Davenport, Iowa, Hospital Fire

Fire, discovered at an undetermined time prior to 2:06 A.M. on January 7, 1950, in the St. Elizabeth's Women's Psychopathic Building of the Mercy Hospital, Davenport, Iowa, took the lives of 41 women. Forty of these were mental patients, mostly elderly, and one was an attendant. Save for the locked doors and barred windows, furred interior finish on exterior walls and partition construction, the fire was almost an exact replica of that which occurred at the St. Anthony Hospital, Effingham, Illinois, April 4, 1949, in which 74 lives were lost.

The Building

The building involved in this fire was a two-story basement and attic, brick wood joist building 60 to 80 years old. The basement was high, making it the equivalent of a four-story building on the north side. It was a separate structure but administered as part of the Mercy Hospital, which included other buildings with the usual hospital occupancy. The structure was approximately 7,000 sq. ft., 40 to 50 ft. wide and 155 ft. long. It had two stairways, a central stairway on the west side which did not open to the outside, and one at the northeast corner with an opening to the outside at the basement level. These stairways were enclosed but the doors were of ordinary wood, thin panel type, some of which recently had wired glass panels installed in them. Whether all doors were closed at the time of the fire is unknown. There was one outside fire escape but access to it was blocked by barred windows.

Opening into the corridor was a central dumb waiter with a metal lath and plaster enclosure but a wood lining. The fire and building inspection departments had recommended metal doors at the openings to this shaft, but they had not been installed at the time of the fire. Ceilings were metal covered except in the first floor corridor, where a suspended combustible fibreboard acoustical ceiling had been recently installed. There was some plywood construction introduced in recent remodeling in the first floor lounge office and front entrance corridor but most of the interior partitions were of ordinary wood lath and plaster except for light weight pressed wallboard on wood studs in several rooms, including the room of origin. The first floor of the building was divided into patients' rooms and areas used for physiotherapy treatment. The second floor and attic were of the open dormitory type. Kitchen hazards, located in the basement, were not involved in the fire. Doors were usually kept locked between floors. Windows were provided with iron bars or heavy wire screens fastened to the wood window framing with lag screws.

The Fire

A patient undergoing periodic treatment ignited the curtains in her room on
the first floor near the fire escape in protest over being locked in her room, which was not normal treatment for this patient.

Fire is believed to have spread from the curtain to the window frame and behind the furred wood lath finish on the inside of the exterior wall to the second floor and attic. The light pressed wallboard partition ignited and the fire spread from the room into the acoustically treated corridor after the patient broke out the wired glass transom and escaped over the transom and out the front entrance. The combustible fibreboard of the corridor ceiling spread fire through the corridor of the first floor. Also contributing to the rapidly spreading fire in this structure were ancient brick chimneys with hot air flue openings at each floor, long unused but not capped at the eaves. These are believed to have spread fire rapidly to the attic space.

Two attendants were in the building at the time, one sleeping and one awake. The one who was awake died in the fire; the other escaped from the second floor by the center stairway.

Due to the locked doors, the mental condition of patients who wanted to stay in their rooms or once out of the building wanted to return, and the lack of a prearranged procedure for evacuation of the building in case of emergency, it was possible to rescue only 25 of the 64 occupants. Two of these rescued died later. Only a very short space of time was available to the firemen to get patients out owing to the exceedingly rapid spread of fire through the old building.

Just how much delay there may have been in discovering the fire and reporting it to the fire department may never be known, but the fact that the fire had extended to the upper floors when the fire department arrived is evidence that there must have been a considerable delay either in discovering the fire or in reporting it. The alarm was telephoned to the fire department from the central switchboard in the main office in another building.

The fire department on arrival found the main and second floors extensively involved. Their efforts at rescue operations were greatly handicapped by the barred windows. Chopping the bars out of wood window frames necessarily took time and delayed rescue. The fire department was responsible for saving the lives of 19 of the 23 survivors and did everything that was humanly possible, but in a building such as this with the fire so far advanced upon their arrival no fire department could be expected to prevent heavy loss of life.

