

# WARRENTON, MISSOURI, NURSING HOME FIRE

by Chester I. Babcock

Manager, NFPA Fire Record Department

At 2:30 P.M., February 17, 1957, one of the many Sunday afternoon visitors at the Katie Jane Nursing Home, Warrenton, Missouri, discovered fire at the first floor ceiling. Ten, or at the most 15, minutes later 71 of the 149 elderly patients had lost their lives and several had been injured (one of the injured died in a hospital on February 19). These people lost their lives because the State of Missouri did not have adequate fire safety regulations for nursing homes. "The animals in the field take better care of their own," was the way Governor Blair described the nursing home situation in his state.

## The Buildings

In 1941 Central Wesleyan College ceased operations. Two years ago Mr. Woodrow O'Sullivan acquired some of the former college buildings and converted them to nursing home use. Major changes made by Mr. O'Sullivan in the 65-year-old buildings involved in the fire were removal of the heating plant and laundry from the basement of the Annex (see diagram) to a detached building, connection of the Annex and Main Building by an enclosed passageway and laying of asphalt floor tiles over the old oil-soaked floors of both buildings.

The U-shaped Main Building was brick, wood-joisted, 6,000 sq. ft. ground floor area and two stories high with basement except for

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The author is indebted to members of the Missouri Inspection Bureau, the Missouri State Police and the Warrenton Fire Department for their assistance at the investigation of this fire.

a small 1-story office section at one corner and a 1-story without basement Men's Ward section. Because of the gradual downward slope of the ground from the front (bottom of diagram) to the back of the Main Building, the Men's Ward section was at ground level.

The 4,450 sq. ft. Annex was also a 2-story brick, wood-joisted building with basement, the basement being at ground level because of ground slope.

The 1-story concrete block, wood-joisted passageway was approximately 500 sq. ft. in area with the floor at the same level as the first floor of the Annex and five steps down from the first floor of the Main Building. A bedroom and two baths occupied one side of the passageway.

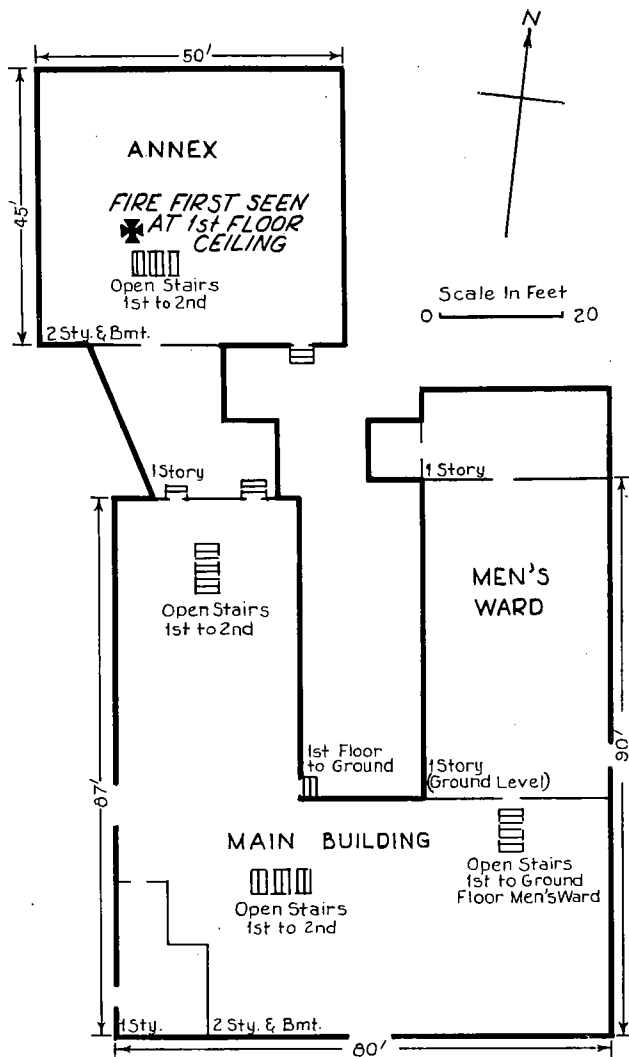
## Exits

Interior stairs, located about as shown in the diagram, consisted of two open, wide stairways connecting the first and second stories of the Main Building, and one open stairway between the first and second stories of the Annex. Since there were no outside fire escape stairs or slides, the open stairways discharging into the open first story hallways were the only means of egress from the undivided second stories of the Main Building and Annex. Two double width doorways and one single door provided exits from the first floor of the Main Building. Escape from the first floor of the Annex was via the passageway to the Main Building or through a single width exit to outdoors.



