HISTORY AND CONSERVATION

of

SHOPPING ARCADES

Five Volumes

VOLUME II


Degree of Doctor of Philosophy

HERIOT-WATT UNIVERSITY

Department of Architecture

September 1983
## Contents

### Volume II

#### Chapter III Examples outside Britain

- France 54
- Paris 55
- Lyon 55
- Autun 63
- Belgium 65
- Brussels 67
- Italy 67
- Milan 74
- Genoe 74
- Turin 80
- United States of America 84
- Providence 84
- Cleveland 90
- Russia 99
- Moscow 99

#### Chapter IV Typology

- Plan Types 103
- Access and Storage 104
- Entrances 114
CHAPTER THREE

EXAMPLES OUTSIDE BRITAIN
pl. 106 Galerie Vero-Dodat, Paris.
FRANCE

The true Shopping Arcade first emerged in Paris and whatever other nations had contributed to the design with arcaded streets, exchanges or bazaars, it was the French who took people in from the vulgar, old fashioned alleys and market place and transported them to skylit indoor streets. The development was commercially successful and entrepreneurs were quick to take advantage of the new form of building. It was studied with delight by travellers to Paris and it was copied in city after city, becoming more ambitious and more important as the century progressed.

Paris

Late eighteenth century Paris was essentially a mediaeval city with many religious houses within its boundaries. Some improvements had taken place in the seventeenth and eighteenth centuries but during the 1790's there was an opportunity to increase the scale of development, to widen, straighten and build new roads and speculate as the vast areas of land and buildings became available following the dissolution of the monasteries after the Revolution. The novel way of combining public display with the sale of goods and entertainment whilst making a high profit from redevelopment, was to build several shopping streets with apartments above, free from mud, dirt, traffic and the vagaries of the weather. Following the example of the Galeries du Bois, (pl.76) erected in 1781 in the Jardin du Palais Royal (pl.77 & 78) about 30 arcades were built in the six decades from 1790 to 1850. From the 1840's there were further great changes in the city with the implementation of large scale redevelopment. New roads and new pedestrian routes directed shoppers away from the old areas and onto the boulevards or into bazaars and department stores. Social changes and the gradual dispersal of people, homes and commerce to the west of the city left the arcades to decline on the fringes of the new business areas. French architects and engineers used the
new materials and new techniques of construction in other types of buildings and it was left to the Italians, Americans and English to build monumental arcades.

Of the arcades built in Paris nineteen remain in the city although many are neglected and most are unnoticed amongst the commercial buildings that have surrounded them. Their arched gateways rise through two storeys and are almost indistinguishable from the innumerable entrances to the courtyards of Haussman's grand design. The majority of the entrance buildings are of a later date than the arcades and there is in all of them a restrained approach resulting in anonymity and subservience to the overall civic design. There is increased delight therefore in discovering an arcade behind such a facade. Architectural styles in most of the arcades were derived from the reasoned classical period of the late eighteenth century. Materials were generally timber and brick rendered with either a smooth or jointed finish. Pilasters and columns surmounted by decorated capitals, dentilled cornices and entablatures with plaster swags and medallions were used in many, but the visual impact in all was heightened by the rhythm of the shopfronts, advertisements and the pitched or barrel vaulted glazed roofs. The Passage des Princes of 1860 has a cast-iron pitched roof with decorated curved trusses and there is cast-iron in the Passage Jouffroy (1845) and the Passage Verdeau (1846) but there are no large spans with skeleton framed construction. Several contain what were considered to be dramatic rotundas, such as that of the Galerie Colbert. The general impression however is of long, narrow passages drawing the pedestrian through rather than encouraging the shopper to sit and view the surroundings.

It is possible to cover large areas of Paris almost wholly undercover with arcade entrances opposite each other across major boulevards and minor streets. The plan of many is complex, there are curved, Y and L shapes, parallel passages linked by shorter corridors and some are a series of covered town streets. Leading from the Jardins du Palais Royal are two short galeries,
the Passage du Peron, (p.80) which is a shop lined corridor and the acute angled (p.81 & 82) Passage des Deux Pavillons. Immediately opposite the entrance to the latter is the Galerie Vivienne designed by Delannoy and built in 1823 by Marchoux. It is a beautiful L shaped arcade connecting the Rue des Petits Champs (p.83) to the Rue Vivienne, with an additional short Passage des Petits Peres running at right angles into it from the Place des Petits Peres. The Galerie was built in the Empire style, influenced by architectural drawings published after the Egyptian campaign. It has been partially restored and is one of the finest arcades in Paris (p.84 & 85). The site was previously covered by houses and the stables of the Duc d'Orleans, and three of those dwellings were incorporated into the scheme, giving a series of rooms and shops of varied sizes. The corridor entrance from the Place des Petit Peres has a decorated plaster ceiling supported by four consoles. The main gallery has a pitched glass roof carried by transverse arches decorated with wreaths and flowers, the cornice moulding is also decorated and each bay is defined by an arched window above the shop facia. There are plaster swags between each arch and a barrel vault decorated with caisson moulding above the short staircase, which leads down to the more simple Rue Vivienne section. Above the stairs is a clock of 1795 supported by allegorical figures. The entrance from the Rue des Petits Champs is dated 1844 and this leads into a wider section than the main galerie with a rotunda covered by a cast-iron lantern roof (p.86).

L shaped and parallel to the Galerie Vivienne is the Galerie Colbert of 1826. Designed by Brillaud it was described by contemporary writers as the most beautiful of the Parisian arcades. The ground floor of an existing hotel was converted into an arcade of shops and the yard was roofed over to complete the building. It was particularly noted for its rotunda at the intersection and it became a favourite meeting place for two decades but then declined in popularity and never regained its custom. It is now closed (p.87) and
dilapidated, but its present owner, the Biblioteque Nationale, is undertaking some restoration.

To the west and at a distance of half a mile is the Passage Choiseul (pl. 88 & 89) built between 1825 and 1827. It runs for almost 660 feet in a simple classical style with internal elevational treatment in a manner similar to the Galeries Vivienne and Colbert. Shops on the ground floor have a mezzanine level with arched windows, each spanning a conventional display window and door below. The first floor contains flats which are within the arcade below the glazed roof. The latter is carried on light, curved beams, emphasizing the continuity and length of the arcade. It is a very busy pedestrian route of office workers and local residents and as with the two above it is far removed from the routes of visitors to Paris.

In the second arrondissement and at a short distance from the Passage Choiseul is the Passage des Panoramas dating from around 1800. It contains some of the oldest existing fragments of any arcade in Paris. It not only provided a direct route to the Boulevard Montmartre from the Palais Royal across mediaeval Paris, but it also took advantage of the high number of people already visiting the 'Panoramas' which had been erected the previous year. These were two large rotundas built by Thoyer (pl. 90 & 91) which contained scenes of Paris and the withdrawal of the English from Toulon. They were so popular that a third was built in the garden and connected to the earlier two by a corridor. The entrance to the latter was placed between the rotundas. The passage eventually became a series of galleries, extended, altered and partially removed over a long period as buildings and roads changed around them. There is now only a small part of the original remaining amongst the nineteenth and twentieth century additions and alterations. The success of the passage resulted from it being the first in that part of the city. The shops contained luxury items, and society met in the lively and fashionable atmosphere. The roofs in the Passage des Panoramas are pitched glass and at
the main intersection there are transverse arches springing from plain capitals on corner pilasters. The spandrels contain medallions and the keystones of the arches are scrolled. The rendered walls are plain and neglected but there are some remaining sections of the dentilled cornices above the shops in the side galleries. One gallery contains an entrance (pl.92) to the adjacent imposing late eighteenth century Theatre des Varieties, perhaps being an inspiration for the later Royal Opera Arcade in London. The main section of the arcade is very busy with modern shops and an exuberant nineteenth century restaurant (pl.93) and at the intersection of the galleries is a rare and elegant example of early shop design, complete with an engraver's signboard of that period.

Immediately opposite the Panoramas across the Boulevard Montmartre is the entrance to the Passage Jouffroy (pl.94 & 95) which was built in 1845 by the Society of that name and designed by the architects Destailleur and De Bourge. It remains a busy pedestrian route and shopping street and it has included over the years, hotels, a bazaar, museum, dance hall, cinema and it also had, from its opening, the great attraction of underfloor heating. In addition it was the first arcade in Paris to use iron in its construction. The glazed roof forms a pointed arch with the centre section overlapping the glass panels of the sides, to allow for extra ventilation and to eliminate condensation. The facades of the shops are of glass rising (pl.96 & 97) through two storeys. Each bay consists of two display windows with a central glazed door in a slender timber frame, a shallow facia and above, five glass panels with an opening centre panel. The plan of the arcade is interesting with its single corridor turning at right angles a third of its length to the south and rising several steps (pl.98) before returning again to follow the original direction. There is an hotel at the turn (pl.99) and another at the entrance to the Boulevard Montmartre.
The tunnel vaulted Passage Verdeau (pl.100) is a northern continuation of that arcade and was built in 1846 by the same company. It is light and bright and very busy with shops specializing in books, prints and antiques.

Within the same arrondissement is the last arcade to be built in Paris, the Passage des Princes of 1860. It is a short distance from the Boulevard Montmartre and is an L shape linking the Rue de Richelieu and the Boulevard des Italiens. It has a pitched glass roof supported by light, decorative cast-iron trusses and there is a hexagonal shallow dome at the bend of the galerie. A large section of the arcade is completely modern (pl.101) and is used as a club for the employees of a bank, but there is an original shop and the workshop of a pipemaker, established when the gallery was built (pl.102).

In the east of the district there are several arcades which have changed in character from retail to wholesale businesses and are mainly in a poor state of repair. The Passage Brady (pl.103) built in 1828 is a long, narrow corridor which was subsequently divided by the Boulevard de Strasbourg. It has a pitched glass roof with some traces of its early architecture such as plain pilasters dividing the bays at first floor level. A short distance to the south is the Passage du Prado (pl.105) an L shape linking the Rue du Faubourg to the Boulevard St. Denis. It is very neglected with a pitched glazed roof supported by curious decorated timber beams and there is a plastic covered polygonal dome at the junction. To the south is the Galerie du Caire (pl.104) which was possibly the first or second covered arcade in the city, with sections dating from 1797 although there is now little evidence of the early architecture, apart from shallow arched open windows in the clerestorey divided by pilasters. It is a series of passages with five entrances built on the site of the Cloisters of the Filles Dieu and it is now full of busy modern shops which are used by wholesalers.
An entrance slightly to the north of the latter passage, on the opposite side of the Rue St. Denis reveals the Passage Ponceau. It was built in 1826 as a continuation of the former gallery but it has been shortened as a result of road works. It falls steeply, the roof is covered in plastic, and it is in a very delapidated condition.

Rivalling the Galerie Vivienne in elegance, although of a different architectural style, is the superb Galerie Vero Dodat, built in 1826 by the eponymous pork butchers. It connects the Rue du Bouloi with the Rue J.J. Rousseau immediately to the north of the Rue St. Honore. The long passage is two storeys in height with five storey apartments at either end. There are also two, five storey transverse houses, which divide the glass roof of the arcade into three sections. This has formed an unusual ceiling with three glazed hipped sections and four horizontal beams each containing two rectangular and one octagonal painted panel. The first floor is of stucco with shuttered windows, whilst the remainder of the arcade is finished in expensive and rich materials. The eighteen bays of the ground floor are divided by double engaged columns of marble, with a base and Corinthian capital of brass. There is a mirror between the columns which originally reflected the light from gas lamps suspended from the capitals. The shop facias are surmounted by a continuous cornice in red timber with black timber and brass also in the shopfronts. The whole is extremely refined with six small arched windows to each bay, and below these a large window on either side of glazed double doors, contained in brass frames. Restaurants and specialist shops selling objets d'art and antiques are in the arcade, but even here there are several empty premises and it is very quiet, sited as it is, away from the activity of the main streets to the south.

Three existing arcades which are rather isolated from the above examples are the Galerie de la Madeleine (the third to be built by the Societe Jouffroy), the Passage du Harve and the Passage Vendome. The latter is situated at a
short distance from the Place de la Republique in the third arrondissement. Built in 1825 on the site of a monastery, it is only 200 feet long having been shortened to that length when the Boulevard du Temple was straightened by Haussmann. The arcade runs across a sloping site and has a pitched glazed roof and attractive arched shopfronts. It has never been particularly successful because it is too far away from the major shopping and pedestrian routes and it is again predominately used by wholesale clothing businesses.

