building relates to the neo Romanesque style, with pointed arches, canopy style projection over the windows, projected eaves around the building, beautiful red brackets and the clock tower surmounted by a dome as in the Indo Islamic style.

Table 1: Shows Details of the Buildings Designed by Samuel Jacob Swinton in Chronological Order.

Sr No	Build. Name	Const. Date.	City	Build. Type	Arch. Style	Material Use.
Museum				indigenous	Brick&Stone	
2	Daly College	1885	Indore	Educational	European	Brick
	Indor				Indo Islamic	and Stone
3	Chiefs College	1886	Lahore	Educational	European	Red Sand
	· ·				Indo Islamic	Stone, Bricks
						Lime Mortar
4	Bikaner House,	1893	Bikaner	Royal	European	Red Sand Stone,
	Mount Abu			·	Indo Islamic	Brick, Marble
5	Lalgarh Palace	1896 old	Bikaner	Royal	European	Brick
	· ·	1926 new		·	Indo Islamic	and Stone
6	Laxmi Niwas	1902	Bikaner	Royal	European	Brick
	Palace				Indo Islamic	and Stone
7	Umaid Bhawan	1904	Kota	Royal	European	English Bricks,
	Palace				Indo Islamic	Stone and Cement
8	King George	1905	Lucknow	Educational	European	English Bricks
	Medical				Indo Islamic	and Cement
	College					
9	St. Andrew	1913-1916	Chanpole	Religious	European	Brick
	Church		Jaipur	,	Indo Islamic	and
			•			Stone

Details of the Buildings Designed by Samuel Jacob Swinton in Chronological Order: The table shows that Samuel Swinton Jacob designed and constructed variety of buildings, including religious, royal and educational buildings, in and around Punjab during 1876 – 1916, but in all of his buildings he used European Indo Islamic (Anglo Indian) architectural elements.

Concluding Remarks: he work of Sir, Col Samuel Swinton Jacob was a critical response to the extensive campaign of construction of buildings and civil services initiated by the British during the nineteenth century through the introduction of the Public Works Department (PWD), (Gupta, 1985). After studying the variety of building examples constructed by him, there is no doubt in claiming that he was the lover and proponent of Indo Islamic Architecture in India. He was highly inspired by the indigenous architecture of Indo Pak. He applied the features of the native Indian and European architecture, and combined them with the Neo Gothic elements as was the trend prevalent in Britain. The compilation of the Jeypore Portfolio was an endeavor to address these stereotypes. As shown in some examples, like the plans of Albert Museum Jaipur, Aitchison College Lahore and King George Medical College Lucknow, it is evident how skillfully he designed the buildings to come up with an axial, symmetrical, and balanced form. Moreover, the buildings were highly ornate and intricately decorated producing a royal effect as was the architectural wave in those days. Their interior as well as exterior produced an overwhelming effect. The architectural language used by him was mostly an amalgamation of Muslim and Hindu architecture and with a blend of classical features of the West, which included the dome, clerestory windows, jharoka, chhatri, cupola, finial, turrets, Moorish and multifoiled arches, jali works, cornices, brackets etc., (Mumtaz, 1985). His greatest achievement was the preparation of 'Jaipur Portfolio of Architectural Details' (Sandreson, 1911), which was a collection of architectural graphic details from various historic buildings designed by him compiled as a record for a reference to the local craftsmen and designers. The main purpose was to revive and promote the indigenous ethnic Architecture of India. His view being, that though the buildings themselves had been designed to meet the age that had passed, the elements can be successfully incorporated in modern buildings.

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