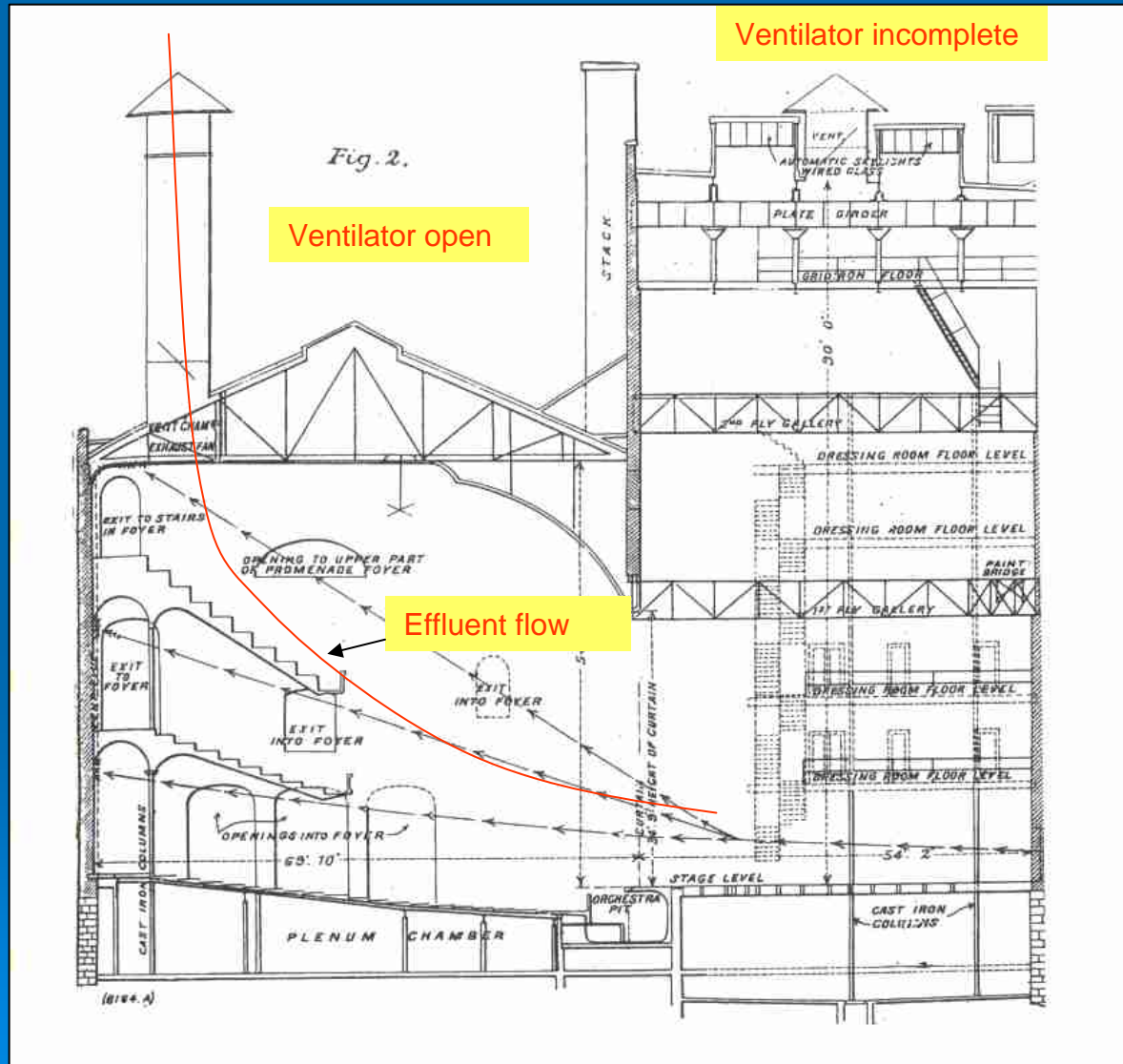


Iroquois theatre, Chicago, 1904

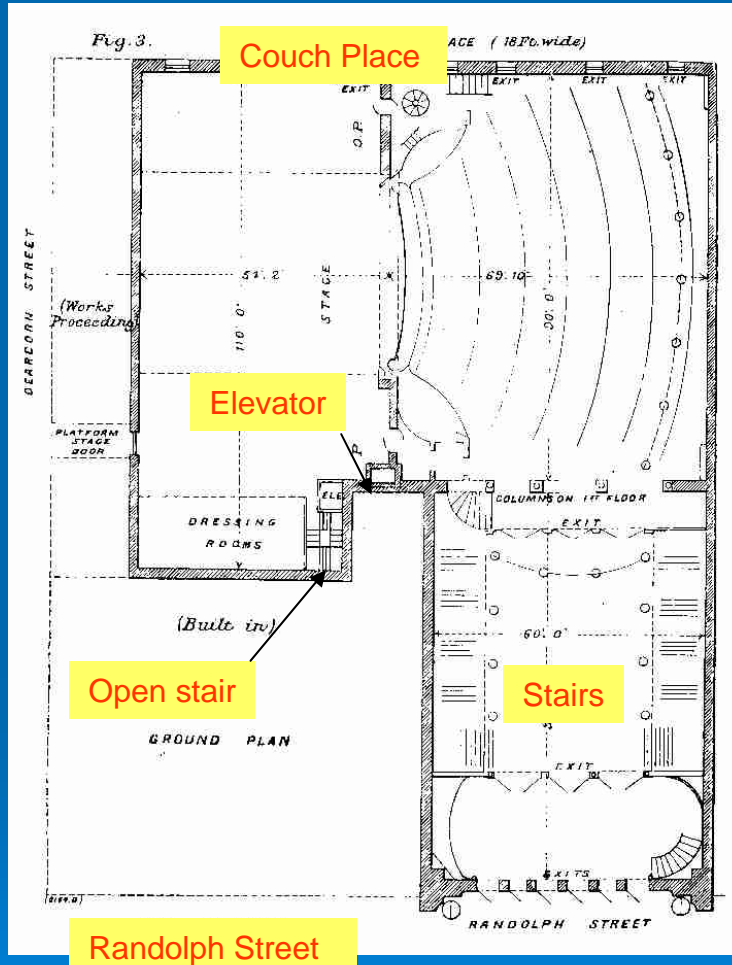
- The fire in this newly opened but badly planned theatre in Chicago in January 1904 caused 572 deaths



