

FIRE ENGINEERING

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"Snorkel" drives back flames
in Our Lady of The Angels
classroom to facilitate rescue
of victims via ladders . . .

**TRAGEDY
in CHICAGO**

See story page 30

No More Monuments To School Children!

Rarely has this country been so completely aroused to the dangers of fire as during the recent Our Lady of The Angels School catastrophe in Chicago. For the first time a large segment of the population, including many firemen, was able to see at first hand via television a disaster of a type which up to now has been somewhat incomprehensible to the average citizen.

Parents of school children have become suddenly and dramatically aware of the gravity of a situation which fire service officials have been warning about for years. It suddenly dawned upon them that such a tragedy could happen in their own community. Even the most hardened fire fighters, accustomed to removing victims of fire tragedies, were deeply affected. The scenes of grief and pathos which appeared in the American living room have shaken many government and school officials as well as voters and, for the present, forced them to face the facts of fire safety.

These are not newly discovered facts! They are the same unsafe conditions which impelled the introduction of a most serious resolution at the International Association of Fire Chiefs Conference in Los Angeles last September. This proposition urges national and state legislation requiring automatic sprinklers be installed in all buildings used for public assembly including schools, whether public, private or parochial!

There are many opinions on the wisdom of employing legislation to force local governments to adopt stringent regulations, such as this resolution would require. However, the effect of present public opinion may compel such action and could result in laws more harsh than might have been expected prior to the Chicago school fire!

Fire service officials have long preached school fire safety but their efforts to acquaint the public with the hazards facing school children now seem for the most part to have fallen on deaf ears. The National Board of Fire Underwriters has published several editions of a booklet which calls attention to major deficiencies in existing school buildings and suggests practical methods for overcoming these shortcomings. Judging from press accounts of school closings and threatened actions during recent crash campaigns conducted by fire officials in many parts of the country, very few education officers have ever read these recommendations or worse yet, have chosen to ignore them.

The fire service has asked for years and is still ask-

ing that fire detection systems and/or automatic sprinklers be installed in school buildings and supervised at a central office or connected directly to the local fire alarm headquarters. At the same time fire officials recommend that a master fire alarm box be located in the immediate vicinity and auxiliary manual pull stations be installed within the building proper.

It is further recommended that all hallways and stairwells be cut off and isolated by properly designed and installed doors and that the use of fire-retarding paints be mandatory. The foregoing points apply to every school regardless of size, age, condition or ownership.

Where proper exits are lacking, approved stair or slide escapes must be provided. In turn these must be located in such a manner that all pupils may exit under emergency conditions directly to safety without crossing a corridor or other path of heat or flame. These recommendations have proven sound over the years and in all probability would have done much to prevent the terrible toll of lives if employed at the Chicago school and in other communities which have experienced similar disasters in the past.

The fire service has an obligation to renew and vigorously pursue its efforts in this direction while people still retain the horrible memory of the scenes which shocked them so deeply. Fire officials practically without exception, have already seized the opportunity to keep this awareness on the part of the public alive and have begun drives to strengthen and rigidly enforce all fire regulations. There can be no rest in these programs.

At this moment our nation is being subjected to a spirited campaign to provide educational facilities which some authorities deem necessary to maintain our position as a world leader. Those in opposition to such views have voiced the claim that many new schools will be merely monuments to a school board or an architect.

Regardless of the validity of the claims or counter-claims, it is the responsibility of the fire service to employ every means at its command to ensure that none of our schools become monuments—to dead children!

Clou O'Brien

BECAUSE of the impact the recent Chicago school tragedy has had on the nation, FIRE ENGINEERING has asked Commissioner Quinn for a firsthand account of his department's actions.