Galerie de la Madeleine\(^\text{pl.110}\) was built in 1845 as part of an apartment block and is now a short cut between the Place de la Madeleine and the relatively minor street, the Rue Boissy d'Anglas. Many of the units are closed and there is a blank length, behind which is a Salon du The. The arcade is in good condition with a pitched roof supported by seven transverse arches springing from a dentilled cornice above the original shop fronts. There are some attractive lanterns on curved wall brackets. In contrast, the Passage du Havre\(^\text{pl.111}\) is a very busy L shaped arcade leading from the Place du Havre near the Gare St. Lazare through to the pedestrianised Rue de Caumartin and the Magasins du Printemps. Built in 1845-47, the original architectural details have disappeared behind the modern shop fronts.

The arcades of Paris were built as speculative ventures and as a means of modernising the city after the Revolution. None is wide or large, they do not provide areas for sitting; they do not dominate their surroundings and they do not appear on the tourist itinerary. Like many old buildings in towns and cities they seem to be accepted by the local population, perhaps without realising their importance in the broader context of architectural history and town development. Many of the elegant and urbane passages have a charm and intimacy which should be exploited. Careful restoration, emphasis on advertising and the redesign of entrances would encourage more shoppers and thus make them financially viable. One of the major problems confronting the City of Paris however is that many are in multiple ownership and there is an
unwillingness or inability amongst landlords and shop owners to form associations for the care and maintenance of each arcade.

The Galerie Vero Dodat was placed on the supplementary list of the Commission Superieure des Monuments Historiques as a Monument Inscrite in 1965. The Passages Panoramas, Choiseul, Jouffroy and Verdeau and the Galeries Vivienne and Colbert were added in 1974. Only the Galerie Vivienne has been restored.

Lyon

In 1825 the architect Vincent Farges modelled the Passage de l'Argue in Lyon on arcades in Paris. The building followed the line of a dark and unpleasant alley which ran between the two busiest streets in Lyon, the Place de la Republique and the Rue de Brest. When completed the Passage became the centre of the luxury retail trade and a meeting place of society.

It was originally 473 feet long with an octagon situated approximately one third of its length from the Rue de Brest, and there was also a small passage running at right angles into the arcade from the Rue de Quatre Chapeaux. In 1850 the entrance to the Rue de Brest, the glazed roof, and many shops were modernised. During extensive alterations to the city centre in 1856, a new north-south road, the Rue President Eduard Herriot, was built across the passage dividing it into two separate sections. Other notable events in the arcade's history were the riots of 1834, when workers disarmed soldiers who attempted to fire cannon into it and more peacefully, a theatre was opened in 1860 and is now used as a cinema.

The interior of the arcade is two storeys with plain rendered upper floors and bays divided by pilasters.
Very little of the original architectural design remains apart from the entrance to the Place de la Republique, which dates from 1825 and is a Renaissance arch with a pilaster and column surmounted by a deep entablature on either side of the opening. And the central octagon (pl.115) which contains only two early shop fronts, each with a large window a fanlight and folding timber shutters (pl.116). The small passage is, unfortunately, a dirty and uninviting alley with a derelict hotel along its length.

There is a noticeable difference in the quality of the goods and volume of trade undertaken between the two sections, with the length leading from the Place de la Republique to the Rue President Eduard Herriot appearing to be much more successful. The second length of the arcade now no longer leads anywhere and shoppers simply refuse to negotiate traffic.
Unfortunately the rapidly decaying but lovely arcade in Autun could easily be overlooked by the shopper. It is now a minor link between the great eighteenth century market place and the higher level pedestrianised mediaeval shopping streets. It began life in the old town merely as an alley used by pedlars and other itinerant trademen.

Expansion of Autun took place in the eighteenth century and the architect Franque, was commissioned to design l'Abbaye de Saint Martin in 1740, and to modernise the Pedlar's Market. He lined the street with shops and decorated them in the Renaissance manner, but they remained mediaeval in form, with shutters lowered to form counters during trading hours. Above, he placed living accommodation entered from a gallery running along both sides of the street. The final transformation to arcade did not take place until 1848-1850, when a pitched glass roof was added and the shop fronts were glazed.

The fourteen bays are divided by pilasters which have a projecting, decorated cap, a deep base and a strip of mirror to reflect lights, as used in the Galerie Vero Dodat in Paris. There are decorated plaster panels above the shop fronts, with cherubs, swags and egg and dart moulding and the cornice on which the glazed roof sits is deeply moulded and dentilled. The entrance from the market area is a giant arch with wrought iron gates and fanlight. The keystone carries a classical face, the pilasters are decorated and the tympanum of the pediment contains plaster decoration and a cartouche. This grand aedicula entrance could easily be mistaken for a private doorway, as in so many French arcades. It leads into a short barrel vaulted section with two shops on either side. The entrance from the opposite end is a later and broader basket handle arch which leads to a low ceilinged section, beyond which is a staircase down to the main length of the
arcade with delicate wrought iron balusters. The arcade floor has its original slate and marble flagstones.

There is some evidence of restoration with several recently repaired plaster panels, but there is dry rot, the gallery is unsafe, and the pitched roof contains broken glass and frames (pl. 121). All twenty eight interior units are empty although those at each entrance are in use. There appears to be only one resident on the upper floor who has made a brave display (pl. 122) with freshly painted white walls and pots of geraniums, defying the building to collapse around her.

Visitors to the town are obviously curious about the building and its contents but they leave hurriedly after finding a semi-derelict arcade. It is an historic monument owned by the town but little has been done to ensure its survival. The Council is considering restoration but finds the cost prohibitive. If the building is left in its present state it will become a dangerous structure.
pl.76 Palais Royal, Galeries de Bois 1786-1788, Paris.
pl. 78 Palais Royal Galerries, Paris - La Sortie du Numero 113. 1815
pl. 80 Passage du Peron, Paris.
pl. 81 & 82 Passage des Deux Pavillons, Paris.
pl.83 Galerie Vivienne, Rue des Petits Champs, Paris 1826.
Galerie Vivienne, Paris.
pl. 85 & 86 Galerie Vivienne, Paris.
p.87 Galerie Colbert, Paris 1980.
Passage Choiseul, Paris.
pl.91 Passage des Panoramas, Paris c.1810.
pl. 92 Passage des Panoramas, Paris. Entrance to Theatre.

pl.95  Passage Jouffrey, Paris from doorway of Passage Verdeau.
pl.96 & 97 Passage Jouffroy, Paris
pl. 98 & 99 Passage Jouffroy, Paris
pl.100 Passage Verdeau, Paris
pl.101  Passage des Princes, Paris
pl.102 Passage des Princes, Paris, early print.
pl.103  Passage Brady, Paris.

pl.104  Passage du Caire, Paris.
pl.105 Passage Prado, Paris.
pl. 107  Galerie Vero-Dodat, Paris. Entrance from the Rue du Bouloi
pl.108 Galerie Vero-Dodat, Paris. Shopfront
pl.109 Passage Vendome, Paris.
pl.110 Galerie de la Madeleine, Paris.
pl.111 Passage du Havre, Paris.
pl.112 Passage de l'Argue, Lyon. Entrance from Place de la Republique

pl.113 Passage de l'Argue, Lyon. Entrance from Rue President Eduard Herriot.
pl.114 Passage l'Argue, Lyon.
pl.115  Rotunda, Passage l'Argue, Lyon.

pl.116  Original shopfront, Passage l'Argue, Lyon.
pl.117 Passage Couvert, Autun.
pl. 118 Interior of Passage Couvert, Autun.

pl. 119 Market place entrance, Passage Couvert, Autun.

pl. 120 Old town entrance, Passage Couvert, Autun.
pl. 121 & 122 Interior, Passage Convent, Autun.
BELGIUM

The first shopping arcade in Belgium was opened in Brussels in 1820. It was the Passage Monnaie which was a modest 83 feet long and 8 feet wide, (recently demolished to make way for modern shops and offices) and was the inspiration for further arcades in the country.

Brussels

The Galeries St. Hubert (pl.123) stands on the edge of the old city centre, a few minutes walk from the Grand Place, well placed between that and the Central Station to attract inwards both the busy shopper and the curious tourist. The distyle porticoes with giant Tuscan columns are left open to pedestrians and the wide, high gallery is a splendid meeting place with a special character at night. The illumination from the diffused light of the white globes suspended above the shops and the carefully concealed spotlights, together with the dark sky, give an ethereal quality to the roof. The iron arches appear to be a fine silver web floating above the classical facades.

The 700 feet long arcade (pl.124) links the Marche Aux Herbes with the Rue du l'Écuyer and it is crossed in the centre by the Rue des Bouchers and a double colonnade carrying rooms and corridors which emphasize the division. (pl.125)

The arcade from the Marche Aux Herbes is called the Galerie de la Reine and beyond the Rue des Bouchers, at an angle, thus denying the pedestrian of a view of the whole building, is the Galerie du Roi. The Galerie des Princes is a side gallery running at right angles to join the Montagne Aux Herbes Potagers.

The architect, Jean Pierre Cluysenaar, built market halls, railway stations and castles but he regarded the arcade as his finest building. It was financed by a local merchant and a banker, together with the not inconsiderable aid of the City Council, in order to demonstrate civic pride after the foundation of the
Belgium nation in 1830. They also wished to rebuild the damaged city after the uprising of that year, to open new routes between the market area and the wealthy Quartier Rue du Marais; to create new shopping areas where safety and cover from the rain were possible and to provide an attraction for visitors to Brussels. The proposed scheme was much larger than the one finally agreed, being unfortunately too dependent upon a large number of compulsory purchase orders. Even with the smaller building, the task of land acquisition and clearance lasted for five years and inevitably there were financial difficulties. Shares were issued in the controlling company, the Societe des Galeries St. Hubert, and the foundation stone was laid by King Leopold I in May 1846. Even naming the three lengths of the arcade caused problems but finally royal titles were chosen and the motto 'Omnibus Omnia' taken from the Guild House of the Goldsmiths which had formerly stood on the site, was placed over the entrances.

Astonishingly the arcade was completed by June 1847 and opened amidst great ceremony by King Leopold I. During the arcade's early years it was open to the public from 8.00 a.m. to 8.00 p.m. with an entrance fee of 25 cents on Sundays and Thursdays and 10 cents on the other five days. There were shops, a theatre, a casino, houses and apartments. Clubs and newspaper offices were opened and artistic and literary meetings attracted intellectuals including such refugees as Victor Hugo and Alexander Dumas. During its first thirty years it was the centre of city life.\(^{(p1.126)}\) In the twentieth century a cinema replaced the theatre and the casino gave way first, to Vaudeville, and then to a night club. The luxury shops moved out to the Rue Royale and gradually the arcade became merely another shopping thoroughfare. However it has always been well maintained and during the past decade it has returned to prominence. It contains many luxury shops, popular cafes and restaurants. Entrance fees and restricted hours have long since disappeared and it is now one of the very few arcades in Europe to be used commercially and socially for the maximum number of hours on every day of the week.
Cluysenaar was faced with a site of a complex shape and irregular boundary, which was the result of conflicts over the purchase of land, but he hid complicated plans behind regular facades. It is a classical three storey stuccoed building, with Tuscan and Ionic orders. The external facades of nine bays have remained as originally built. The centre three bays project slightly and a Tuscan portico has above it, at first floor, a balcony and Ionic pilasters with a statue on either side of a central pedimented window. The second floor is divided by Corinthian capitalled pilasters with similar windows and sculpture. Each of the six outer bays contain a semi-circular arched shop window, above which is a six paned window with an entablature and the second floor repeats an undecorated six paned window. A balustraded parapet hides the roof.

The 25 feet wide arcade is lined by shops with cellars below and apartments above. Each bay is defined by pink marble pilasters and the same marble is used from floor to sill below the large shop window in its delicate timber frame. The shop door has a similar frame containing a sheet of glass. Many are original, rising the full height of the shop front, others have been subdivided horizontally to give a less eccentric door height. Above the shop is a mezzanine level identified by a semi circular window with wrought iron fanlight inset with the number of the shop.

Stucco pilasters continue on the first floor, with a diamond mould in the centre and Ionic capital. A single French window has a moulded architrave, frieze and cornice supported by consoles with acanthus leaf decoration. The diamond pattern is repeated centrally above the window. The second floor has Tuscan pilasters with a central circle motif. Heavily moulded cornices run between the floors and the upper cornice, from which the roof springs, is approximately 50 feet from the ground. The roof is semi-circular and is supported on closely spaced iron arches. The glass panes overlap leaving small gaps to avoid condensation and the accumulation of dirt, although they
do allow the penetration of water when heavy rain is combined with strong winds. A pitched louvre runs along the ridge to further aid ventilation. The roof is very light in appearance and contrasts sharply with the solidity of the walls, seemingly to float above the structure.