Iroquois theatre – vertical section



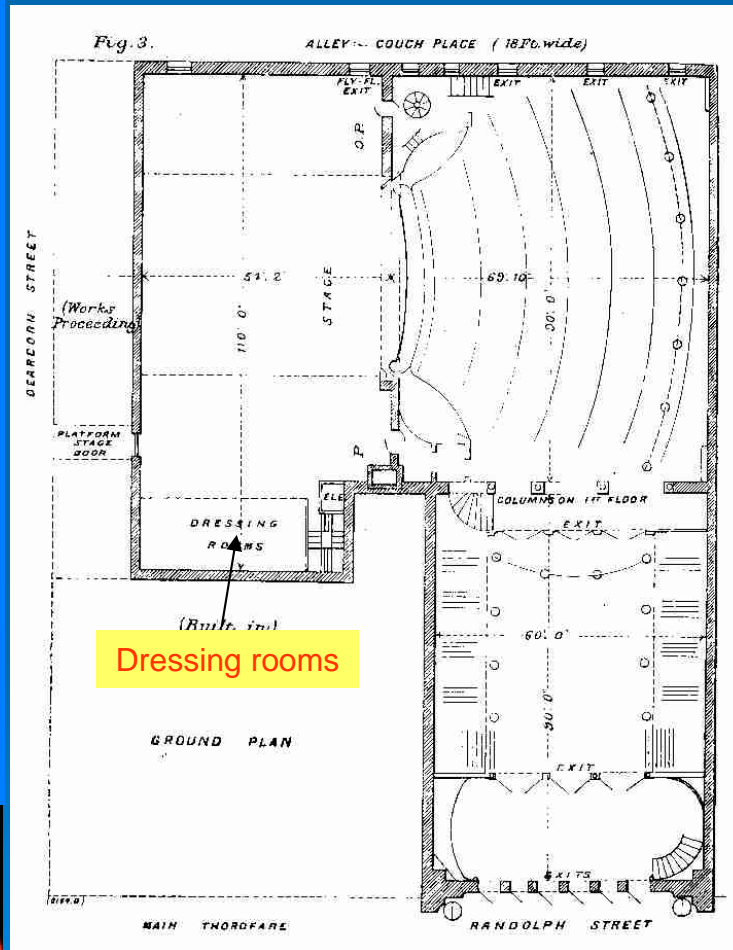
Theatre plan



- The theatre occupied an area of 17,500 sq ft and comprised two blocks, one set back from the main road contained the auditorium and stage, and the other block (serving as the sole approach from the main road Randolph Street) provided the foyers, vestibule and main staircases,
- At the rear of the building was an 18 ft wide alley Couch Place. Internal staircases were open and badly planned so that at some points people came face to face and several landings and passages formed traps (dead ends).
- The whole audience entered and mostly left by the Randolph Street entrance. There were exits into the alley at the rear but it was not clear at the time of the fire if these were usable.



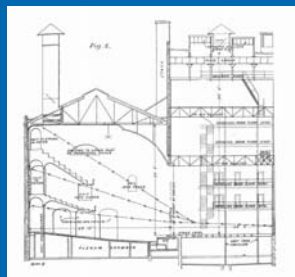
Theatre plan - upper level



- The auditorium was of fire-resisting construction with a height from stalls to ceiling of about 54 ft. The proscenium opening was about 48 ft wide by 34 ft high. The stage accessories and scenery were highly flammable.
- A number of the dressing rooms were situated on the prompt side of the stage on five levels and were reached by an open staircase and lift sited close to the proscenium wall, and there were additional dressing rooms under the stage and auditorium.
- The stage was intended to be separated from the auditorium by an asbestos curtain but the curtain installed was of loose cloth and said to be unsuitable and there was no record of its regular use. The ventilators over the auditorium, which were situated over the highest seats, were open at the time of the fire; the ventilators for the stage however were too small and were incomplete at the time of the fire.



Iroquois theatre – the fire



- Fire broke out at about 15.20 on 30 December 1903 during a matinee pantomime performance and was caused by sparks from an electric arc light used as a flood light. The fire occurred out of reach of the electric operator and a staff fireman was called who tried unsuccessfully to extinguish it with two tubes of patented powder extinguisher.
- He then called to a flyman to lower the burning material to the stage so as to trample out the fire but the message was misunderstood and the fire curtain was dropped incorrectly, and it jammed lopsided.
- Meanwhile a comedian called to the audience to stay seated while the artists and staff aware of the fire on the stage bolted.