Very little of the Chicago Fire Department's views on this fire have been carried by the press. Therefore, it is hoped this article may answer questions which many fire fighters have raised concerning the inability of escape and the cause of the deaths.—EDITOR

Tragedy in Chicago

An official analysis of Our Lady of The Angels School catastrophe

By ROBERT J. QUINN

Fire Commissioner, City of Chicago

MONDAY, December 1, will be remembered by all of Chicago as well as by fire fighting agencies throughout the United States—the day of the tragic flash fire which snuffed out 93 lives, 90 children and three nuns, at Our Lady of the Angels Roman Catholic School on the west side.

That crisp December day began like every other Monday. I arrived at my office in the City Hall shortly after 9 a.m. and settled down to the normal administrative duties required of a fire commissioner with a 4,200-man department.

As the morning passed, it seemed extremely quiet, I even remarked to my secretary about the unusual stillness of the joker line located just outside my office. Like every fireman, my ears are keyed to the constant pounding of the joker key signifying the movement of fire equipment. However, everything seemed at a standstill that day.

Telephone alarm

The stillness carried through the afternoon until the joker pounded out Engine 85 "stilling out" followed by Truck 35, Squad 6, Battalion 18 and Patrol 6. At this time, I was going over a set of blueprints of the department's new "Snorkle" with my chief engineer.

Engine 85 was dispatched to 3808 West Iowa Street. The fire alarm office received a call from a hysterical woman who spoke in broken English. The operator, who answered her call, later told me that he had difficulty in understanding the woman, but he did get the address and that a fire was occurring there.

Within a few seconds, another call was received by the alarm office from another woman who reported a fire in the girls washroom in Our Lady of the Angels School. This was followed by another call from a woman who reported a fire in the stairwell of the school and stated children were trapped on the second floor.

The fire alarm office immediately struck box 5182. This was at 2:44 p.m., two minutes after the first alarm of fire was received. As the operator was transmitting the box, Engine 85 radioed the office and ordered a box struck and requested all available ambulances be sent to the fire. It reported a great number of children had jumped from second floor windows.

The fire alarm office dispatched 10 fire department ambulances to the scene and called the police department, requesting them to send as many "squadrols" as they could spare to the fire. The police responded by sending over 70 of the stretcher-bearing vehicles to the scene.

The office then notified me, along with other fire department officials of the incident and I immediately decided to go to the fire. As I was putting on my coat, I heard the register pound out a 2-11 alarm for Box 5182, which Chief Miles Devine, 18th Battalion, had ordered upon arriving at the burning school.

Initial operations

Engine 85, the first company to arrive, split up into two groups, one leading out a 2½-inch line and the other raising every ladder carried on the engine. A few moments after, Truck 35 arrived and they also began raising ladders and catching children in life nets. Squad 6 arrived at almost the same time and the squad men took over the life nets which permitted truckmen to concentrate on opening the roof and raising ladders.

The officer in charge of Engine 85 had no trouble in locating the seat of the fire which was in the rear stairwell at the northeast corner of the "U" constructed school. He realized that the fire had a tremendous start and had already reached the second floor of the building.

While the men of Engine 85, assigned to life saving were helping with ladders and life nets, water was being poured into the burning stairwell in hopes of

Continued on page 32

Incorrect Address Causes Delay at Chicago Fire

Coroner's "Blue Ribbon"
Jury sifts facts of
school holocaust in
attempt to pinpoint
cause and prevent
future tragedies

A STAFF REPORT

DELAY in notifying the Chicago Fire Department reportedly was a contributing factor in the high death toll at the Our Lady of the Angels school fire. The original location given to fire alarm headquarters, for what later turned out to be the school, resulted in apparatus responding by a route which added to the delay. In addition, it was necessary to inquire at the scene of the stated street number to ascertain where the fire was.

At 2:42 p.m. on December 1, Fire Alarm operator Bill Bingham transmitted a "still" for 3808 Iowa Street. This turned out to be the church rectory, the residence of Rt. Rev. Msgr. Joseph F. Cussen, pastor, and his assistants. The school building is located at 909 North Avers Avenue, around the corner about a half-block distant. Parts of the school front on 3816-20 Iowa Street. It was reported to FIRE ENGINEERING that if the correct address had been given at the outset the first-in companies would have employed a different route to reach that location, with a normal running time slightly less than to the Iowa Street number.