The apartments are entered from the arcade and they are discreetly emphasized by architectural details above their entrance doorways. Each has a large timber panelled door, above which is a bust in a circular moulding. The first floor window is crowned by a panel of figures in relief and a full size statue stands in the window opening of the second floor.(pl.131)

The Galerie des Princes(pl.132 & 133) is a relatively minor arcade in comparison with the major passage. Nine bays of each side divided by moulded stucco pilasters have glass shop fronts with a shallow horizontal bar in line with the mezzanine floor. The pitched glass roof with central raised section springs from the modillioned entablature. A flight of stone steps lead down to the side street and the giant arch with moulded impost, respond and archivolt, outer pilasters of marble and a lettered panel above the keystone.

The Galeries St. Hubert are amongst the finest in the world and are recognized as such by the city and its inhabitants. Indeed claims to be the first arcade in the world are constantly and extravagantly made in guide books and by the citizens. It is successful and will continue to be so, enjoying as it does a well placed site and the protection of its owners and users.

Cluysenaar was almost immediately requested to design an arcade in a nearby street for local merchant, M. Bortier, who had acquired a house, built in 1763 by Breydaels with some link to the Duke of Brabant. It was sited in the Rue de la Madeleine with a large building site around it made available following the demolition of the Hospital of St. Jean. The merchant suggested building a covered market hall and the City Council, following the success of the
Galeries St. Hubert nominated Clyseara to develop the site. He began by sub-dividing the unmanageable area by two new streets, the Rue St. Jean and the Rue Duquesnoy. He placed on part of the land a two storey semi-circular market hall, to be entered from the Rue Dequesnoy, and a small arcade to provide additional access to the market. The Galerie Bortier as the arcade became was entered through the ground floor of the original house, where an arch replaced the doorway. The building three bays wide and three storeys high is crowned by a pediment containing a cartouche. The first and second floors, divided by pilasters, contain three small windows at the attic level and three major windows below, with swags above the outer two and a semi-circular pediment at the centre. A balustrade to a narrow balcony completes that floor. The ground floor has a projecting portico with rusticated Corinthian columns whilst at either side, narrow windows with glazing bars, reveal goods on display. Inside, the 12 feet wide corridor is lined by very shallow shops. There are three double fronted units on each side with rich decoration in black iron set in marble above the windows and narrow black twisted columns define the bays. A flight of eight steps joins the gallery with a second length running round the semi-circular wall of the old market.

Shops with a simple timber frame and glazing bars linked by shallow timber facia follow the curve. A window above each bay reveals an additional floor for storage or residential use. The complete arcade is 216 feet long. Quite early in its life it became the centre of the antiquarian and second-hand book trade but it was never a great financial success. In 1957 after years of neglect the architects Mignot Freres turned the market into an exhibition centre and restored the arcade, although the missing glass roof from the semi-circular walk was not replaced. In 1975 the same firm restored the complete building including the entrance block and replaced the roof with a copy of that in the Galeries St. Hubert. The Council is now responsible for
restoration and maintenance, and therefore whilst it is far less well known, it is assured of financial protection.

During the 1880's boulevards were created in Brussels, making available the land on either side for commercial developments. The Passage du Nord by H. Rieck, completed in 1885, connected the then new Boulevard Adolphe Max with the Rue Neuve. Both thoroughfares were and do remain, extremely busy, particularly as the latter has become a pedestrianised shopping street. The arcade is a short cut between the two and is, therefore, a constantly used route.

The three storey external facades are richly decorated. There are shops at ground and mezzanine level and the first floor is recessed behind a terrace. The lettered panel, 'Musee du Nord', is a reminder of the original use of the upper floors where exhibitions, plays, concerts and meetings attracted society in the last decades of the nineteenth century. They are now used by an adjoining hotel.

A giant flat arch, almost lost among the shop doorways, leads into the 235 feet long arcade which is subdivided halfway along its length above ground floor, by a corridor, one unit wide supported on console brackets. This division is faced with stucco and contains on each side a triple window and a statue of a young boy. To complete the Baroque character, a broken pediment and cartouche support the roof at that point. The ground floor shop fronts are modern but the original architecture remains at the upper levels. Defining the bays are 16 caryatides on each side supporting the entablature. A deeply recessed window and rusticated stucco completes that floor. Above are windows with decorated architraves rising to the deeply moulded and dentilled cornice from which springs the narrow ribbed barrel vault with its pitched ventilation louvre along the ridge.
The passage is in good condition (pl. 144 & 145) and contains a wide variety of shops from boutiques to newsagents. White globes suspended from scrolled wrought iron brackets are similar in style to those in the other arcades in the city and give a welcoming quality to the arcade at night. Attractive and well maintained as it is however, it unfortunately suffers from comparison with the Galeries St. Hubert.
pl. 123 Galeries St. Hubert, Brussels.
pl. 124 Galeries St. Hubert, Brussels. Lithograph
pl.125 Galeries St. Hubert, Brussels - Rue des Bouchers.
Trade cards from the Galeries St. Hubert, Brussels
Collected by Georges Renoy.
pl. 127 Plan of Galeries St. Hubert by Jean-Pierre Cluysenaar

pl. 128 View of facade of Galeries St. Hubert by Jean-Pierre Cluysenaar
pl.129 Galeries St. Hubert, Brussels. Entrance from Marche Aux Herbes.
pl.130 Shop front, Galeries St. Hubert, Brussels.

pl.131 Cinema and Apartment Doorway, Galeries St. Hubert, Brussels.
pl.132 & 133 Passage due Prince, Galeries St. Hubert, Brussels.

pl.135 Galerie Bortier, Brussels.
pl.136 & 137 Galerie Bortier, Brussels.
pl.138 Galerie Bortier, Brussels. Rue du Quesnoy.
Maison fondée en 1848
par J.B. MOENS
La plus ancienne de Bruxelles
Galerie Bortier improvements.
pl.142  Passage du Nord, Brussels. Boulevard Adolphe Max.

pl.143  Passage du Nord, Brussels. Rue Neuve.
pl.144 & 145 Interior of Passage du Nord, Brussels.
ITALY

Italy is famous for large and exuberant arcades, built when the techniques of cast-iron construction had been perfected and when reunification of the country after bitter fighting, encouraged the inward looking mediaeval city states to redevelop in the sophisticated manner of France and England. The arcades of Turin, Genoa and Milan are buildings which differ markedly from those in France. The designs are much more monumental, using architectural form and decoration to create palaces of shopping and commerce, rather than simple covered streets.

The Italian galleries mirror the gregarious quality of the nation, they are places to meet, sit, talk and conduct business, with the shops appearing to be almost ancillary to the social function of the buildings. They are not merely links between busy streets or squares but they are central 'places' with streets leading into them. This is particularly so in Milan where the gallery was built as a major element in the redevelopment of the city centre.

Milan

The Galleria Vittorio Emanuele II (pl.146) is known throughout the world. The very name of the Milanese arcade describes immediately a building of substance and prestige. Sited by the fifteenth century Gothic cathedral, it forms an astonishing feature of the Piazza Duomo. Its opulent cinquecento architecture, massive triumphal entrance arch, and five storey interior covered by a barrel vault and glass dome 157 feet high, ensures that it is the great meeting place for residents and visitors to the city.

It was designed by the Italian architect Mengoni, with advice from British architects and French engineers, in answer to the problem of turning mediaeval Milan into a great modern city and at the same time celebrating its
liberation from Austrian rule. Unlike most Italian cities, Milan did not have a large central square. The Cathedral was surrounded by winding narrow streets and alleys, and there was no meeting place in the manner of the Campo in Siena or the Piazza San Marco in Venice, for the citizens to display private wealth or civic pride.

The history of its design and approval is long and complex, beginning as early as 1806 with discussions on the need for a square to complement the then recently completed western facade of the cathedral. After decades of plans and proposals the political events of 1859 brought matters within sight of fruition. Napoleon III entered the city with Vittorio Emanuele and within six months the king authorised a lottery to raise five million lire for the project. The city council required designs for a piazza, and for a street or bazaar to link it with the Piazza della Scala, whose Opera House was the second building of importance. An astonishing 220 schemes were submitted between April and June 1860, and in 1862 eighteen architects were asked to submit detailed proposals. A public committee under the chairmanship of architect Luigi Tobbi suggested that the Cathedral should stand in an 'oblong complex' with arcades on the western side, and using the example of the existing Galleria Cristoforis, built in 1831 in the Parisian manner, a new galleria was required. The whole scheme was to be split into three sections; to the north of the 'Nuova Galleria' was to be a street with arcades on both sides and its centre covered with glass. Opposite the Cathedral was to be the free standing Palazzo del Fondo with arcades on all sides and links to adjacent buildings; and finally a vehicle free square was envisaged with an accompanying traffic plan for the surrounding area.

The jury met in June 1862 and was impressed by the scheme of the Bolognese architect Giuseppe Mengoni, but the public was becoming uneasy about the whole project and the intended demolition of so much of old Milan. The popular newspaper 'Pungolo', which was housed in that area, led a fierce attack
on the City Council and the latter therefore decided that action was required as soon as possible. A further complication had arisen with regard to finance. The lottery had only raised one million lire, and as demolition costs alone were expected to be 15 million lire, alternative funding had to be found.

Mengoni's plan for the arcade was accepted but for the remainder of the project he was asked to work with Matas and Pestagalli. They were to produce either one joint or three individual schemes for the Piazza. Matas withdrew shortly afterwards in order to work on a church facade in Florence, and the two remaining architects produced similar schemes. In September 1863, after three years of argument and discussion Mengoni was appointed sole architect and in 1865 the foundation stone of the Galleria was laid.

The original design for the arcade was visualised only as a link between the two Piazzas with two small theatres, the Teatro dell'Opera Comica and the Teatro della Commedia at the entrances, to replace two which were to be demolished. The first plan included an octagon but the cross-shaped plan emerged in 1864. Such a Latin cross may have been copied from the arcade in Trieste or from the crest of the House of Savoy. Mengoni superimposed the outline of the dome of St. Peter's, Rome on a sketch dated September 1865, which ultimately determined the size of the glazed dome of his arcade. Gradually the galleria became larger and more politically significant, with the possibility of it providing a centre for public activities independent of the cathedral square. At the beginning of 1865 Mengoni went to conferences in London and Paris, visiting also the Galeries St. Hubert in Brussels and returned convinced that his building should not only be a place for trade but a promenade for the city dweller at any time of day or night.

The City of Milan Improvement Company financed the ambitious project. 30,815 sq. yards were owned by the Company, with the covered but openly accessible areas to remain the property of the community. Capital of 16
million lire was raised and the City guaranteed a profit of 5% per annum. The English architect, Digby Wyatt, was a director and Sir Charles Barry was a consultant, whilst the French engineer, Joret, worked specifically on the design of the dome. (pl. 149 & 150) The galleria took two and half years to construct with 1000 workers on the site at any time. The triumphal arch was finished much later as there were inevitably financial difficulties and the remainder of the rebuilding around the Piazza was never undertaken. Tragically Mengoni fell to his death from the scaffolding in 1876.

The arcade received great attention in the local and national press and thousands flocked to see its architectural wonders (pl. 151 & 152) and mechanical marvels such as the 600 gas flames in the lantern, which could be increased on special occasions to 2000, and which were ignited by a pilot light carried on a carriage on rails. It has remained the great meeting place and strong historical links with the city have been forged since its opening in 1865. There were demonstrations against the imprisonment of Garibaldi; a hail storm destroyed much of the glass in the roof on June 13th, 1874; in 1880 the Cafe Gnocchi became the first room in Milan to be illuminated by electricity and in the same year the City bought the arcade for 7.3 million lire. In May 1890 it was occupied in order to stop workers rioting, the French army marched through it in the First World War, and it was badly damaged by bombs in 1943. Fortunately it was eventually reopened, fully restored and resplendent, in 1955.

Architecturally it is freely adapted from the Renaissance style of northern Italy and the particular influences were the earlier Galleria Cristoforis and the Palazzo del Capitano and Palazzo Bianchi in Bologna.

In many towns and cities there is some difficulty in appreciating the fact that an arcade lies behind a frontage, which is identical or similar to every other in a traditional High Street. Often entrances are underplayed and the shopper
stumbles upon the hidden delights quite by accident, but in Milan the whole population of the town and its visitors, are made aware of the great building adjacent to the Cathedral. The Piazza is no quiet close with seventeenth and eighteenth century homes for the clergy, but the centre of a great metropolis whose city fathers created not only an outdoor but an indoor central 'place'. It is emphasized by the enormous triumphal arch (pl.153) which was a feature used by the Romans to signify the success of their generals and conquering armies. Here it has found a new use in calling attention to the commercial greatness of Milan.