Katie Jane Nursing Home, Warrenton, Mo. Remains of Annex in right foreground.

*St. Louis Post-Dispatch*



First floor plan of Warrenton, Mo. nursing home. Front entrance is at bottom of diagram.

#### Fire Protection

Private fire protection consisted of portable fire extinguishers. Attendants had been shown how these devices worked. There were no sprinklers, automatic or manual fire alarm systems.

Public fire protection was provided by a 500 gpm pumper and a rural fire truck, manned entirely by volunteer firemen. Two hydrants within 200 ft. of the home were on a 4-inch dead end main supplied by a 45,000-gallon elevated storage tank (100 ft. to top) 1200 ft. from the fire. A third hydrant on another 4-inch main was about 500 ft. from the fire.

#### Patients and Attendants

The buildings destroyed by the fire contained 67 rooms and 4 wards, with the 149 patients distributed as follows: Main Building, ground floor Men's Ward — 42; first floor — 37; second floor — 34 (majority bed patients); Annex, first floor — 16; second floor — 18 (5 bed patients); passageway — 2. Bed patients were housed on the second floor so that ambulatory patients would not have to use the stairs. As far as can be determined not one bed patient survived.

There were four attendants, one each for the first and second stories of the Main Building and for the first and second stories of the Annex. In addition there were five other employees with various household duties who served as nurses' aides when needed.

At 2:30 P.M., when the fire broke out, a few of the patients were outdoors, a number of visitors were in the buildings (possibly as many as 50), and the first story attendant in the Annex was upstairs assisting the second story attendant with a patient.

#### The Fire

Shortly before 2:30 P.M., a 92-year-old patient thought he smelled smoke in the first story of the Annex. Although no one heeded his warning, he dressed and went outside. At approximately 2:30 P.M., a visitor in the passageway looked into the first story of the Annex and saw fire coming from the wood lath and plaster ceiling adjacent to a linen closet beneath the stairway to the second story. During the estimated five minutes for the visitor to find an employee, for the employee to verify the presence of the fire and to telephone the alarm from the office in the Main Building, smoke, hot fire gases and flames had spread so rapidly that the employee after completing the call could not re-enter the Annex. Eight first floor patients and three from the second floor managed to escape with the help of visitors and attendants during these first five minutes. All other patients in the Annex were trapped.

As soon as shouts of "Fire" were heard, visitors and attendants in the Main Building did what they could to get the elderly inmates out before smoke and hot fire gases pouring through the open passageway from the Annex made the Main Building untenable. At the most there were between five and ten minutes during which evacuation of the Main Building was possible. This time limit was based upon a statement by the driver of the first piece of fire apparatus to respond. When he reached the fire (about five minutes after the siren blew) smoke was billowing from front windows of both stories of the Main Building. Rescue efforts were by then futile.

Flames rapidly enveloped the Main Building and had made so much headway when apparatus arrived that another brick nursing home building 75 ft. west from the Main Building appeared to be in danger of ignition. The 45 patients in the exposure were removed and a hose stream was used to protect the exposed side. The exposed building did not ignite.

#### Fire Origin and Spread

A careful study of all available evidence has eliminated all except one plausible explanation for the origin and rapid spread of this fire. Investigators have concluded that a smoldering fire must have originated within the walls or ceiling of the first story of the Annex where it generated smoke and hot fire gases for some time before discovery. The tightness of the wall and ceiling finish (wood lath and plaster walls and ceilings covered with several coats of oil-base paint, floors consisting of two layers of boards covered by asphalt tile) would prevent early detection by the occupants of the Annex. Assuming that the fire originated in this fashion, once it broke through the ceiling, pent-up fire gases would escape, mix with air and ignite and almost at once an intense fire would spread up the adjacent open stairway to the second story of the Annex and also spread through the first story. Additional fuel would be contributed by draperies, furniture, wood trim and the thick coating of paint on the walls and ceilings.

Large quantities of smoke and heat generated by the fire in the Annex were vented through the passageways to the first story of the undivided Main Building, where thick paint on the wood lath and plaster walls and ceilings (a few patient rooms off the first floor hallway had suspended combustible fibreboard ceilings), combustible furnishings, draperies, flooring, and wood trim were soon raised to their ignition temperatures.