Following the original phone call, a flurry of calls was received, prompting Chief Operator Joseph Hedderman to transmit Box 5182, Chicago and Hamlin Avenues, about two blocks from the school. It is reported the local telephone company records show the following log.

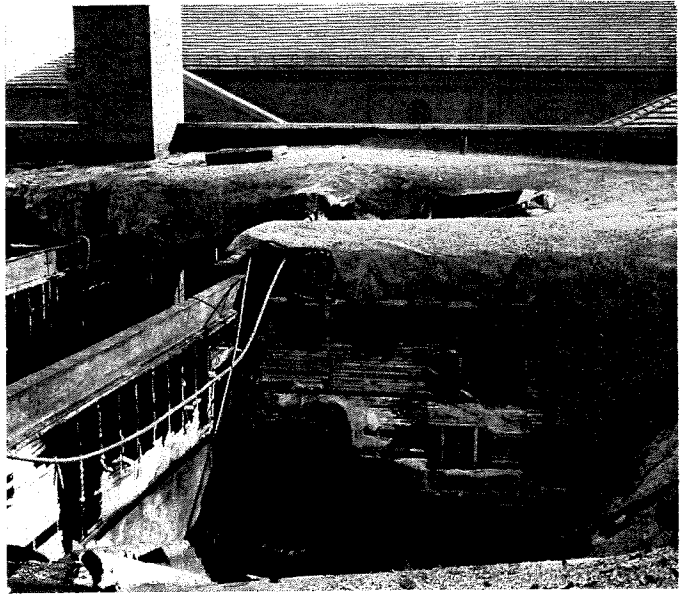
2:41:30—fire call for 3808 Iowa Street
2:43:20—same address as above
2:43:30—same address as above
2:43:40—fire call for school
2:43:42—three more calls for rectory

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Roof collapse, which Fire Commissioner Quinn believes led to cause of most of the deaths, released blast of hot gases

Chief Fire Marshal Raymond J. Daley views ruins of school corridor during post-fire investigation

cutting the volume of fire. It was only a matter of minutes before the firemen realized it would be impossible to rescue each person individually. Acting under orders of Chief Devine, the firemen began dropping the children into life nets and on to the sidewalk below. Devine realized that a broken arm or leg would be better than burning to death. This order resulted in the saving of many lives.

It was a matter of two or three minutes, at the most, before box alarm companies arrived. The first engine on the box response stretched two 2½-inch lines equipped with fog nozzles. It entered the front stairwell of the building in hopes of cutting the fire down and pushing it, the hot air and gases, back into the stairwell to enable the trapped children in the classrooms to escape behind the protective fog. While these men fought their way to the top of the stairs, truckmen were swinging axes as fast as they could to get the roof open.

It was then that Chief Devine ordered the 2-11. It was also at this time that the fatal blow, which snuffed the life from the children and nuns, struck.

Roof collapse

It was only a matter of minutes after the first fire companies had arrived at the school, that death struck 90 persons still trapped in the classrooms. The roof

of the building, directly over the burning stairwell collapsed, causing the ceiling of the second floor corridor to fall in. This sent a blast of super-heated air and gases through the building which snuffed out every ounce of life from those still caught in the building. It also knocked firemen, attempting to reach the second floor with their hand lines, down two flights of stairs. Those that could, regained their feet and again tried to make the second floor. Two firemen were sent to the hospital for treatment after they were blown down the stairs.

Just before the roof fell, a number of firemen had managed to get into the building by means of the fire escape on the rear. They assisted one class down the stairs, but when the roof collapsed, it was impossible to get back into the second floor by means of any rear entrance.

All this had taken place while I was on my way to the fire. When about a mile away I heard Chief Devine order a 5-11 on Box 5182. He had skipped the usual 3-11 and 4-11 and had jumped directly to the 5-11. Immediately, I knew that the fire must be of great volume and I was already beginning to wonder how a fire could get such a start in a school occupied by some 1,300 persons. The first thought which entered my mind was that the boiler must have exploded.