Although the entrance is part of a continuing arcade along the north side of the Piazza, the arch projects forward giving an illusion of being free-standing. It is higher than the adjoining four storey buildings and its size is emphasized by apparently being only of two storeys, a giant in Lilliput. The centre arch rises to the internal upper cornice level, revealing, to those outside, the glass of the barrel vault. The bay on each side projects forward slightly, containing an arch framed by Ionic columns as if a portico, with a Gothic window and balcony above. The whole is surmounted by a massive cornice and plain parapet.

The entrance from the Piazza della Scala (pl.154) is a second triumphal arch set forward from the facade. It is apsidal in plan with two arches, only one of which opens into the arcade. Above is a footbridge connecting the flats on the upper floors.

The external facades have little decoration and their size and dramatic effect are complemented by the ornate galleria within. Internal dimensions are immense, the arms are 96 feet high, the octagon is 137 feet high and 128 feet in diameter and the barrel vaults span 48 feet. Dominating, almost overpowering, the rhythm of the interior emphasizes the length. Arcades define the ground floor units but give no hint of the individuality behind the
glass. It is a complete building and not separate shops grouped together under glass. Ionic pilasters on double plinths rise through two storeys between the arches and they are richly decorated. They support a wide, heavily moulded cornice which serves as a balcony for the third floor. As if to assert the superiority of the fourth floor as the support for the cornice moulding from which the cast-iron trusses spring, the bays each with its ornately framed window are divided by caryatide. The dome above the central crossing sits on decorated pendentives and the tympanums (pl.155) at the four corners of the crossing are richly painted. Represented are the arts, agriculture, science and industry; the coats of arms of the great cities and the Royal House. There are also statues of artists and politicians positioned around the Galleria. All noble allusions to the power of King, State, Industry and Commerce.

There are no advertisements to distract the eye but restaurants and superior pavement cafes spill out into the arcade. At night the effect is extraordinary, with light from table lamps and the simple globes suspended from wrought iron brackets on each pilaster. The whole is so far removed from the early Parisian arcades in scale and architecture, that only the retail uses of the building, the free movement of pedestrians and glass in the roof are common to both. The arcade was the highpoint in the development of the building type.
If the Genoese could build the Strada Nuova in the early sixteenth century, the greatest street in the Renaissance world, why not design a whole series of indoor and outdoor streets in the new Italy of the 1870's?

A half mile pedestrian route incorporating arcaded streets, piazzas and a galleria was planned and executed, and it immediately became a popular 'promenade'. The Galleria Mazzini (pl. 156, 157 & 158) was the centre of that redevelopment of mediaeval Genoa. A large and very fine building, it was erected in 1875, perhaps to rival the Galleria in Milan and was named after a local revolutionary leader and friend of Garibaldi.

Designed by the engineer Giovanni Argenti, it was built by an English company. The roof construction is similar to that of Milan although the design of the curved, hexagonally perforated, cast-iron segmental ribs first appeared at Paddington Station in 1850.

The city of Genoa is famous for entrance vestibules, courtyards, flights of steps and the splendid architectural value of sloping sites to create beautiful vistas and hanging gardens. The designers of the galleria made excellent use of the site in the Genoese tradition. The 633 feet long arcade runs parallel to the Via Roma and connects the Piazza de Ferrari to the Piazza Corvetto. It is 31 feet wide and there is considerable slope from north east to south west. To overcome the design difficulties the whole is divided into five terraces, which are stepped down the hill. The scale of the elevations, decoration and the design of the roof overcome any psychological problems created by the slope, and the pedestrian is only conciously aware of being within a magnificent enclosed space, without appreciating the additional effort that might be required to walk through it. The arrangement has enabled four cross sections to be incorporated into the scheme and there are two entrances to the parallel
street, the Via Roma, one entrance at either end of the arcade and one entrance to the minor Via Ceba. The glass vault is four storeys in height but the buildings rise to six and seven storeys outside and above the glass roof.

Genoese Renaissance of the sixteenth century inspired Argenti who took the Palazzo Sauli by Alessi as his prime model. There is a double colonnade of Tuscan columns at the entrances with light plaster decoration above a large triple window. The long facades are heavy in contrast to those at each end. Undecorated pilasters divide the bays and the windows and doorcases at ground and first floor are very plain. There are bold cornices however, and the second floor fenestration is more dominant with consoles supporting the entablature.

The imposing roof dominates the building with four octagonal glass domes (p.159) dividing the barrel vaulted sections. Each dome is surmounted by a raised octagonal lantern and finial. The four side entrance corridors are crowned by glass pyramids (p.160) with a terrace around them at roof level. The original heavy iron chandeliers and wall brackets are still in situ and illuminate the arcade at night.

There is residential use on the floors outside and above the arcade whilst those within the building are used for storage, restaurants, cafes, bars and shops. The latter have entrances from both the galleria and the street and the goods sold from them are those found only in the expensive inner city shopping area. It is popular but not overcrowded and is currently being restored by the Commune di Genoa.

Turin

Two arcades exist in Turin, the Galleria dell'Industria Subalpina and the Galleria Umberto I. The former is a superb commercial arcade which achieved some notoriety in the late 1960's as a setting for a car chase in a film. It
links the Piazza Castello with the Via Cesare and it is situated at the junction of a monumental L shaped commercial block, which has arcaded footpaths around it. The site of the gallery was originally a busy passage and courtyard adjacent to government buildings, and it contained shops and the post office. During the rebuilding of the town centre, the post office was moved, and the then mayor commissioned the architect Gabetti in 1870 to build an arcade. Other architects however were keen to follow Mengoni’s footsteps and many plans were submitted. From these the design by Carrera was chosen in 1872. The project was financed by the Bank Industriale Subalpina, from which it gained its name. Old buildings around the courtyard were demolished and an arcade 115 feet by 47 feet above a beer cellar, was erected. A cinema now flourishes at basement level with shops in the arcade and offices and store rooms on the second and third floors. One notable use is the Cafe Baratti on the ground floor which is situated by the principal entrance. It has retained its original furnishings and decoration and is a popular meeting place for Turin businessmen.

Italian Baroque inspired the architect, and the immediate visual impact is of a curved building enclosing a moulded, sculptured space.\(^{(p.161, 162 & 163)}\) The fine glazed hipped roof with a central louvre is carried by arched iron principal rafters decorated at the apex. They are supported on curved brackets which are fixed to columns in the clerestorey. The curved theme is maintained throughout with curved corners, windows, arched doorways and staircases. Each bay is divided by pilasters, there are almost flat segmental arches over the windows, the curved cornices have consoles carrying the floor above and the first floor balcony has a wrought iron balustrade giving that level the importance of a piano nobile. Richness is achieved by the discriminating use of such expensive materials as buff, beige and pink marble, mahogany and terrazzo. There are no external facades except those of the outer arcaded buildings. The Galleria is at a corner and behind other shops, and even the entrances are extremely discreet. In that, while they are giant arches with
rich decoration, they are small elements of a larger building and not independent doorways which would be noticed in less impressive surroundings.\(^{(pl.164 \text{ & } 165)}\) It was restored in 1958 when a formal geometric garden was added and glazed doors were installed in the diagonally placed entrances. Whilst these improve the quality of the environment, particularly during the winter, they also emphasize the overall appearance of a private rather than a public thoroughfare, the arcade becoming a dignified hall of a stock exchange or the cortile of an Italian palace.

The success of the Galleria dell'Industria Subalpina encouraged further development in Turin and the Galleria Umberto I\(^{(pl.166, 167 \text{ & } 168)}\) designed by Marsaglia was opened in 1890. It is situated on the periphery of the central area of the city with nineteenth century market halls, derelict land and low cost housing surrounding it. In plan it is reminiscent of Parisian passages with four entrances, one at each end of the main arcade and one at each end of an L shaped arcade which runs part parallel and part across the main corridor. The external appearance is undistinguished although the corbelled flat arched giant openings do have lettered panels and the Royal arms in the tympanum of the outer rusticated arch. There is crumbling stucco and peeling paintwork but the interior is light and bright and in good condition. The pitched roof is glazed with centre opening lights and delicate cast-iron arched trusses. The walls are rendered and the floor is marble. The entrances and the bays are emphasized by the use of the flat arch and each bay has glazing from the floor through two storeys with a mezzanine floor across. Above are three vertical windows with a central wrought iron decorative balustrade but many of the outer windows are blind. The Composite order is used throughout.

The major use within the arcade is shopping with storage and residential accommodation above and it is used as a district shopping centre for low to medium priced goods by members of the local community.
Galleria Vittorio Emanuele II, Milan.
pl.147 Isometric projection of the Piazza del Duomo, Milan.
Galleria Vittorio Emanuele II, Milan. Rotunda and Dome section.
pl.149 Dome.
pl.150 Roof.
Both Galleria Vittorio Emanuele II, Milan.
pl. 151 & 152 Galleria Vittorio Emanuele II, Milan.
pl. 153 Triumphal Arch, Galleria Vittorio Emanuele II, Milan.

pl. 154 Entrance from Piazza della Scala
pl. 155  Galleria Vittorio Emanuele II, Milan.
pl.156  Galleria Mazzini, Genoa.
Galleria Mazzini, Genoa.
pl. 159 Galleria Mazzini, Genoa. Octagonal dome.

pl. 160 Galleria Mazzini, Genoa. Pyramid roof over side arcade.
pl.161.162. & 163  Galleria Subalpina, Turin.
pl.164  Galleria Subalpina, Turin from Piazza Castella.
pl.165  Galleria Subalpina, Turin from Via Carlo Alberto.
pl. 166 Galleria Umberto I, Turin.
pl. 167 & 168  Galleria Umberto I, Turin.
France had a special relationship with the then new United States of America at the turn of the nineteenth century, and sophisticated Paris was a major source for new ideas in city building. Not surprisingly, the passages and galeries were adopted as early as 1825 as a perfect form of retailing in undeveloped towns. Although perhaps a dozen were built in America, most have been victims of the transient nature of the American Real Estate business, and very few now remain. Of those, Weybosset Arcade, Providence and The Arcade, Cleveland, have become a means of keeping alive the declining city centres of the late twentieth century following the fashionable dispersal of shops to the suburbs. They have been rehabilitated using the highly successful formula found in the conversion of Faneuil Hall\(^7\) and Quincy Market in Boston. That is, high quality building refurbishment and interior design, with an emphasis on 'fast' food, luxury goods and a relaxed atmosphere for sitting or meeting friends.

Providence

The main retail area of Providence is a mixture of early twentieth century eclectic buildings and high rise blocks, all large in scale and fighting for visual dominance. It comes as a shock therefore, to find a Greek Revival Temple, with pediment and Ionic columns in Westminster Street and Weybosset Street.(pl.169 & 170)

The porticoes are 74 feet wide and 15 feet deep, the 6 Ionic columns have 21 feet high shafts and are 3 feet in diameter, five steps lead up from the pavement. Built in 1828 it was the first monumental business and commercial
building in the town and it was also the first in the Greek Revival style. The 'American Magazine of Useful Knowledge' noted in 1834:

This is said to be the most spacious and splendid building of the kind in the United States.

Before the arcade was built, Cheap Side, (now North Main Street), was the centre of commerce and most of the 14,000 inhabitants lived in or around Westminster Street. It was openly agreed that the arcade would be a financial disaster and it was known for some time as Butler's Folly. The eponymous builder was a merchant and entrepreneur who owned land east of the arcade site, extending from Westminster to Weybosset Street. Charles and Benjamin Dyer owned the strip immediately adjacent to the west and Butler conceived the idea of building one development across both plots. After negotiation it was agreed that each owner would build half and each would nominate an architect. Butler chose James C. Bucklin, and the Dyers, by then trading as the 'Providence Arcade Realty Company', briefed Russell Warren.

There are several opinions over the design and construction of the arcade, and over exactly who was responsible for what, with some views probably being apocryphal. It appears that two separate companies and their two architects worked together to a basic design by Warren. That plan required Greek Ionic columns at each entrance and the architects are reported to have disagreed on the method of capping them. Each man therefore designed an entrance giving some individuality and a story for the local newspapers. Warren, apparently inspired by the Madeleine in Paris placed a pediment above the entablature and Bucklin added a pilastered parapet.