### Fire Fighting

Six towns sent apparatus to Warrenton. However, because of poor water supplies much of this equipment could not be used. Three 2½-inch hose lines wye'd to give six 1½-inch hose streams were the most that could be obtained from the 4-inch dead end mains.

No criticism has been directed at the Warrenton Volunteer Fire Department because of this fire. At some fires the time necessary for a volunteer fire department to assemble and respond and the poor water supplies could have seriously affected the outcome. It is probably true that a full-paid fire department at Warrenton (impractical for a town of 1600) would have arrived in time to rescue a few of the victims. However, because of the speed with which the fire spread it is doubtful if substantial loss of life and total destruction of both buildings could have been prevented had a large city fire department and unlimited water supplies been available.

### The Basic Cause

Three possible causes of the fire were cited: defective wiring, careless smoking and arson. The first is the most probable due to the apparent origin within a concealed space.

Although destruction of evidence prevented pinpointing the actual ignition source the basic cause of this tragedy was not

buried in the ashes. The real responsibility for this tragedy is clearly summarized in the following paragraphs extracted from an editorial entitled "Savage Tragedy at Warrenton" that appeared in the February 19 issue of the St. Louis Globe-Democrat.

Grim inadequacy of the state inspection and safety program for nursing homes was thrust into ghastly highlight by Sunday's holocaust in the Katie Jane Memorial Home at Warrenton.

The reason? The State Division of Health hasn't nearly enough staff to inspect and to enforce even sketchy provisions of present laws.

The director, Dr. James R. Amos, said the statute requires inspection once a year, but he has only 17 employees to supervise conditions in more than 600 nursing homes, caring for in excess of 13,000 old and ill persons. These 17 include 12 inspectors and five nurses; usually a nurse and inspector must go on each investigative trip. These 17 also have the duty to inspect all hotels, motels and similar establishments in the state!

Missouri is one of only seven states that have no fire marshal and staff to inspect and enforce fire-hazard regulations!

## COUNCIL BLUFFS, IOWA, NURSING HOME FIRE

Fire swept through the Council Bluffs Convalescent Home at Council Bluffs, Iowa on February 13, 1957. Fifteen of the 30 patients were killed, six patients and four of the ten attendants were injured. This fire presents ample justification for several recommendations pertaining to nursing homes in the NFPA Building Exits Code, in particular the recommendation that homes of combustible construction that are more than one story high be sprinklered.

### Construction and Protection

The 67-year-old former private dwelling in which this fire occurred may be said to be typical of a large majority of the nursing homes in the United States. The 57 ft. by 50 ft. building sat on top of a hill and contained a basement (storage, heating equipment and operator's quarters), first and second stories (patients' quarters) and attic (employees' quarters). Wood framing, wood sheathing, and wood lath and plaster interior finish were the principal construction features. Interior stairways were open with a door at the head of each. One stairway extended from the basement to the kitchen in the first story, one from the first story recreation room to the second story, one from the kitchen to the second story, and one from the second story to the attic. A 42-inch-wide wooden stairway on the outside of the rear of the building provided a direct route to the ground from second story and attic porches.

An automatic fire alarm system consisting of spot type fixed temperature devices was installed throughout the building including all rooms, halls and closets. Current was provided by a 115 volt circuit with batteries available as an emergency power supply in case the primary supply failed. The alarm bell was located in the kitchen. The only suggested explanation advanced so far to explain failure of the alarm system to operate at the start of or during



*Council Bluffs Fire Department*

Side view of Council Bluffs, Iowa, nursing home. At right is outside wooden stairway on rear.

the fire was that the system may have been put out of order during one of the frequent building alterations. The system had been tested in December. Since the fire was discovered at once by one of the patients the failure of the automatic alarm system to operate had no bearing on the outcome of the fire.

### Patients and Attendants

Thirteen ambulatory and seven bed patients were on the first floor, five ambulatory and five bed patients on the second. There were ten attendants including the operator (a 35-year-old woman), a 70-year-old practical nurse and eight others, seven of whom had been hired on a probationary status from a school for feeble minded. These seven had IQ's from 50 to 70 and were classified as "retarded" rather than "feeble minded." As far as could be determined the employees had not been trained in what to do in

Based on information submitted by the Council Bluffs Fire Chief and the Iowa State Fire Marshal, NFPA members.