**Unanswered Questions**

The exact details of the start of this fire are to our mind much less important than the question as to why conditions existed that permitted the rapid spread of fire from its point of origin to involve the entire building.

It is generally agreed that an automatic sprinkler system, properly installed and maintained, would have prevented this tragedy. Over a period of about twenty-five years, fire department officials had repeatedly suggested automatic sprinklers, according to the chief. Why were sprinklers not installed? Why were the benefits of sprinklers and the practicability of their installation in this building not adequately presented to the hospital management?

With the lesson of the hospital fire in Effingham, Illinois, so close at hand, why was not the combustible fibreboard ceiling at least coated with a flame retardant paint?

The fact that the fire had spread so extensively by the time the fire department arrived is conclusive evidence that there was delay in discovery or delay in giving
the alarm. Again remembering the recent object lesson of Effingham, why was there not an effective procedure for prompt discovery of fire and calling the fire department? If it were not possible to have adequately trained personnel on duty in every part of the building during the night, had consideration ever been given to an automatic fire detection system?

What about the locked doors and barred windows? These are necessary in certain types of mental institutions, but electric devices can be installed to release all locks simultaneously by the operation of a switch at a central point in case of fire or other emergency. Windows can be barred from the inside but with outside fastenings that can be quickly released by firemen on ladders.

How many more such fires must occur before hospital construction and protection reach the point where all patients in all hospitals will be reasonably safe from fire?

Editor’s Note: The information on which this account is based was obtained at the scene by James K. McElroy, Assistant Technical Secretary, NFPA. Particular acknowledgment is made of the cooperation of the Fire and Building Departments of Davenport, the office of Iowa State Fire Marshal, the Iowa Inspection Bureau and the management of the hospital. In connection with our investigation of this fire we are pleased to note close cooperation between the fire and building departments of Davenport, in advancing their common objective of safety to life from fire. Both departments are, however, handicapped by limited personnel available for inspections.

Fire Protection Developments in 1949

By Percy Bugbee, General Manager,
National Fire Protection Association

Accurate figures on loss of life and injury in fires are not yet available from any source, but there was no indication in 1949 that there was any lessening of fatal fires and we believe that our estimate of a loss of life of approximately 11,000 persons from fires annually in the United States is probably conservative.

Preliminary estimates of the property damage from fires in 1949 indicate a figure of $670,000,000. This is a 6 per cent decrease from the all-time high figure, dollar-wise, of 1948. So far as numbers of fires are concerned, while no figures are as yet available, the indications are that there was probably a slight decrease from the previous year.

The lower trend of losses was also maintained in the number of large loss fires. During the past year there were 218 fires with an individual loss of a quarter of a million dollars or more, as compared with 268 such fires in 1948. Of these, 19 were over a million dollars as compared with 33 the previous year. A careful analysis of these large loss fires indicates that buildings of excessive area, lack of automatic protection, and unprotected vertical and horizontal openings which encourage the spread of fire were the main factors. The tendency these days to decentralize industry is perhaps also a factor in that in a number of cases large factories located in areas outside of strong municipal fire protection were involved in large fires.

Fires that aroused the greatest public interest during the year were the St. Anthony Hospital fire in Effingham, Ill., on April 4, in which 71 persons were burned to death and the fire in the Canadian steamer Noronic at Toronto, Ontario, on Sept. 17, when over 100 died.
On January 7, 1950, fire took the lives of 41 women at the St. Elizabeth's Psychopathic Building of Mercy Hospital, Davenport, Iowa. Forty of these were mental patients, mostly elderly, and one was an attendant. Lack of automatic protection for the very old brick, wood-joist building, combustible interior finish, delayed discovery and alarm to the fire department and barred windows were the major factors responsible for the loss of life. The picture was taken from the northwest corner and shows about half the length of the building.
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