The first design had two floors of shops and one 'front' entrance. The entrepreneurs, full of enthusiasm and expectation of increased land values and
high sales, decided to add a third storey. That was easily concealed at the Westminster Street end by the pediment, but at Weybosset Street there was a much greater problem. The simple parapet was hastily quarried and erected, explaining the difference in design, and Bucklin as 'an enterprising master builder' possibly helped Warren to find a solution. Robert Alexander in the Journal of the Society of Architectural Historians notes that the Greek Revival style had been freely adapted by Parris and Willard in New England, and Warren used their design of the 1819 facade of St. Paul's, Boston, for the Westminster Street frontage. In addition:

Parris' Quincy Markets in Boston were not too far different in purpose from the arcade and probably helped determine the exterior treatment. 9

Contemporary newspaper accounts refer to Cyrus Butler's knowledge of similar buildings in London and Paris, but there were of course other American arcades being erected at that time. Arcades in New York and Philadelphia designed by Haviland were both begun in 1826, and completed the following year. Philadelphia was the larger with two avenues separated by a three storey central building, and four arched openings, two storeys high on the facade. The New York arcade however, was similar in size and proportion to Providence. The most important feature of Haviland's buildings were the long continuous skylights and balconies at the upper levels, both features which were used by Warren and Bucklin in Providence. (pl.171)

Warren described the inner dimensions, plan and roof construction in a letter to a friend but unfortunately did not allude to his sources:

Built of granite stone in 1827 and 1828 it fronts on two streets 74' on Westminster at the north and 74' on Weybosset at the south and is 216' in length it forms a transept or cross 194' by 42'.

The two fronts are ornamented by recess Porticos 15' deep each composed of 6 Grecian Ionic columns of 3' diameter and 2 square antaes and crowned with an
entablature and cornice forming a pediment, the whole height of the front Colonnade is 45' from the base of the pediment.

The roof over the entrance hall or avenue is covered with glass 32' in width by 188' in length the roof over the stors is covered with tin.

You enter the Portico by a flight of 4 steps running with the corner Buttments the entire length of the colonnade.

The hall or avenue running through from street to street is 13' in width the building is 3 storeys high there is 26 stors on each story making in all 78 stors.

The stors in the second and third stories you assend by two flights of stone steps under each Portico in each front.

The corridors forming the floors of the second and third stories are protected by a strong cast iron ornamented balustrade railing capt with mahogany and running entire around the interior of the Building.

The whole cost estimated at $145,000

In February 1829 it was announced:

This truly splendid Bazaar, said to be the most elegant and costly building of its kind in the United States, is now ready, completely finished and ready for the reception of tenants. 11

An exciting element of the arcade is the arrangement of staircases(pl.172 & 173) which rise at the back of each portico. The arch and columns are dramatic and create a focal point and the interior is contained and linked to these by the iron railings, modillioned cornice and Ionic entablature. From the heavy, dark porticoes it is a visual surprise to walk into an enclosed space which is full of light. The interior is free of obstruction, as the upper levels are recessed, allowing maximum illumination from the glazed roof,(pl.174) which is supported at its ends by large arches. The roof beams are cantilevered out to the ridge.

It is unmistakably a Neo-Classical building, with the maximum use of small panes of glass along the shop fronts.(pl.175) The second floor bays each
contain small paned double glass doors and a display window, whilst the first floor has more important projecting bays with fewer glazing bars. Unfortunately the original quadrant curved bays of the ground floor have been replaced by flat folding doors whose vertical panes provide less successful fenestration. The arcade has new, plain glazed entrance doors, which clearly reveal the first floor balcony from which rise two fluted Ionic columns carrying the entablature, and an arch supporting the roof, the whole emphasizing the theme of a Greek Temple.

The hazards of fire were a continual preoccupation of designers and an attempt was made to produce a building with a fireproof construction. Granite, stone and brick were all employed, but the shopfronts and floors were not considered to constitute a danger and were of timber.

The arcade achieved great notoriety when a school geography book of the mid nineteenth century included it as one of 'the seven wonders of the United States'; and again in 1970 it was brought to public attention by the Metropolitan Museum of Art, New York, who noted it as one of the three finest commercial buildings in the history of American architecture.

For decades this century it was threatened with redevelopment and as many others have disappeared in America, such proposals were fought through the local press and by the Rhode Island Historical Society. It became delapidated and was reduced to a pedestrian short cut, but in 1979 a development group led by Gilbane Properties undertook to spend $2.5 million dollars in order to create a mini Quincy Market. (pl.177)

In 1979-80 the granite was cleaned, shop fronts replaced or repaired and painted; balustrades and railings cleaned and repaired and wooden floors restored. But a major change was the installation of glass curtain walls at the ends of the corridors to control the temperature. Unlike the upper floors, the
ground floor shop fronts are new but they have been designed to give an open-
stall effect without detracting from the character of the building. The centre
two shops on either side have been removed (pl. 176) to give access space and
create patio areas for sitting and eating, and the floor covering is in a new
pattern of white, grey, green and buff tiles.

A carefully controlled tenant mix policy was adopted, with speciality shops
replacing traditional businesses. Rents were also increased. The market for
such shops being seen as the 36,000 professionals who work within five blocks
of the arcade and the upper income shoppers from the suburbs. Using Quincy
Market as a guide the ground floor is devoted almost exclusively to restaurants
and food stores, the first floor to clothing and accessories. The second floor
is service based with such uses as hairdressers and offices together with a
restaurant/club. The shops must be locally owned and managed. No national
or regional store chains are included, because they impose their own
standardized format and are managed from a distance.

Providence has an arcade to be proud of, a rare Greek Revival monument to
the early developers who seized European ideas and planted them amongst
unpromising surroundings in a splendid manner. The building is justifiably a
National Landmark.13
Cleveland somehow has managed to hold on to some of the most uninteresting buildings to be found anywhere, while allowing the picturesque structures to be bulldozed to make way for nifty new parking lots, drive-in banks and other crowd pleasers. But there are still some jewels left in the downtown diadem, and the best of these are the arcades.

It was inevitable that a new nation emerging from isolation but whose population had a predominantly European background would design and build in the fashionable styles of such cities as Paris and London. As confidence grew, the architects of the United States produced American architecture and a high degree of sophisticated technological inventiveness. Commercial buildings moved from the unpretentious cast-iron framed mills of England to skeleton framed sky scrapers, clothed in creative and original designs. Demand for such development came from the new industrial cities one such as Cleveland, which rapidly expanded in the last two decades of the nineteenth century. It had great wealth from oil, steel and railways and national architects who built in the eclectic mode of the age produced homes, offices and institutions. Free use of historical and contemporary styles, together with technological experiments in construction appeared in the city, resulting in architecture which was a product of the combined skills of the architect and the engineer.

Monumentality was required, reflecting permanently, or until something better could be erected, the wealth and power of the new clients. In addition, a city notorious for the greatest number of cloudy days in the United States, developed a passion for the light court. The lighter, more open structures were first achieved in wood and masonry, but fully realised with iron and steel. All the elements were successfully and dramatically brought together in the Cleveland Arcade. It has no peer on the North American continent and whilst it has been compared with the Galleria Vittorio Emanuele II in Milan, it is quite different in concept and design.
The Cleveland Arcade, (pl.178) claimed to be the 'largest of its type in the world' is an enclosed pedestrian route which connects two of the city's major thoroughfares. It was the solution to the problem of fully utilising an awkward urban site between two roads which were not parallel.

Monumental Romanesque (pl.179, 180 & 181) facades of hard red brick and stone, Richardsonian archways and Byzantine foliage in the spandrels suggest a bank, or other prestigious institution. The dark, cavernous entrances heighten the dramatic impact of the glorious open space within. The element of surprise, of visual shock, (pl.182) is achieved by the eye readjusting from massive masonry to skeletal construction. As the Avenues of Euclid and Superior do not run parallel, even more excitement is created by taking a passage at a twenty three degree angle from Euclid into the centre light wall and creating a rotunda at the junction.

Drama is heightened by the brilliant use of levels, planes and curves which were the answer to the problem of building across a site with a fall of twelve feet. (pl.183, 184 & 185) The designers created two main floors of shops, connected by a grand staircase at the Euclid Avenue end. A second divided staircase was added later in 1930 at the Superior Avenue entrance. The three hundred feet long, fifty feet wide covered light court is ringed by slender columns providing vertical lines which rise one hundred feet to the glass roof.

All the elements of the design emphasize the vastness and height of the interior space. Balcony, column or lampstand are in the foreground of any view of the arcade, increasing the perspective and making the eye constantly aware of distance and the great curve of the roof. The delicate glass appears to float above a gothic arch, but the roof trusses, although curved at their lower sides, are, in fact, gabled, with a twenty feet by ten feet louvre running along the ridge. The glass of the roof and in the shop fronts, together with the grille fronted balconies give a sense of ethereal enclosure.
Building the arcade was the idea of Myron T. Herrick, sometime American Ambassador to France. His company issued stock of one million dollars and appointed architect George Smith and engineer Professor Eisenmann to design the structure. It is a mixture of techniques, materials and styles which might appear to be contradictory, but which resulted from the rapid changes in construction and the different approaches of the two professions. The skeleton principal of non load bearing walls carried on a frame had been used in Chicago a few years earlier, making the skyscraper possible, and there is a combination of framed and load bearing walls in the entrance office towers. The floors and roof of the building and arcade are supported on iron and oak columns and wrought iron or steel beams. But the completely new feature in 1890 was the construction of the glazed roof. The steel trusses were designed with three hinges pinconnected to beams, carried on steel columns and the glass lantern was also hinged at the top. The main criticism at the time was the lack of tie rods across the arch to counteract the thrust of the roof, with only lateral cross bracing used between every other pair of trusses. In fact settlement has been less than half an inch in the past ninety years. Finding a company to build and take responsibility for the forty nine feet ten inches wide arches with their twenty three feet wide rise, was impossible locally, and the Bridge Company of neighbouring Detroit eventually, and successfully, undertook the work. (p.186, 187 & 188)

The arcade floors vary in width. There is a twenty five feet concourse from Superior Avenue and nine feet wide balconies on the Euclid level, both taking the heaviest pedestrian traffic. The upper balconies are set back for architectural effect, which also increases the daylight below, (p.189 & 190) whilst relieving the sense of height when looking down from the upper floors. From the fifth floor there is a view of the second floor balcony, then the wide first floor balcony, before realising the dizzy height of the court. (p.195)

Shops were placed on the first two levels, with office space above and offices in the two end blocks, giving a predominantly commercial income and a
captive group of shoppers from amongst the office staff. At the time that it was opened Superior Avenue was the major street in the city, but inevitably there were changes, and Euclid Avenue superseded it in that role.

Both central entrance towers were originally Richardsonian, but in 1939 the Euclid entrance was remodelled.\(^{(p1.181)}\) The great arch was removed and an attempt was made to counteract the tendency towards verticality, but the result was a loss of detail and the creation of a flat, horizontal conflict. Within the arcade the only major internal alteration was the redesign of the staircase at the Superior Avenue end. Originally it rose from the entrance and divided on its way to the balcony. In 1930 the present reversed stair was installed, blocking the view of the arcade from the street. The dramatic impact of the arcade from that entrance therefore is not fully appreciated until the half landing is reached, or the base of the staircase is circled. Art Nouveau lamps were also removed at that time and replaced by more simple fittings.

The arcade, when first opened, was advertised as 'an arrangement of stores rather like an oriental bazaar', where everything could be purchased, including lunch, with the addition of 'palatial architecture and all the pecuniary economy derived from scientific construction'.\(^{17}\) It remained a popular meeting place for many years and was occasionally used as a banqueting hall.\(^{(p1.191)}\)

Fashion progressed however, and the fickle shopper searched elsewhere for novelty. The arcade lost tenants and ceased to be busy. Recognised at least by local architects for its many qualities, it was listed as an Historic American Building in 1961, and became Cleveland's first National Landmark in 1973. A study was commissioned in 1975, with the aid of a ten thousand dollar grant, to determine the best use for, and means of upgrading, the building. There was only fifty per cent occupancy and a low rental value. The proposals called for
public ownership, air conditioning, replacement of staircases by escalators, public seating, restaurants and the encouragement of subsidised arts and crafts. Boston's Quincy Market was cited as an excellent example of restoration of a 'building in crisis'. The strength of feeling in the city for the arcade produced criticism of the naive and unrealistic proposals, particularly the loss of architectural and functional integrity and the six million dollars which would be required to undertake the scheme.

The arcade continued to exist rather than trade successfully until it was purchased for three million dollars in 1978 by Cleveland developer Harvey G. Oppmann, together with architect Herbert McLaughlin and developer Edward J. Connor, both from San Francisco. They made no major changes but spent one million dollars on upgrading the property. The interior was repainted, all offices renovated, music, art and community events encouraged and subsequently, it has been extensively advertised and used as a film set. The tenant mix was carefully organised, there was the controlled siting of key shops, and the rents were doubled.