Arriving at the scene, I could see at a glance that the still, box and 2-11 alarm

companies were working, throwing water into the building on four sides. Truckmen were on the roof performing their duties there. There were two hand lines going up the front stairs and I immediately went into the stairway. In my 30 years as a fireman, I have never seen such thick, dense smoke pouring from a building under such pressure.

The men were doing everything they possibly could. I climbed to the second floor of the burning building and tried to make it to the corridor. It was impossible. The heat and smoke was too much for anyone, but the firemen were still trying to push the fire back with fog. We had to back down because of the heat, but we kept trying. We didn't know what the situation was in the classrooms on the floor.

Water was being thrown into the building by hand lines, high pressure wagons and the new watertower. The "Snorkle" was able to push the fire out the roof and make it possible for us to get into the classrooms on the North side of the building. Division Marshals Anthony Pills, Robert J. O'Brien, Deputy Marshal James Bailey, Chief Marshal Raymond J. Daley, Deputy Marshal Harry Mohr and myself made our way into the classrooms and found the children, some still seated at their desks. All of us, veterans of more than 30 years had never witnessed a sight so terrible.

Chief Daley then called for an additional two trucks and two squads to be sent to the scene to aid the 40 pieces of fire equipment already there.

We had little trouble in fighting the remaining fire and I struck out the 5-11 at 4:19 p.m., less than two hours after the first alarm had been received.

Path of fire

The fire had started in the stairwell in the northeast corner of the building and

was confined there until it reached the second floor. A Class "B" fire door on the first floor prevented fire from involving the lower half of the building.

Upon reaching the top of the stairwell, it traveled down a cockloft just above the hallway. I believe that the fire had already gotten a good hold in this cockloft when it was discovered on the second floor.

The fire alarm system was sounded and the children, some not realizing it was the real thing, began to file into the hall. The children in the front classrooms were able to escape down the front stairs, thanks to heroic efforts on the part of the teachers. About the same time, fire in the cockloft dropped into the hallway through two registers in the ceiling of the corridor. This forced the children in the rear classrooms back.

Many were struck by panic, some jumped and others were rescued by firemen. When the fire had reached volume enough to cause the roof to fall, it was the end.

Many persons have said a fire door on the second floor would have been the answer, but I believe that the cockloft running above the 107-foot corridor is the means which enabled the fire to travel where it did. A fire door would have certainly helped.

Delayed alarm

The big question about this terrible fire is why and how it happened. Testimony at the inquest has revealed a 20-minute delay in notifying the fire department. This is certainly a basic reason why 93 persons are dead today.

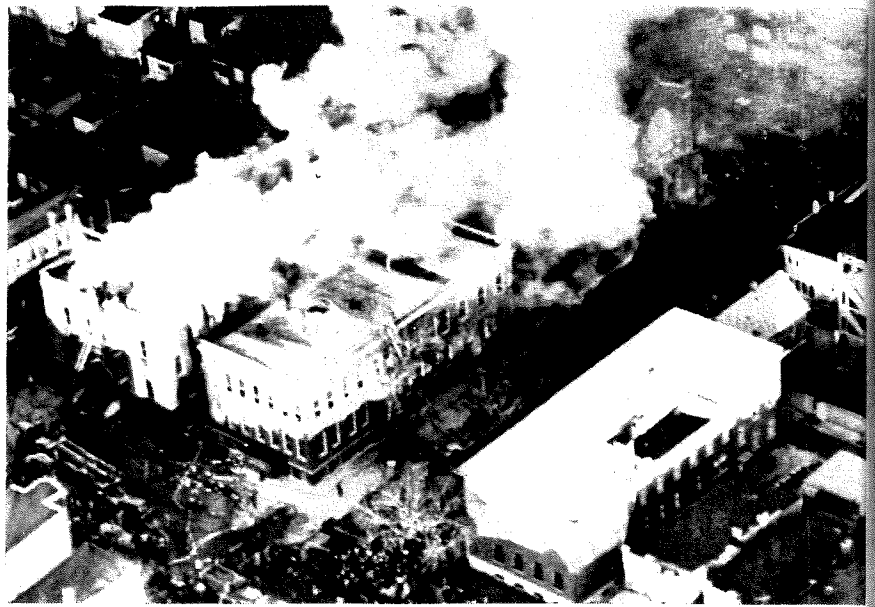
All the fire department needed was just a few minutes more. If only we had been called when we should have, the story of the Our Lady of Angels School Fire might be much different. The fact remains, it happened, and we must insure that this never happens again.