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## NATIONAL FIRE PROTECTION ASSOCIATION

The non-profit international technical and educational organization devoted to saving life and property from fire

60 Batterymarch Street, Boston 10, Mass., U.S.A.

### YOU ARE WANTED!

#### AT THE 61st ANNUAL MEETING Los Angeles, May 20-24

Enthusiasm approaches fever pitch as plans for the 61st annual NFPA convention go forward. A vigorous local committee of members and friends is making elaborate arrangements and the Program Committee is sparing no effort to establish this Los Angeles meeting as the greatest in the long history of the Association. This is one meeting you must not miss! Preliminary information about the program, accommodations, registration, and travel will be found below. Make your plans now. Don't procrastinate!

#### RIDE THE NFPA "DOMELINER SPECIAL" FROM CHICAGO TO LOS ANGELES!

Arrangements have been made with the Union Pacific Railroad to provide special car accommodations for the exclusive use of NFPA members and friends on their deluxe train "City of Los Angeles." This is one of the finest and fastest trains operating between these points and is really the ultimate in rail travel. With our own group in special cars a happy congenial time is assured. Our train will leave Chicago at 6:45 P.M. on Friday, May 17, and will arrive at Los Angeles on Sunday morning, May 19, at 9:30 o'clock. In spite of luxury accommodations and "dome-liner" cars no extra fare is involved. Make your reservation for the "NFPA Special" just as soon as possible. Reservations should be made through Mr. John C. Pollock, General Passenger Agent, Union Pacific R. R., 1 So. LaSalle St., Chicago 3, Ill. The U. P. R. R. has an attractive color folder describing the complete facilities of this "City of Los Angeles" train, copies of which are available from any U. P. office or direct from Mr. Pollock. If you plan to travel by rail from Eastern points to Chicago, tell your local ticket agent to specify "account NFPA meeting" in his request to the U. P. for space. Travel on the "NFPA Special" does not in any way affect your return travel arrangements.

The fares from Chicago to Los Angeles are, including tax:  
Round trip, first class \$153.40  
One way, first class 94.12

Pullman accommodations, one way  
Roomette 37.18  
Single Bedroom 50.49  
Double Bedroom 58.36  
Double Compartment 63.86  
Double Drawing Room 89.10

### OUTLINE OF CONVENTION PROGRAM

Monday, May 20

Aviation Seminar — all day — addresses and discussions of jet transport fueling, crash fire fighting, in-flight fire safety, and other topics.

Fire Marshals' Section — all day — addresses and panels on municipal fire prevention, state fire regulations, rural fire protection, electrical fire causes, flammable liquids and gases, arson investigation, and other topics.

Electrical Section — afternoon — N. E. Code proposals, discussion of electrical inspection problems as seen by contractors, manufacturers, and utilities, professional status for electrical inspectors, and other topics.

Get-Together Party — 5 to 7:30 P.M. — a popular annual event to conclude the opening day program.

Tuesday, May 21

Opening General Session — morning — NFPA administrative symposium including reports of officers, directors, and general manager, annual election, feature addresses on nursing homes and inspection of dwellings.

Luncheon — Society of Fire Protection Engineers — Guests welcome. Feature address to be followed by a brief business meeting.

Second General Session — afternoon — discussion and action on aircraft rescue and fire fighting, inerting of aircraft fuel tanks, ground fueling of aircraft, testing of foam crash trucks, hazards of aviation fuels, specifications for fire apparatus, fire hose, dust explosion hazards, motor boats and outboards.

Wednesday, May 22

Third General Session — morning — discussion and action on code for flammable liquids, oil burning equipment, tank trucks, making small containers safe for "hot work," solvent extraction, gas welding and cutting, liquefied petroleum gases, bulk oxygen systems, hospital operating rooms, lightning protection, fur cleaning, garages.

Excursions — afternoon — special events program being arranged by local committee — details next month.

Thursday, May 23

Fourth General Session — morning — discussion and action on industrial fire protection topics including nuclear reactors in industry, combustible metals, industrial trucks, fire pumps, spray painting and dip tanks, industrial fire prevention programs, fire protection in the motion picture industry.

Fire News is published to inform members of meetings and current events of fire protection interest, to transmit new pamphlets, publications and posters and advise members of other publications, to chronicle current membership and committee activities, and to report current activities of the N.F.P.A. staff. The N.F.P.A. Quarterly, Proceedings and other Association publications contain the popular and technical articles, fire protection standards, fire records and other material of permanent reference value.

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