The colour scheme is now gold, brown and dark green. There is an abundance of marble and mosaic with timber doors and window frames. The first floor shops have flattened arches over recessed doorways containing elaborate plasterwork. The facias are identical and shallow in depth, with discreet and elegant Roman lettering in gold. There is no advertising within the building. The cast-iron and steel columns are dark green with gilded capitals and there are forty gold gryphon heads menacingly guarding the roof. The graceful gilded grilles of the balconies are original. No single element, bay or shop is more important or visually more dominant than any other. The impact is created by the total of all its parts, given life and decoration by cascades of green leafed plants and colourful banners. (p.192, 193 & 194)

Tables and chairs have been placed around the first floor balcony and loitering is encouraged. The visitor can eat, read, listen to music or just watch. The
largest arcade in the world is not full of phrenetic activity, it is an extraordinarily beautiful, calm and peaceful arcade, an interior to be experienced.

Three further arcades were built in Cleveland following the great success of the Cleveland Arcade and two remain. The Colonial Arcade was opened in 1898 and the Euclid Arcade around 1900. It was suggested in a newspaper article of August 1900 that the city:

led the world in conversion of otherwise unavailable land into sites for these fine business structures which are thronged continuously with shoppers and other pedestrians.

There seems to be a well developed demand for arcades of this sort in large and rapidly growing communities.

It was noted that there were small arcades in Cincinnati, Indianapolis, Toronto and a few other cities but it was claimed that the most successful were in Cleveland.

This may be because of the peculiar layout of Cleveland streets or it may be because of the business acumen of men who see a way to use wasteland for business purposes.

A further more amusing explanation given for the existence of the arcades was to enable the pedestrian to walk in a north to south direction across the city centre.

People who found themselves either on Prospect or Euclid, whether by design or accident, were trapped. Those who didn't know about the arcade exit system sometimes got hysterical and ran round in a panicky way, blindly crashing into store fronts until they were too exhausted to move, at which point they would sit down and cry. When the arcades were cut through, thousands of pent-up despairing Clevelanders raced back and forth between Euclid and Prospect in a frenzy of delight. 'Liberation!' they screamed, 'Freedom!' 18
George Smith moved across Euclid Avenue to design the Colonial Arcade and Hotel in 1898 for Charles G. King. He produced, in contrast to the earlier masterpiece, a pleasant but traditional two storey shopping arcade which connecting Euclid Avenue with the Colonial Hotel on Prospect. (pl.196, 197 & 198)

Iron and glass were used in its construction but the architectural style reflects the revival of interest in classical details. The whole development of arcade and hotel covered 50,000 square feet of land with a 90 feet frontage to Euclid and 116 feet to Prospect. The length of the arcade is 440 feet.

The main feature is a glass gambrel roof reminiscent of the Passage Jouffroy, which rises behind an ornately supported cornice and frieze. Both gallery and ground floor have marble panelling and there is a Palladian window as the focal point above the main entrance. When first opened only the ground floor contained shops and an entrance foyer of the hotel. The latter is no longer used and the two levels now contain shops and offices. (pl.199, 200, 201)

Geographically the development was in an excellent position, almost opposite The Arcade, and sited on the busiest street in the city centre but it also relied upon clientele from the hotel, which like many old inner city hotels lost its exclusivity and eventually closed. John D. Rockefeller was as a regular guest at the beginning of the twentieth century and other notables lived in the suites, (pl.202 & 203) but a famous disagreement over the price of breakfast drove the former to a rival establishment and gradually the smart set followed. The hotel is now a very sad sight, being for several years the home of vagrants and scene of police raids.

The whole was purchased by Neimann Marcus and Oliver Altman in 1979 and they have revived interest in the arcade, with a major redecoration scheme and modernisation of main services. In 1981 all the premises were let with a
Delicatessen as key tenant. That business has taken a large part of one side at ground and first floor levels. Much of the splendour of the hotel has been uncovered at first floor level and silver chandeliers, Tiffany windows and marble floors (p.204 & 205) are once again on display.

Present plans are to convert the remainder of the hotel into offices, with strict control of building work in the arcade. The marble shop fronts cannot be changed and advertisements, signs, and light fittings must not detract from the original design.

The Euclid Arcade parallel to Colonial Arcade was designed by an unknown architect for John F. Rust. The site was previously a large retail dry goods store. When that was left empty, it proved impossible to find a tenant willing to pay the required rent and it was then converted into an arcade. The 20 feet wide one storey arcade of shops is doubled in height by the barrel vaulted roof with coffered moulding which springs from the modillioned cornice. Opaque glass has replaced the original stained glass of the skylights along the centre of the vault, taking the eye down the gentle curve of the arcade. The elegant interior, with surfaces of cream faience and marble contrasts sharply with the severe exterior facades. (p.206 & 207)

The passage was open as a public thoroughfare but there are now glazed doors to restrain vandals and to maintain an equable temperature. Offices above the Euclid entrance, rise six floors whilst the Prospect entrance is below the empty seven storey Colonial Hotel.

Again recently purchased, it has been restored, but unfortunately the original shop fronts have been replaced by aluminium frames. Nevertheless, deep facias and advertisements have been removed and only small hanging signboards are approved of. Plants have been added to give colour and life. Clean and bright with cafes, tailors, card and book shops and a sub-post office, it is a cool and sophisticated hall of commerce. (p.208 & 209)
The Colonial and Euclid Arcades are both very fine interiors, which in any town would be regarded highly, but they have suffered by being so close to The Arcade. Recently rediscovered they have been designated as State Landmarks.
pl.178 The Arcade, Cleveland.
pl. 169 Weybosset Arcade, Westminster Street, Providence.

pl. 170 Weybosset Arcade, Weybosset Street, Providence.
pl. 171 & 172 Interior - Weybosset Arcade, Providence.
pl.174 Weybosset Arcade, Providence. Ground & First Floor Plans.
pl.175  Upper Floor Shopfronts. Weybosset Arcade, Providence.

pl.176  New Staircase. Weybosset Arcade, Providence.
pl.177 Restored interior. Weybosset Arcade, Providence.
pl.179 & 180 Superior Avenue entrance. The Arcade, Cleveland.
pl.181 Euclid Avenue entrance. The Arcade, Cleveland.
pl.182 The Arcade, Cleveland from Euclid.
pl.183 East-West section. The Arcade, Cleveland.
pl.184 North-South Section. The Arcade, Cleveland.
pl. 185 The Arcade, Cleveland. Plans
pl.186 Roof

pl.187 Roof - interior : all The Arcade, Cleveland

pl.188 Gryphon heads.
pl. 189 & 190 The Arcade, Cleveland. Superior Avenue exit.
pl.192.193. & 194 Interior of The Arcade, Cleveland.
pl.196 Colonial Arcade, Cleveland. Euclid Avenue entrance.
Colonial Arcade, Cleveland. Prospect entrance.
Colonial Arcade, Cleveland.
pl.200 & 201 Colonial Arcade, Cleveland.
PERHAPS it was partially luck, it may have been the sudden realization of a long-felt want, for just as it was, at a time when the necessity of having a hotel centrally located and modernly appointed was particularly urgent, the new Colonial may well be said to have leaped into prominence from the start, and to have enjoyed the increased favor of the local as well as the traveling public continuously thereafter. The building of the Colonial Arcade—a stupendous work conceived by one of its owners, who having become interested in the Arcades of Europe during his travels there, believed that if one was constructed absolutely fire-proof and only two stories high, with all the most modern ideas in show windows, lighting, etc., it would become popular in Cleveland.
pl. 204  Former Billiard Room of Colonial Arcade, Cleveland.

pl. 205  Tiffany window, Colonial Arcade, Cleveland.
pl. 206 & 207  Euclid Arcade, Cleveland.
pl. 208 & 209 Euclid Arcade, Cleveland.
From the sixteenth century, Red Square was the traditional market place of the Russian capital, with market stalls and arched galleries containing busy shops along the Kremlin wall. In the process of modernising the area during the nineteenth century, the commercial units were removed, and the 'Arcades' were proposed in order to accommodate all the businesses under one roof and to clear the square for ceremonial occasions. A design competition held for the prestigious site was won by the St Petersburg architect, Alexander Nikanorovitch Pomerantsez, who produced a huge complex of arcades (pl.210) in stone, brick, iron and glass. It was known originally as Torgoye Ryadi and was opened in 1893 at a cost of five million roubles. Three long passages intersected by cross corridors, bridges and galleries, contained shops in a variety of sizes, the latter made possible by using internal lightweight partitions. It was estimated that 200 firms occupied 1,000 rooms before the revolution, although many of the original market stallholders, for whom it was intended, moved elsewhere because inevitably, the rents were too high.

After 1917 it became the state owned store of GUM but was closed by Stalin during the 1930's. It was used as a military hospital during the second world war and renovated and reopened as GUM in 1953 after Stalins death.

This Russian 'Ancient Monument' is situated in the most central of spaces, forming the fourth side of Red Square, (pl.211, 212 & 213) with its architecturally most prominent entrance immediately opposite the site now occupied by Lenin's Tomb. The walls and buildings of the Kremlin dominate the square, overshadowing GUM and the vast red brick nineteenth century Museum of Russian History to the south. To the north is St. Basil's Cathedral which is much smaller, but quite remarkable, with its onion domes, brilliant
primary colours and gold, leaving the grey of GUM as a rather second rate backdrop for affairs of state.

The Italian Renaissance style\(^{(pl.214)}\) chosen by Pomeransez was much in use in St Petersburg at that time. There are also details from Russian church architecture and decoration from the nearby Kremlin Royal Palace, which has been handled in a heavy and unsophisticated manner. The first floor windows rise the full height of that storey and are set within moulded arches, with inset triple arches in the Italian manner, on the most important north, south and east facades. The second floor has aedicular windows on three sides, and the Red Square elevation has ogee window heads and much richer carving overall. There are half hexagon projecting towers at each of the four corners of the building and the whole is capped by an ornate cornice rising to form a parapet, behind which can be glimpsed the three glass barrel vaults covering the arcades and running parallel to Red Square. There are chateau roofs and pinnacles above the Red Square facade, which emphasize the major entrance\(^{(pl.215)}\) with its giant arch and inset ceremonial staircase, and the two smaller entrances. The remaining three facades also have three arched doorways set in projecting bays. The remainder of the ground floor has horizontal chamfered stone courses broken by bays containing large shop windows framed by moulded segmental arches.

The interior in stucco is ornate multi-arched Renaissance\(^{(pl.216 \& 217)}\) with elaborate and heavy decoration, but it is more refined than the external facades and although the three arcades are very long they are never monotonous. They are broken by staircases and bridges\(^{(pl.218)}\) and above the eastern arcade, dividing the corridor in half above first floor level, is an office block running at right angles to Red Square. The middle and wider gallery has a central space covered by a dome.\(^{(pl.219)}\)
The bays are divided by projecting pilasters and contain heavily moulded arched windows, and the two outer arcades in addition, have oversailing second floor balconies\(^{(pl.220)}\) carried on iron consoles. The balustrades are of wrought iron, as are the original but non-operative lamp standards. Rising from the modillioned and dentilled cornice of the clerestorey, the three delicate glass barrel vaults and dome float above, rather than belong to the robust and vibrant interior.

The delivery of goods is via ramps from Wetroschy Prospekt down to an underground unloading bay. The basement runs under the whole block and is used for storage. Light and air for this lower floor is provided through grids on the arcade floor whilst heat is obtained from raised vents which are gilded and covered in mirrors adding slightly bizarre elements into each corridor.

It is an immensely busy and bustling trading area,\(^{(pl.221)}\) very large and unusual in its plan form and complexity. But if it was left to survive without state ownership and in a free market economy it may, because of size and geographical position rapidly decline. Few people even now venture upstairs, and negotiation of the galleries is hazardous with goods and rubbish on large trolleys taking precedence over shoppers. The whole requires modernisation with escalators, lifts and improved services. Nevertheless, as the building has the monopoly of trade it is in a unique position. From eight in the morning until late evening it is full of hopeful Muscovites who do not sit and enjoy the world going by as do the Milanese, but who queue for hours for the day's special goods from knitting wool to sardines. One and a half miles of counter, 58,024 square yards of sales space and 7,000 shop assistants are the great attractions and between 1956 and 1966 some 1,000,000,000 customers were served.
GUM, Moscow. The Roofs.

Red Square, Moscow.
GUM, Moscow.