The day after the fire, I called each and every member of the still and box alarm companies into my office and interviewed them. All gave me their own account of what happened and what each did during those first few minutes. All had one common statement to make: "We tried." As fire commissioner I can ask no more of any man.

Over 160 rescued

Over 160 persons were rescued by members of the Chicago Fire Department. This is certainly an indication of a magnificent performance by the members of the responding companies. It is only with a tone of sadness that I say we were called too late. If only we had those extra few minutes, we could have done so much more.

All fire departments in this country can do now is to take steps to insure that this never happens again. As long as Richard J. Daley is mayor and I am fire commissioner, we will not rest until every Chicago school and public assembly unit has the absolute maximum in fire protection. □□



Aerial view of fire shows U-shaped construction of school. Fire was confined to north wing. School is located in closely built-up northwest side of the city

INCORRECT ADDRESS CAUSES DELAY—Continued from page 31

In addition, two more calls were received before 2:44 p.m. which gave the correct school address. Within the next 15 minutes, seven additional calls were received, two of these requesting ambulances.

The building was erected in 1903 as a combination church-school and expanded in 1910. It was of brick-wood joist construction, two stories in height with base-

ment. The walls were mainly plaster on wood lath with ceilings of acoustical tile. Between the ceiling of the second floor and the roof was an attic or cock-loft approximately 2 feet in height. In keeping with the architectural style of the period, the rooms were large with high ceilings and wood trim.

After the present church was built in 1939, the entire building was converted

5182		Chicago and Hamlin Aves.										800 N. 3800 W.		
Engines		Trucks		Squads		H.P.		W.T.		Ambulance	Div. Mar.	Batt. Chief		
44	68	85	95	26	36		6				2	18	23	
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24	77	114	117		32		2	2					28	
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7	38	42	106	109										

COMPANIES TO CHANGE LOCATION									
Alarms		Engines			Trucks			Batt. Chief	
Second		28-95	17-85	20-68	42-57	32-26	39-35	6-24	25-18
Third	6-24	22-76	25-26	39-38	112-43	23-36	57-35		
Fourth					89-117				
Fifth					79-57				

The first alarm assignment to the school was recently augmented by Truck 35 which does not show on the card. Apparatus and ambulances special-called are not listed

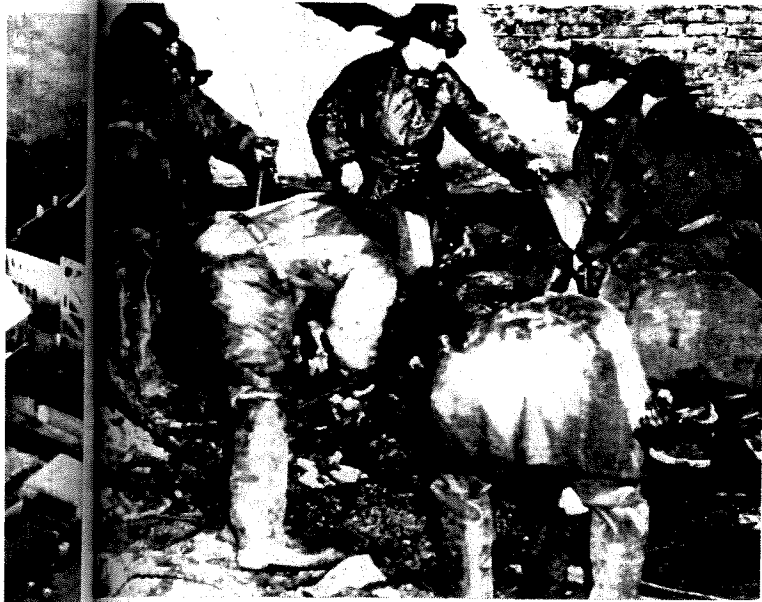
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Firemen search debris following extinguishment of blaze in hunt for bodies of victims trapped in second-floor classroom



