The glazed arcade is a building type which is both interesting and popular in contemporary architecture. Arcades may be on a single level, slope gently to follow the contours of the site, or have a split-level arrangement to change levels. Arcades are through routes intended exclusively for pedestrians. They should be accessible around the clock as semi-public routes. Arcades can have a multiplicity of uses (retail sales, mixed sectors, etc.). Therefore facilities that will attract customers outside normal business hours should be encouraged. Glass structures are supported by steel, aluminium or laminated wood beams.
GLAZED ARCADES

Historic Examples

Passage du Caire → 1, 5 is the oldest surviving glazed arcade in the world, and at 370 m is the longest in Paris. This low-key, two-storey arcade is on average only 2.70 m wide. It houses two stores of shops, as well as apartments above the glass roof. Galerie Vivienne → 2, 6 by architect François-Jacques Delannoy (1755–1835), was built at nearly the same time as Galerie Colbert, which is located in the same block of buildings. Passage du Grand Cerf → 3, 10 is only 4 m wide, but is three stores high and 120 m long. It runs straight through a block of buildings. There are shops on the ground floor, offices and workshops on the first floor, and apartments on the second floor. More than most other arcades in Paris, the 190 m long Passage Choiseul → 4 is a roofed-over street. There is separate access to each building by a spiral staircase. Passages Jouffroy and Verdeau → 6 is a combined, roofed pedestrian system which is 400 m long. Galleria Mazzini → 7, 8 is one of the monumental arcades. Leeds Thornton’s Arcade → 6 has houses in front and an arcade area occupying three stores. Galleria Umberto I → 9, 16 is an ideal embodiment of a cross-shaped design with four entrances. The crossing is crowned with a giant dome. Morgan Arcade → 15, 16 was built in 1897 by the architect Edwin Seward for David Morgan. It was altered by the later addition of department store buildings on the Hayes.
GLAZED ARCADES

Historic Examples

Galleria Vittorio Emanuele II in Milan represents the developmental zenith of arcade architecture. It is the culmination of a process that began with the 'passages' in Paris and reached an intermediate stage with the Galeries St. Hubert in Brussels. The plan of the Galleria is in the shape of a Latin cross with its centre expanded into an octagon. The main dimensions are: longitudinal arm 196.62 m; diameter of octagon 36.60 m; height to top of lantern 47.08 m - (1) + (2) and (5) + (7). Those dimensions are exceeded only in some details of later arcades, e.g., the height of the Galleria Umberto I in Naples, and the length of the GUM department store in Moscow - (3). Significant references to the urban façades of Palladio can be seen in the design of its interior.

The GUM department store building in Moscow - (3) + (4) and (6) + (9) is in approximately the shape of a parallelogram, with sides measuring 90 m x 250 m on average. The polygonal extension in the centre of the intersecting central aisles is reminiscent of the arcade in Milan, although the transverse arm does not extend up to the roof.

Galeries St. Hubert - (11) + (12) is the first example of a monumental arcade. Its volume has rarely been exceeded by later examples. The Galeries St. Hubert were also the first to be publicly funded.
GLAZED ARCADES

Applied Examples

Galleries and arcades are design elements that have been re-discovered by architects. Their transparent roofs span roads, paths and squares, and connect buildings, shops and stores. Galleries and arcades have been used to expand pedestrian zones, protect against bad weather, and provide a meeting place.

A shopping arcade in Hamburg — 1-3 has a site area of 11000 m². There is shopping space of 9400 m² over three levels, and roof parking for 180 cars.

Kaiserpassage in Bonn — 6-8 is based on 19th century arcades and galleries. Bringing together specialised shops, boutiques, kiosks, cafés, restaurants and cinemas is intended to encourage passers-by to linger without regard to the weather.

Calwer Passage in Stuttgart is covered by a huge vaulted glass roof — 4-7.

Wilhelm-Arcade in Wiesbaden — 11-13 connects the Marktplatz (market square) and Wilhelmsstrasse. The ground floor has shops, and the upper floor accommodates a restaurant and the personnel and service rooms needed by the businesses.

‘Galerie Kleiner Markt’ in Saarlouis — 14-16 has escalator access to three storeys. Inclusion of the basement floor area gives the arcade the appearance of a gallery.
TRANSPARENT ROOFS AND CANOPIES

To make life more agreeable for city inhabitants and visitors, large transparent canopies are playing an increasing role in the architectural concepts of modern town planning. The transparent canopies not only protect against wind and weather, but also add decorative accents to the appearance of our cities. Transparent roofs improve the quality of life of city residents. They increase the quality of leisure time, for example, by protecting window shoppers on commercial streets and in pedestrian zones. Transparent roofs are also used for outdoor theatres, swimming pools, or sports facilities to provide shelter from inclement weather.

It is obviously essential that fire rescue services are still able to reach the buildings, and that the micro-climate in the street, shops, restaurants and offices is not adversely affected. The following materials are used for transparent roofs:

- silicate glass panes/pyramids;
- acrylic glass domes;
- vaults made of acrylic glass or polycarbonate;
- intersecting skins containing synthetic fibres and the like;
- fire-resistant glass (→ pp. 130–31, 169, 173);
- curved glass (3-8 mm; radii 50–230 mm).

Possible canopies

1. Possible canopies
2. Free-standing canopies in streets
3. Canopies providing complete coverage
4. Possible shapes to be used as canopies in streets
5. Transparent street canopies
6. Canopy over market stalls
7. Shelter over street supported by building
8. Light canopies for stadiums
9. Access stairs with gabled roofs
10. Canopies over schoolyard at Römerschule, Stuttgart
11. Suspended tent-like canopy over stand at Lords Cricket Ground, London
12. Nimes, France: inflated light cushion roof anchored to a ring resting on the steel supports of the top row of arena seating
13. Porch-roof, Hamburg main railway station
14. Spa at Bad Krozingen; roof over entrance
15. Rheingarten in Cologne