GUM, Moscow - main entrance opposite the Kremlin.
pl.218 & 219  GUM, Moscow.
pl.220 & 221  GUM, Moscow.
Notes to Chapter Three

1. Passagen

2. See Chapter 8 - Table D

3. Appendices III Panoramas

4. See Chapter 5

5. Appendices IV Monuments Historiques en France

6. 'The Italian Job' starring Michael Caine, Noel Coward


8. Old Arcade Bournemouth known as Joy's Folly for similar reasons.

9. Weybosset Arcade

10. Letter from Warren to William Staples 1893

11. Manufacturers and Farmers Journal February 1829

12. Geography Guyot - 1850

13. Appendices II National Landmarks

14. (Cleveland) Plain Dealer 18th May 1971

15. (Cleveland) Plain Dealer 1900

16. Notes of the Cleveland Arcade Company 1937

17. Opening advertisement Cleveland Arcade Co.

18. (Cleveland) Plain Dealer May 1971

19. Passagen J.F. Geist
CHAPTER FOUR

TYPOLOGY
The arcades of Paris were long, narrow corridors providing a series of easily covered pedestrian thoroughfares, and the first arcades in Britain were also developed to follow similar plan forms. The Royal Opera Arcade (pl. 222) ran the length of the theatre site and was a covered entrance corridor, whilst the Burlington Arcade, (pl. 222) sited parallel to Burlington House garden, was both a narrow building producing few problems in its construction, and also a long, indoor pedestrian route connecting two busy streets. There was no reason however, why a shopping arcade should not follow any plan form as long as the building enclosed a covered pedestrian area lined with shops, and difficulties in finding a long narrow site in the right geographical location led to experiments in spatial planning.

Arcades were built to a plan, therefore, which was determined by the shape and size of the site, the possible exits and entrances, and the ability to gain the maximum pedestrian flow. Whether there were legal battles over land purchase is not known, but it is evident from studying the plans that some arcades are an extremely odd shape, or have entrances in a less than advantageous situation because that was all that could be achieved on a particular site. There are simple corridors or groups of corridors (pl. 223) in L, Y or H, shapes and more rarely there are central lightwells within a block of development.

The street pattern in the central area of nineteenth century towns often followed the routes established in the middle ages or even earlier, and the system of land tenure and the relatively small scale of building projects, ensured that generally it continued to survive in its mediaeval form. Therefore, as towns expanded and new buildings were erected, they did so in a piecemeal fashion. One great benefit of that pattern of building for the developer of arcades, was that maximum use could be made of old alleys and
narrow roads. In Bristol, for example, the Lower and Upper Arcades were created over well known, and frequently used short cuts, between the middle of the city and the housing areas. Following that idea of using busy pedestrian routes, some entrepreneurs created their own by taking advantage of sales of land and buildings, in order to acquire a favourable trading position, which linked two busy streets, or one busy street with such a financially attractive use as a market.

In addition to the existing alley roofed over as an arcade, there was also very sensible use made of 'burgage plots' in some cities. Mediaeval Cardiff, which became the city's modern central area, was divided into plots, each with about 30 feet frontage to the main street and a considerable depth behind. The city was not developed until very late in the nineteenth century and it did not experience fully the industrial revolution. The population in 1870 was, in fact, less than the 2,500 that it had been in 1262. The mediaeval walled town became the business district of the present city, and the growth of industry was at some distance and confined to the port. Shops were built to serve a wider region, and the burgage plot was used as a basis for development. Ownership of the plots was often spread amongst a large number of people, leases were mostly 999 years, and control by landowners was almost impossible. The most profitable use was obtained by building around courtyards, that is along the sides of the plot and these eventually made a natural site for arcades. Nine were built in Cardiff, but the Andrew's Arcade of 1896 and Dominion Arcade opened in 1921 have been replaced by modern structures, and therefore only seven of the original remain intact. (pl.224)

The central business district was transformed from the mid 1880's with hotels, offices and shops replacing old housing. One interesting feature of this was the building of shopping arcades to increase the frontage available. 1
Burgage plots were also much in evidence in the centre of nineteenth century Leeds where 60, consisting of an half acre allotment and a building plot, lined Briggate, which was and remains one of the primary roads in the town. The plots were long narrow strips running at right angles to the street, and throughout the Middle Ages they each contained a house with a back garden. By 1600 pressure on land and buildings led to subdivisions and redevelopment, and eventually on most sites a passageway was created through the front building. That gave access to a courtyard, around which were built town houses - a rather grand title for the high density dwellings. Later they were converted to industrial use, or to tenements, and the courtyards became insanitary slums. Social services were provided in the form of an inn in each court, many of which survive, although most of the other buildings have long since disappeared. The arcades in the city\(^{(p1,225)}\) owe much to the rights of way established through the courtyards, and in particular the Thornton and the Queen's Arcades were built over such plots of land.

In the growing urban areas and city centres of the nineteenth century, despite the predisposition towards retaining the mediaeval infrastructure, many sites were ripe for redevelopment and new roads were constructed, whilst some old roads were widened, leaving valuable new sites on one or both sides. Developers were able to erect large buildings for the growing commercial sector. The sites were often very deep and could only be used efficiently, at that time, with a central open or glass roofed courtyard. If an arcade was required on such a site, it therefore took the form of a covered lightwell as in Barton Buildings, Manchester, which followed the widening of Deansgate in 1871.

The clearance of large areas of land in town centres however, only became a common occurrence with the statutory provisions of contemporary Town Planning and Compulsory Purchase legislation. It is, therefore, very rare to find an arcade which was erected as part of a much larger scheme, and owing
its plan form absolutely to the designer of the building. Leeds contains a unique example, with shops, offices, theatre and new roads, constructed by the Leeds Estate Company at the end of the 1890's. It was funded by private capital but it was made possible by the Council's involvement in land assembly, and the initial proposal for the modernisation of that area of the city was made by the City Engineer. The whole scheme remains intact, apart from the Empire Theatre which, described on its opening as 'the handsomest of its kind in the country' was removed in an act of corporate vandalism in order to create a thoroughly nasty modern shopping arcade.

An arcade enabled a developer to utilize more fully a difficult shaped site. Land for example, that was too awkward to form one large shop, too large for one store but which could be capable of containing mixed unit sizes and a pedestrian corridor. Such a triangular or polygonal site occurred in Walsall and in Letchworth where, by building the arcades, new streets were created giving greatly increased shopping frontage.

Whatever the shape, size or geographical position of the site there are principally only four forms of plan.

1. The corridor or passage which is one uninterrupted length.

2. The corridor which widens somewhere along its length into a larger space and is (or originally was) covered by a hipped roof or a dome.

3. Several corridors which are linked and are, for example, Y, H, L or T shaped on plan.

4. The lightwell, a rectangular or square space surrounded by shops, and with upper floors of shops, offices or workshops.
At its best the corridor links two busy streets, or links a busy street to a use which attracts pedestrians, such as a market or car park. Both arcades in Wigan, and in Oldham, lead from their respective main shopping streets into busy markets. The Market Arcade in Inverness was built as part of the Market Hall development, forming a corridor into the latter, in a manner similar to the Russell Arcade in Halifax. Bedford Arcade was constructed over back land between two busy streets and in what, since 1982, has become the centre of the arcade, there was a wide covered hall for market stalls. The arcades in Burton on Trent, Newark, Rotherham, Norwich, and Silver Arcade, Leicester, and all three arcades in Dewsbury also lead directly into their respective market place.

If an arcade runs between relatively minor streets that are away from the main shopping routes it will be rarely successful, unless it provides an advantageous short cut between some other central area uses.

A corridor that runs at right angles to a shopping street, even if it is busy, will have a significant reduction in visitors if its secondary entrance leads to a service street and becomes, for most purposes, a dead-end. The number of shoppers attracted into one entrance will be significantly fewer than into two or more, and those who venture inwards may feel trapped as they search for an exit. In addition, shopping is often undertaken on impulse and therefore a large flow of people in both directions is required. There are a few examples of an arcade running parallel too, and with two entrances from, a major street. Arcade (Chambers) Keighley\(^{(p.227)}\) and Clarence Arcade Ashton under Lyne are in this form and fail to attract many visitors inwards.

Whatever the origin of the site, 97 of the existing 117 arcades in Britain are linear developments, that is they follow the simple corridor plan established in Paris. They vary in architectural quality, with such widely disparate examples as Burlington Arcade and The Arcade in Abertillery, and despite the
technology available to create extraordinary lightwells as in Cleveland, or
elegant wide covered spaces as in Genoa, the average width of these arcades is
only 15 feet. They are also limited in height, generally to two stories, with as
many as 37 being of only one storey internally, and conversely only the Silver
Arcade in Leicester \(^{(pl.228)}\) has an internal covered space of four floors.

In a few towns the arcade began life as simple pedestrianised street of shops,
built as part of one development scheme, but the roofs were added later. Most
notable are the Kingsway and Queensway Arcades in Dewsbury. \(^{(pl.229)}\) A
triangular site was developed between 1911 - 1916, with shops and offices of
stone in a classical style. Where the site widened, two streets of shops were
continued across the land between the Market and Northgate. In 1927 the
local Council\(^{3}\) proposed to roof over the two, and the Town Clerk suggested
that gates should be added to stop their use as public thoroughfares. The
Chamber of Trade and the property owners objected strongly to both
proposals, giving as their reasons that internal light was bad for the health of
the assistants; there would be increased lighting costs; the pollution in the
town would damage the glass roofs; cost of erection was high; there was a
need for economy and the roofs were regarded as a waste of money. Finally,
to justify their opposition, they claimed that 'everyone' was against the
scheme. Gates were rejected, but as the local authority owned the site, the
roofs were installed in 1928.

Abertillery in South Wales has been described by a local historian\(^{4}\) as a
'Klondike' settlement, which enjoyed rapid growth during the last decade of
the nineteenth century. The buildings on the steeply sloping hillside were
hurriedly erected, and the highest architectural quality was not achieved. A
pedestrian street of about 1890, was created to fully utilize a triangular site in
the town centre, and it became The Arcade in 1898, when a pitched glass roof
was added \(^{(pl.230)}\) bringing the sophistication of Cardiff to the depressing coal
town.
Not all the corridors run in a straight line between entrances, but often curve, resulting not from the designers wish to create serial vision, but because it was the best way to develop a large site; or the development followed the line of an earlier alley or land boundary. The latter is clearly seen in the High Street - Duke Street Arcade complex in Cardiff. The Strand Arcade in Derby curves gently following site boundaries, whilst The Arcade in Accrington gained its distinctive alignment from being built over a culverted water course.

Of the 97 corridor arcades, as many as 30 were built to develop back land, giving an entrance from a shopping street, but in many cases the second entrance is, or was, merely a back door leading to a minor street or a lane and in a few examples it was a land locked plot. Wayfarers Arcade in Southport has a back door leading to a minor street, whilst St. Michael's Row, Chester originally had a flight of steps leading down to a back lane. That arcade now, however, leads directly into the Grosvenor Centre. Such an advantage has also been gained by the Westgate Arcade in Peterborough which since 1982 has become a direct route into the new Queensgate Centre. Not all arcades have been so fortunate, and for example in Colne The Arcade has ceased to trade. Opened in 1875 behind a row of cottages, it was a landlocked site with only one nondescript entrance from Church Street. There was no entrance building and only local knowledge could identify the arcade, however as it formed a boundary to the churchyard and was a great novelty, it was initially successful. Eventually the row of cottages were replaced by Shackleton Hall, a three storey stone development with shops on the ground floor, and a shop lined entrance into the arcade. But in the past two decades new shopping development in the small town has moved the retail area eastwards and the arcade, much in need of repair, is closed.

The small single storey arcade in Ayr was built in the courtyard of older premises, with its entrance formed through the open coach arch, as was the
development in Hitchin and The Arcade in Barnsley.\(^{(p.233-234)}\) All three are in an excellent position in their respective towns as they are entered from the main shopping street. The latter's second entrance is also from a shopping street and the secondary exits of the former two lead directly into a car park. The Lowther Arcade, Carlisle was built in the courtyard of a public house and consisted originally, of a row of lock-up shops entered through a passageway. A pitched glazed roof was added later, and a second entrance created through a purpose built block which had offices on the upper floors. The Arcade at Merthyr Tydfil is unique in having its second and quite unadorned entrance leading directly onto a platform of the town's railway station.

Some arcades were built as part of a larger scheme and form a corridor adjacent to, or below, the main use of the building. The North Bridge Arcade in Edinburgh is secondary to the office use of The Scotsman building whilst Park Mansions Arcade, Kensington provided a service for the flats above and utilized an internal light court. Both the Piccadilly and Prince's Arcades, Westminster, were pedestrian links through very deep office and hotel development and Queen's Arcade, Hastings and the Royal Arcade, Boscombe, were both connected directly with a theatre.