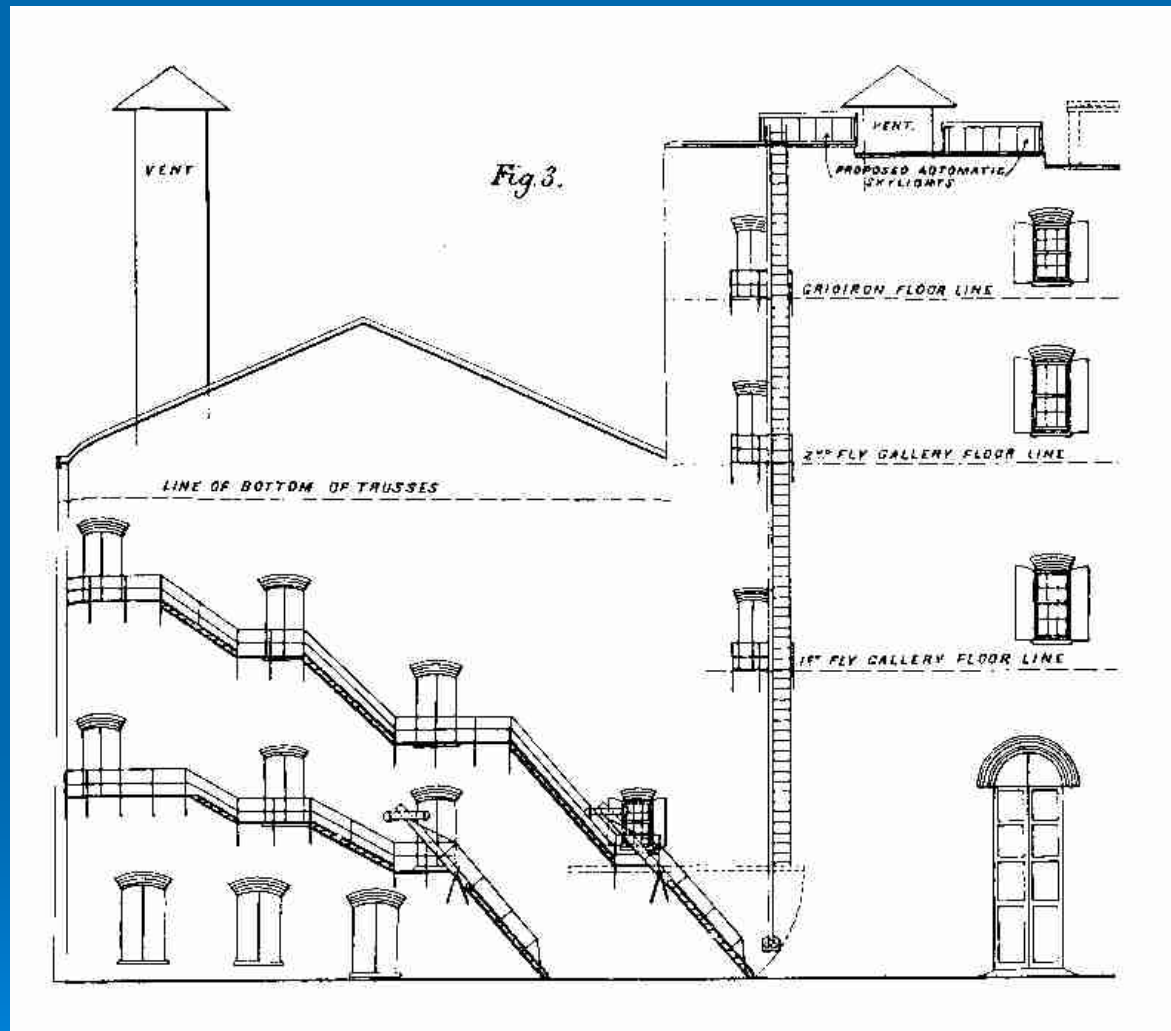


Iroquois theatre – the fire continued

- The elevator boy however stayed and brought 40-50 people down who then evacuated via a temporary wooden bridge to the street but only after by passers pushed open the doors from the street side.
- Opening these doors provided ventilation and draft for the fire and it rapidly spread to involve all the stage materials.
- The stage was cleared of human beings at the moment that the audience realised the danger – up to this point the comedian and two doormen were still asking the audience to remain seated – and it then spread into the auditorium.
- Panic set in as fire swept into the auditorium and upwards to the open vent in the roof at the back. The audience did not attempt to make use of the back exits but tried to get out by the way they entered and with the panic people were trampled even after they had got out of the auditorium.
- The fire brigade began to arrive in force some 15 minutes after ignition and the fire was rapidly extinguished. The structural damage was slight, but the contents of the stage were entirely destroyed.