Roof collapse into classroom. Depth of char in portion of rafters indicates fire may have been burning for some time

...rth wing.

to a school with 13 rooms. It was remodeled in 1951 and was considered to be in good condition.

At the time of the fire it had an enrollment of 1,635 pupils, including a kindergarten of 120 children operating on double shifts; 1,200 children were in the fire building. The teaching faculty included 20 nuns of the Sisters of Charity of the Blessed Virgin Mary and nine lay teachers, all women.

The fire is believed to have originated in a basement stairwell in the northeast corner of the building. It apparently extended up the walls into the cockloft and by the wooden stairs to the second floor where it mushroomed out into a 107-foot corridor, finished with acoustical tile walls and ceiling. This hallway served six classrooms of the fifth, sixth, seventh and eighth grades. A closed fire door at the first-floor level prevented its extension on that floor and all children located there marched out safely. There was relatively little fire damage in this area.

Three stairways and a fire escape served the second floor. All of these are said to have been in good order.

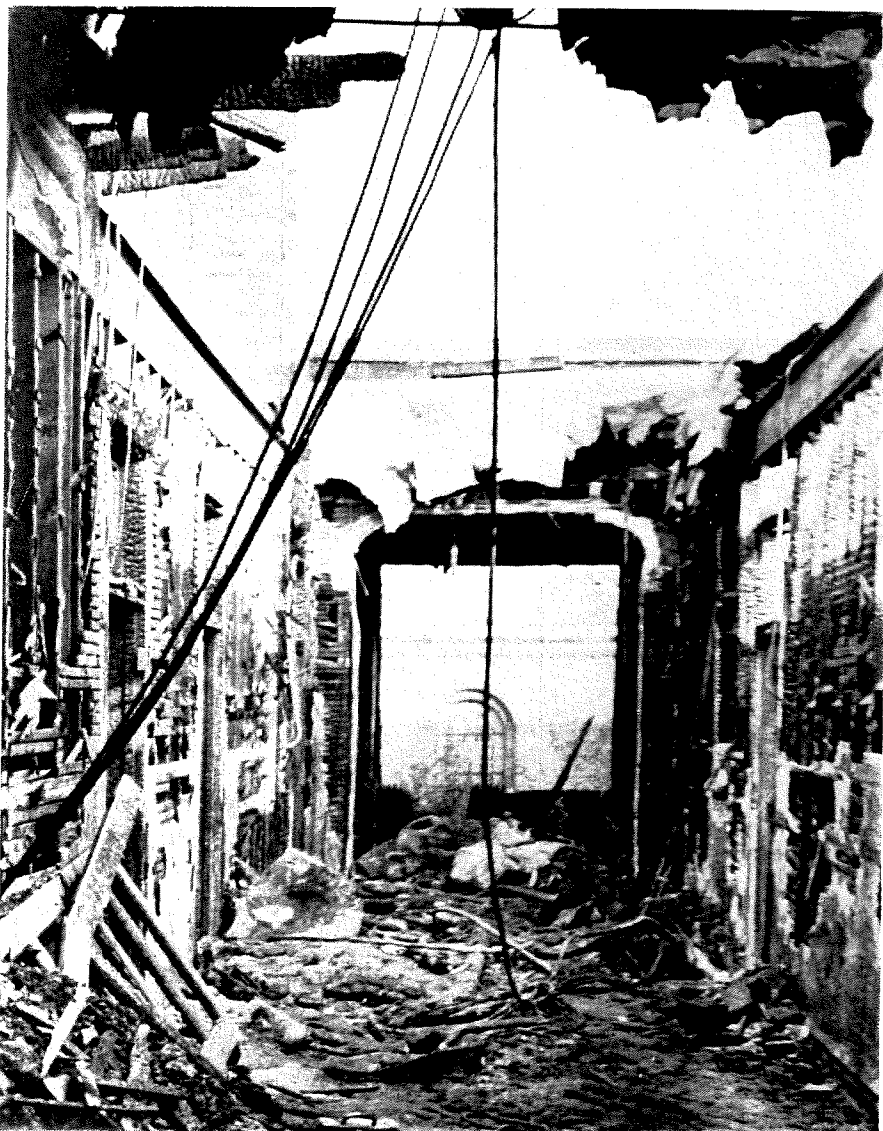
Blue-ribbon jury

Coroner Walter McCarron impaneled a jury of outstanding experts to investigate the holocaust. Testimony to date is reported to reveal the following:

The stairwell where the fire is thought to have started is said to have contained test and homework papers. A roll of tarpaper or lining felt was also found at this point.

It was the practice of the school to dump waste paper in containers in the boiler room. This area was not involved in the fire due to closed wooden doors which connected to the stairwell. Heat for the building was by coal-fired steam.

Janitor James Raymond said he was returning to the school from other church property in the area between 2:20 and 2:25 p.m., when he noticed smoke and



Destruction in second-floor corridor. Fire burned away or weakened roof beams causing collapse shortly after arrival of fire companies

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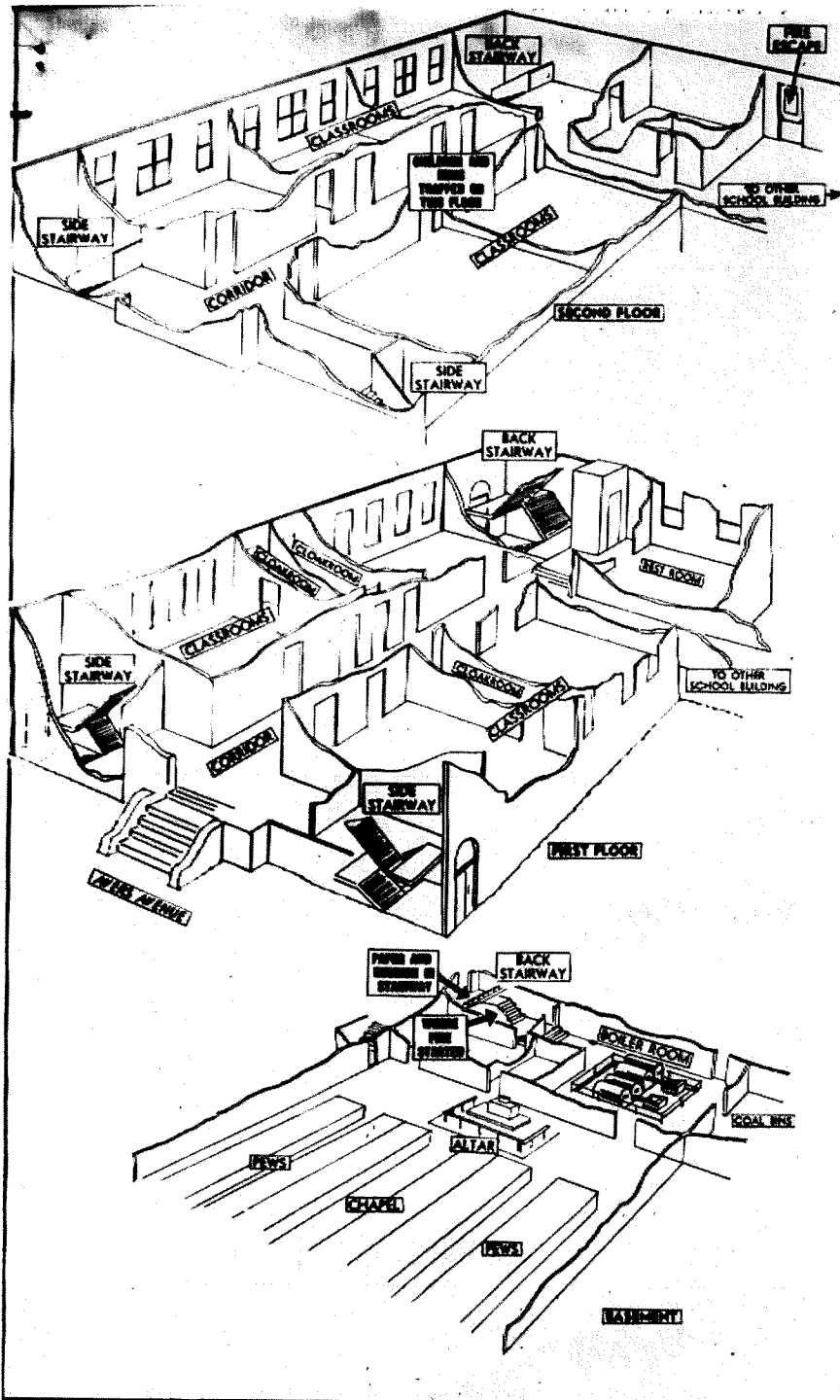
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how on