Perhaps the economic problems of the Royal Opera Arcade, London, tied as it was to the theatre, did not encourage a more frequent juxtaposition of the two uses and indeed, as they keep different hours of trading, there does not seem to be much in common between a theatre and an arcade, however there are several later examples. Charles Thornton built his arcade in Leeds\(^{(p.235)}\) adjacent to his Variety Theatre; the Queen's Arcade, Hastings was built around the Gaiety Theatre, and the Royal Arcade, Boscombe had a direct link into the Hippodrome. Quite unique however was Crawford's Arcade, Stirling, which included the Alhambra Theatre in the centre of the development.
In contrast to such linear developments there are six arcades (pl. 236) which can be more properly described as lightwells, that is with a glazed roof over a space and surrounded by buildings of varying heights. Barton Arcade, Manchester, Byram Arcade, Huddersfield, Clarence Arcade, Ashton under Lyne and King's Arcade, Doncaster, have arcades which make use of the central area of a deep site, and have galleried access to offices on the upper floors. The Wayfarers Arcade in Southport is a combination of corridor arcade and a much wider 'space', and therefore is not perhaps strictly a lightwell. Rotherham's Imperial Buildings is a rectangular three and four storey block of shops and offices with a central single storey top lit space containing small market stall type shops. This is a surprisingly low number, but of course, where towns also had, or needed department stores, large and especially deep sites could be more efficiently used by that type of development. In architectural terms the interior of the lightwell arcade was often quite independent of the exterior.

Regardless of the plan of arcades very few designers used open balconies to gain access to upper floors and only 13 have been designed in this manner. It might be assumed that there was scope for architectural exuberance, with the inclusion of upper galleries to give public access to offices and workshops, and indeed the concept of the galleried interior seems to be most appropriate for arcade design. However very few were used to increase vertical utilization, or to create dramatic spatial effects. Pedestrian circulation was almost wholly confined to the ground floor in the Georgian manner although the multi-level lightwell was used successfully in early department stores. There have always been great problems in forcing people to walk upstairs to buy goods. Without lifts or escalators only the desperate will climb up or down. The shopper is often too busy, or regards the effort required to far outweigh any possible advantages. None of the arcades have successful shops trading on the upper levels. Even those in the newly restored Silver Arcade in Leicester, with a small lift to give ease of access, are taken by specialist
boutiques and craft shops which are only open for a limited period. The pattern is repeated in Byram Arcade, Huddersfield and Handyside Arcade, Newcastle upon Tyne. Cafes are more successful on upper levels, as in the Great Western Arcade, Birmingham, and the Wayfarers, Southport, where it is pleasant to sit and watch the activity on the ground floor.

Offices, professional services and workshops are on the upper floors of Barton Arcade, Manchester, Clarence Arcade, Ashton under Lyne and the Castle Arcade, Cardiff. King's Arcade, Doncaster has a few offices. Westminster Arcade, Harrogate has shops and a cafe, the upper floors of the Newport Arcade and The Arcade, Llanelli are used for storage. Apart from the unwillingness of visitors to climb stairs, another major problem is that most of these buildings have dark, and often delapidated back staircases upon which no one would wish to linger.

The third category is more difficult to define. The buildings are more adventurous and wider than the simple corridor, and seven have some form of open space covered by a dome or change in roof line. The Royal Arcade, Boscombe has an octagon at the junction of the two arms, a dome with mosaic pendentives is a major feature of the County Arcade, Leeds and the Council Arcade, Nottingham,\textsuperscript{(pL237)} whilst Crawford Arcade, Stirling and St Michael's Row, Chester have a central space covered by a hipped roof. The Royal Victoria Arcade, Ryde has a central space covered by a dome, and at the junction of the two arms of Digbeth Arcade, Walsall, is a large area which is similarly emphasized.

There seems to have been very limited interest in multi-corridor arcades\textsuperscript{(pL238)} such as the series which combine to make the Passage des Panoramas in Paris so interesting. Perhaps fewer large open spaces, and competition from other types of shops conspired to prevent the development. The Grand Arcade in Leeds has the rare distinction of being built as a double
arcade, that is with two corridors running parallel and joined in the centre by a short passage. Opened in 1890, but at a distance from the main shopping district, it was not a great success and a quarter of the site was converted into a cinema. The remaining section of the eastern arcade was absorbed into the trading area of the shops, and eventually the complete corridor disappeared, leaving a single arcade from which runs a short corridor at right angles leading to a third, but minor entrance.

Handyside Arcade in Newcastle upon Tyne presents a plain three storey facade to Percy Street, with shops along the ground floor, a central entrance to the offices above and two entrances into the arcade. The site behind this frontage however, was developed as a horseshoe-shaped plan, and a short extra corridor to give access to a back street. The arcade contains shops on the ground floor and there are a mixture of retail and workshop units on the upper level. It was never intended to be a high class development but a practical and intensively used site on the fringe of the shopping centre. The Morgan Arcade, Cardiff gradually grew round the David Morgan shop, and there are several lengths linked by service roads, one of which lead into the Royal Arcade. The Sanderson Arcade, Morpeth, has three corridors of market stall type shops, but the most complex layout is the Granville Arcade, Brixton. The four storey flat roofed building was opened as an arcade in 1937, but in fact the interior is a warren of avenues with market stalls which have extended beyond the original site, and now join premises below the railway arches, at some distance from the main building.

**Access and Storage**

Arcades are generally sandwiched between other buildings, (pl.239) with two or more entrances leading directly into the pedestrian corridor. Their long side walls are party walls shared with neighbouring property, or they are immediately adjacent to those buildings. As a result, none of the units within
the linear arcades have back doors. Similarly the lightwell arcades are in the centre of a block of development, and therefore goods to all but one British arcade, are of necessity, carried into the shops via the pedestrian entrance arches. They are then stored in basements and sometimes, on the upper floors. Problems are posed for modern transportation planners if they attempt to create pedestrian streets which include arcade entrances, because there is often no other route into them. Delivery vans must have agreed access sometime during working hours or, as often happens, the boundary of the pedestrian area stops short of the arcade.

Direct access into an arcade via a separate service entrance can only be found in two arcades, one of which is in Moscow where a ramp leads directly into the basement. In Britain, the Council House Arcade, Nottingham, opening as it did in 1928 when motor-vehicles were becoming common place, has a lorry lift, which enables vehicles to be driven into the building and unloaded at basement level.

Apart from Nottingham all the arcades rely upon dual use pedestrian and service entrances. Goods must be carried along the corridors, and there is great difficulty in negotiating narrow spaces with large objects such as furniture or white goods. And those items, of necessity, tend only to be sold in some of the larger arcades such as Digbeth Arcade, Walsall and the Grand Arcade, Leeds.

All the arcades have substantial basement areas, extending under the arcade floor, thus increasing the floor space of the units. Very few cellars have been converted into retail use, because without that storage area, the extremely small shops would be impossible to organise. Some rare examples can be found however, such as several shops in the County Arcade, Leeds, which have opened their basements to shoppers; there is one shop in the Barton Arcade, Manchester and an end unit in the Royal Opera Arcade, London. It is proposed
to utilize fully the basement of the Montpellier Arcade, Cheltenham by converting it into a restaurant although the Local Planning Authority is not yet convinced of its safety, and the lower floor space of the Royal Victorian Arcade, Ryde, has been opened out to form one large space for an antique market. Generally, however, the arcades are as they were when first opened, being serviced directly from the arcade and using the basement for storing goods.

Entrances

However attractive is the interior of an arcade, from Georgian quadrant curved windows to Edwardian theatrical splendour, unless the pedestrian is drawn into the building it will decline and die. There are, of course, different means of tempting people into an arcade, from placing it on an busy pedestrian route to continuous advertising. But one simple means to such an end is to create so splendid an entrance that people are enticed towards it in an irresistible urge to find what is concealed within. Nothing in that category surpasses the triumphal arch of Milan, but that was an extremely expensive device which not unnaturally has failed to appear elsewhere, not least because there was a shortage of money and of national events which required commemoration in such a manner. The Council House Arcade in Nottingham (pl.240) has three giant arched entrances leading into the building. However, these are not sited on the main facade but are in relatively narrow side streets where their impact is reduced. Similarly in Letchworth, The (Leys) Arcade has giant archways (pl.241) permanently open, but as they do not project in front of the building line they are merely openings and not civic design elements. Most architects of the remaining arcades were content to provide an arched entrance rising through one or two storeys, often with ornamental gates to be closed after shop hours. (pl.242)
Lord Street, Southport has the distinction of being lined by cast iron canopies to shelter the promenader. Designs vary along its length, depending on the whim of the individual developer, and the architect of the Wayfarers Arcade (pl.243) sensibly emphasized its entrance by turning the narrow section of the canopy into a barrel vault. In a more simple manner a cast-iron canopy focusses attention on the entrance to The Arcade (pl.244) at Bognor Regis. Notable variations on the arch theme are the triple Gothic arch with cast iron canopy at the Westminster Arcade, Harrogate (pl.245) the arches with semi circular gables and towers on the Old Arcade, Bournemouth (pl.246) and the wonders of the Art Nouveau entrance (pl.247) in Norwich.

Two modern canopies which attract the passerby and are commercially successful are the solid barrel vault which extends over the pavement outside the Argyle Arcade, Glasgow (pl.248) and the great curved hood which distinguishes the Bridgwater canopy (pl.249) from its eighteenth century neighbours.

Barton Arcade, Manchester, can, on its entrance from St Ann's Square, claim a unique and particularly beautiful glass and cast-iron curtain wall (pl.250) which provides a complete elevation and reveals the glorious interior and domed roof, but unfortunately it is situated in an alley off the Square, and is a hidden gem which appears to be a private rather than a public building.

One great problem of many arcades is the passion for standard modern shop fronts, with deep horizontal facias, which have replaced the original elevations immediately at their entrances. (pl.253.254) The result is that in place of pleasantly detailed and often curved windows leading into the archway, there are dominant shop windows with a blank space between, which appears merely to be a doorway into one unit. The Arcade, Merthyr Tydfil (pl.251) and The Arcade, Bedford (pl.252) are examples of such modernisation.
Generally the relationship of arcades to the remainder of the street architecture is remarkably underplayed. The owners were so sure that they had a superior street of shops, or were, particularly in the Georgian period, so careful to be elegant and tasteful, that the entrance was reduced to an almost minor role. (p.1255) Competition, city centre expansion and adventurous or garish eye catching shops in the High Street have led to a problem of 'hunt the arcade'.

It is of great significance that Burlington Arcade, the most economically successful shopping arcade in Britain, has the most flamboyant and impressive entrance. Sir Beresford Pite's much maligned alterations to the Piccadilly entrance, with its huge proscenium arch framing the earlier beauty of the shops, (p.1256) tempts inwards thousands of visitors each year.
pl.247 Royal Arcade, Norwich
pl. 222  a. Royal Opera Arcade, Westminster
b. Burlington Arcade, Westminster
pl.223 Some Plan Forms of Arcades
pl. 227  

a. Arcade Chambers, Keighley  
b. Clarence Arcade, Ashton under Lyne
pl.228  Silver Arcade, Leicester
pl.229  Kingsway & Queensway, Dewsbury
pl.230 The Arcade, Abertillery c.1925
pl.231 Church Street Colne c.1880
pl.232 The Arcade Colne c.1880
pl.233 Entrance to the Arcade, Barnsley via Guest's Yard
pl.234 Removal of Market Hill property, Barnsley 1893
pl.235 Thornton's Arcade & City Palace of Varieties, Leeds
pl. 236  a. Barton, Manchester.  b. Clarence, Ashton under Lyne
    c. Imperial, Rotherham.  d. King's, Doncaster
    e. Byram, Huddersfield  f. Wayfarer's, Southport
pl.237 Council House Arcade, Nottingham
pl.238  a. Handyside, Newcastle upon Tyne.  b. Grand, Leeds  
c. Morgan, Cardiff.  d. Royal, Cardiff
pl.239 Argyle Arcade, Glasgow
pl.240 Council House Arcade, Nottingham
pl.241 Leys Avenue, Letchworth
pl.242 North Bridge Arcade, Edinburgh
Wayfarers Arcade, Southport

pl.243  Wayfarers Arcade, Southport
pl.244  a. & b. The Arcade, Bognor Regis
pl.245 Westminster Arcade, Harrogate
pl.246 The Old Arcade, Bournemouth
pl.248  Argyle Arcade, Glasgow
pl.249  The Avenue, Bridgwater
pl.250  Barton Arcade, Manchester
pl.253 Hepworth's Arcade, Hull
pl.254 The Arcade, Dewsbury
pl.255 Royal Opera Arcade, Westminster
pl.256 Burlington Arcade, Westminster
Notes to Chapter Four

1. Coal Metropolis

2. The Leeds Mercury

3. The (Dewsbury) News

4. Mr. Thomas - Deputy Borough Engineer

5. see Chapter 3