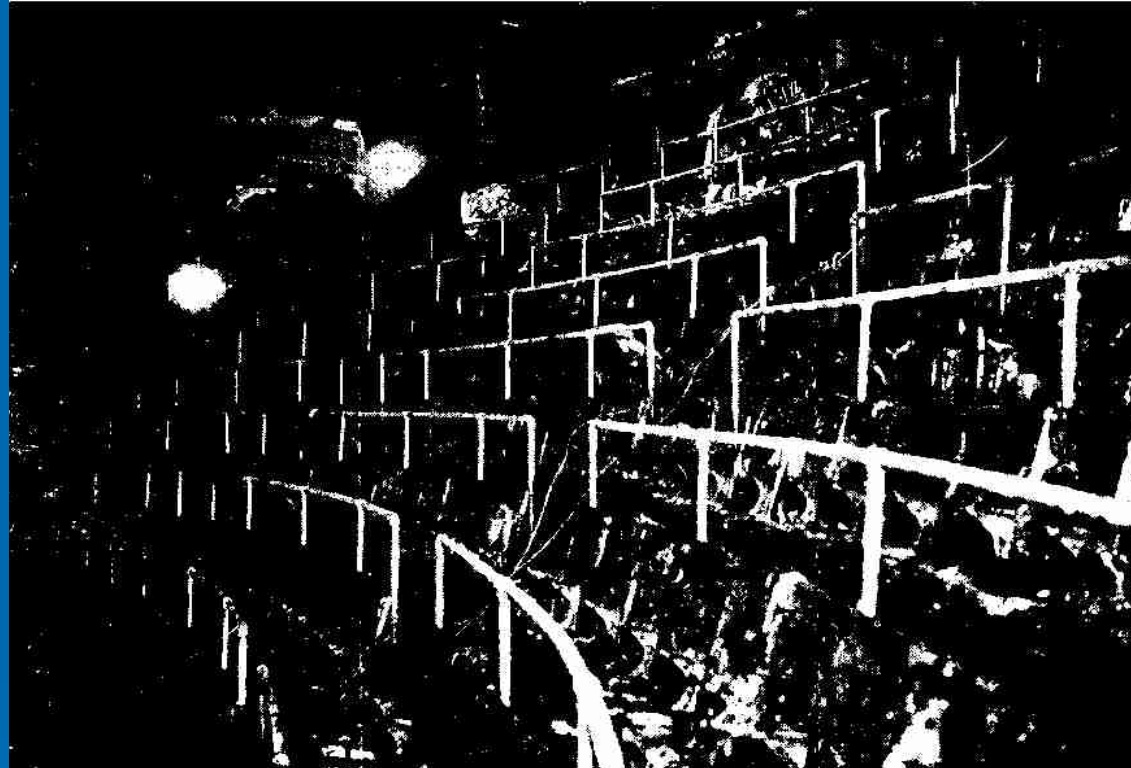
Rear of theatre



- These exits at rear of building were not used because audience
- did not know they existed



Balcony area after the fire



- Shows damage in the balcony. Only the dress circle and balcony were badly damaged by fire.
- The total number of lives at risk was 1830 spectators (for whom there was seating accommodation) and 275 personnel. 571 of the spectators and one of the staff died within a week of the fire.
- Approximately 70% of the dead were in the gallery, and only 30% in the balcony; comparatively few died on the main floor i.e. in the stalls

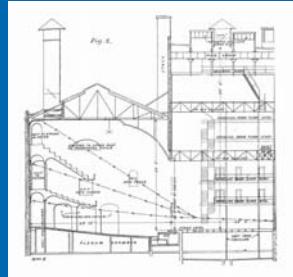


Iroquois theatre - observations

- The building was mainly constructed of non-combustible steel and concrete but the stage scenery and draperies were highly combustible and should ideally have been flame proofed, especially as most fires begin on stage. Structural fire damage was slight.
- The means of escape was poorly planned. Some exits led to dead ends caused by locked doors.
- The intention to ventilate the stage portion was not carried through - the openable skylights were not finished and were blocked at the time of the fire
- The asbestos fire curtain should have been supported by steel cables running through steel pulleys
- Care should have been taken to ensure that the inherent sparks produced from the open electric arc light used for illuminating the stage could not reach combustibles.



Iroquois theatre – observations cont'd



- Fire fighting equipment was not present. There was one hydrant but no hose fitted, no hydrants, buckets, hand pumps or cutting hooks either on the stage or in the auditorium.
- Sprinklers were being installed.
- There was no fire alarm call point in the theatre and no direct telephone communication with the fire brigade.
- Staff were unaware how rapidly fire could develop and asked people to remain seated when they should have been leaving the building.
- Staff received no instructions on what to do in an emergency.
- Exits were not suitably signed



Iroquois theatre – Inquiry findings

- The Coroner's Inquiry decided that the Mayor of the City of Chicago shirked his duty to get his subordinates to be more effective in seeking public safety.
- Similarly the building inspector was criticised for allowing the building to be used by the public when the theatre was incomplete
- Immediately after the disaster a new set of ordinances were adopted by Chicago City Council relating to all assembly halls used for large gatherings of people

