PEOPLE MOVING PAVEMENTS

Proposal for a Stepped-Platform Railway in London in 1890.
In theory, with three separate adjacent moving platforms, each having a different speed from the adjacent one (3, 6 & 9 mph) the passenger might, by stepping from one platform to another, increase or diminish their rate of transit at will.

ELEVATORS AND ESCALATORS
AND MOVING PAVEMENTS

BRIAN ROBERTS
CIBSE HERITAGE GROUP
The Colosseum was built in 1829 to exhibit the giant painting "Panoramic View of London." A lift or "Ascending Room" for twelve persons was said to be raised by secret machinery.
A paternoster lift is a passenger elevator which consists of a chain of open compartments (each usually designed for two persons) that move slowly in a loop up and down inside a building without stopping. Passengers can step on or off at any floor they like.

ELEVATORS, ESCALATORS AND MOVING PAVEMENTS

BUILDINGS

ELEVATORS
Paternoster 3, Edoux 18,19, Amiot 19,
Otis: pioneers 20-21, steam 22-24, rope 25, hydraulic 26, electric 27,

ESCALATORS AND MOVING PAVEMENTS
Harrods 28, Reno 29, Wheeler 29, Earl’s Court 30, Paddington 34, Paris 31, 33-35,

EIFFEL TOWER PARIS
Elevator Systems 36-37, Exposition 38,44, Construction 39-41, Double Deck Car Otis 42, Low Level Car Roux & others 43,
Caged elevators 1893 (featured in many Hollywood films).
FLATIRON BUILDING, NEW YORK

700 ft high, 50 floors. Elevators being installed 1910.
Passenger elevator with attendant c.1907.
Lift lobby. Building opened 1933, 850 ft tall, 66 floors with 60 elevators.
SINGER BUILDING, NEW YORK

612 ft high, 1908. 16 Otis electric elevators (building demolished).
WOOLWORTH BUILDING, NEW YORK

62 floors, 792 ft tall, 1913 (The Cathedral of Commerce) Then the tallest building in the World).
26 Otis traction elevators for passengers and freight.
Lift lobby in 1929.
WOOLWORTH BUILDING, NEW YORK

Layout of elevators at Ground Floor.
CHRYSLER BUILDING, NEW YORK

Built 1930, 899 ft tall, 77 floors, 32 elevators.
One of the famous Art Deco style elevator doors.
EMPIRE STATE BUILDING, NEW YORK

Built 1931, 1250 ft tall, 102 floors, originally 64 elevators.
EMPIRE STATE BUILDING, NEW YORK

Elevator cab with schematic of system and controls.
The Leon Edoux Hydraulic elevator at the Paris Exposition of 1867.
DESIGNS FROM FRANCE

Edoux Hydraulic Lift 1888.

Amiot's Stair Climber 1889.
Elisha Otis demonstrates his Safety Hoist
World's Fair Exhibition, New York 1853.
OTIS ELEVATOR COMPANY PIONEERS

Elisha Otis (Founder)   Norton P. Otis (Second President/Chairman)
Charles Otis (First President)   Jesse Van Alstyne (Third President)
Otis steam engine and steam-powered elevator (freight machine) of 1861.
OTIS STEAM ELEVATOR

Chicago Exhibition of 1893.
Otis Patent "Life and Labour Saving" Hoisting Machinery.
OTIS ROPE-CONTROLLED ELEVATOR

The Otis Controller, (a lever connected to a rope) controlled the movement of the elevator cage.
Operated by water under pressure, introduced in the 1870s.
OTIS ELEVATOR CO: ELECTRIC ELEVATOR

The residential automatic electric elevator, c.1900.
HARRODS MOVING STAIRCASE

A flat travelling belt (or moving pavement) installed 1898 (from 1902 press).
RENO and WHEELER ESCALATOR PATENTS

United States Patents of 1892.
PARIS ROLLING STAIRCASE

Rolling Staircase at the Paris World Exhibition of 1900.
PARIS MOVING WALKWAY

Moving Walkway at the Paris Exhibition of 1900.
Two views of the Moving Walkway at the Paris Exhibition of 1900.
PARIS TRAVELLING GANTRY

Demonstration of people and freight mover (the Travelling Gantry)
Palais des Machines, Paris 1889.
First London escalator installed at Earl's Court Underground Station in 1911.
The Escalator at Paddington New Station, London in 1913.
THE EIFFEL TOWER ELEVATOR SYSTEMS

Gustave Eiffel planned for three different systems to access the Tower. All of them were to be driven by hydraulic power, with water reservoirs installed on each floor. Four double-deck elevators served the 1st and 2nd floor, sliding on inclined rails in the pillars. Operators sitting in the small seats outside of the cars steered them. Two elevators provided by the American company Otis were installed in the North and South pillars, and were pulled by cables, equipped with cast iron counterweights, with a safety system meant to stop them in the event of a cut cable or excessively high speed. The two other elevators, in the East and West pillars, were built by Roux, Combaluzier et Lepape. They were driven by hydraulic pistons with movable joints installed at the foot of the elevators. Between the 2nd floor and 3rd floor, the ascent was provided by a vertical hydraulic elevator built by Edoux. The two cars were balanced, and each car ran only half of the height. Visitors thus had to switch cars on an intermediate landing to go all the way up to the top. The power for the five elevators was driven by a steam engine installed in the South pillar. The steam from the engine was evacuated by a brick chimney, which was built in the gardens near the West pillar.
Fig. 1. Elevation of Eiffel Tower.

- Third Platform
- Midway Platform
- Second Platform
- First Platform
EIFFEL TOWER
EIFFEL TOWER
EIFFEL TOWER
EIFFEL TOWER
EIFFEL TOWER