Members of Coroner's jury inspect stairwell where fire is said to have started



Cutaway diagram of school wing—Copyright—Chicago Tribune—from Wide World Photos

flames in the stairwell area. He rushed into the basement and ordered two boys emptying baskets to leave. He then ran to the rectory and told a housekeeper to call the fire department. He ran back to the school where he had several boys walk out on the fire escape to let down the counterbalanced lower section. He then broke open a door connecting classroom to the corridor area and the fire escape to permit the pupils to escape. He also lowered a window and broke another to permit the children to breathe.

Coroner McCarron later stated that many of the children trapped in the building died from smoke suffocation. In one room 24 bodies were found, some still seated at their desks.

Commissioner Quinn at first thought arson was involved as heavy black smoke was noted in the early stages of the fire. He later said this may have been due to the burning of the tarpaper. He attributes the heavy death toll to the delayed alarm.

He recounted how Miss Pearl Tristano, fifth-grade teacher, smelled smoke between 2:35 and 2:40 p.m. She notified another teacher in an adjoining room who hunted unsuccessfully for the mother superior. In the meantime, Miss Tristano led her class to safety and then sounded the interior fire alarm.

In accounting for the lack of fire-resistant stairs, Building Commissioner George Ramsey said the school was constructed before the Chicago stairway ordinance was adopted. At present, the requirements are for steel stairs and enclosed stairwells.

Press reports stated that Sergeant Drew Brown, Chicago Arson Squad, theorized the fire smoldered at least one hour before breaking out. Chief of Fire Prevention Robert J. O'Brien believes the fire was burning for at least 20 minutes before the fire was detected. He said the entire school had been inspected last October and was found to be in order. He recommended the following changes be made in the school fire regulation requirements:

1. Enclose all stairwells
2. Install rate-of-rise fire detectors
3. Provide more fire escapes
4. Make all stairs fireproof
5. Provide more exit doors
6. Abolish all transoms
7. Install automatic sprinklers

Dale K. Auck, director, Fire Prevention Division, Federation of Mutual Fire Insurance Company, and a jury member recommended that all schools be prohibited from storing clothing collected in drives within the building.

He would also require that janitors be instructed in fire prevention technique and would fine or imprison anyone wedging open fire doors. He believed that all present open stairwells should be enclosed with low-cost materials which would give at least 15 minutes of fire-retarding protection. He further believes that automatic heat and smoke ventilators should be installed over stairwells. □

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