The building was well planned for the care of mental patients—except that fire protection had been left out.

New Mexico State Hospital Fire

ERNEST E. JUILLERAT
Manager, Fire Record Department
National Fire Protection Association

A tragic combination of laxity, inadequate help, abundance of combustible interior finish and contents, faulty building design, and lack of proper emergency procedures led to the death of six patients at the New Mexico State Hospital in Las Vegas, New Mexico, shortly after midnight on Thursday, September 21, 1967.

Investigators suspect that a patient set the fire. Since the fire was confined to a wooden cabinet in a first-story day room when it was discovered, two questions are of uppermost importance: Why was the fire not controlled or extinguished in its incipience? And why did six patients die in the second story? The answers to these questions were obvious after the fire, and the circumstances had been pointed out before the fire by inspectors from the State Fire Marshal’s Office and from the Contractors Licensing Board of the state.

THE HOSPITAL

Although the buildings of the mental hospital were for the most part in sound condition and well kept, inspectors from the aforementioned state agencies had pointed out several shortcomings from the fire protection standpoint. The inspectors had pointed out, among other things, the need for automatic sprinklers and had recommended that combustible fiberboard ceiling tiles be removed and replaced with noncombustible materials. They had also recommended tightening up of the smoking regulations and better employee training for fire emergencies.

At the time of the fire, none of the several buildings comprising the hospital had automatic sprinklers, fire detection systems, or local alarms. Some of the buildings had standpipes and hoses, but the building in which the fire occurred had only soda-acid portable extinguishers.

Little had been done to instruct employees in firefighting and evacuation procedures. On some bulletin boards there were floor plans of the buildings showing evacuation routes. Employees had been told to report fires first to the superintendent and then to the telephone operator, who would call the fire department.

THE RECEIVING WARD BUILDING

The building in which the fire was started was L-shaped, with two stories and a basement constructed of brick-faced concrete-block walls, concrete floors, and a terra-cotta-tile-on-wood-plank-on-wood-rafter roof (see the drawing, next page). All the stairways were enclosed. The arrangement of rooms was the same in both the first and second stories. The partitions were part concrete block and part metal lath and plaster on wood studs.

The ceilings in the corridors, sleeping areas, and day rooms were of combustible fiberboard acoustical tile nailed to gypsumboard on metal channels suspended by wires from the concrete floor above (some of the combustible tiles had been removed in the entrance corridor in compliance with the recommendations of the Contractors Licensing Board). The floors were covered with vinyl tile. Heat was provided from a re-
mote boiler house to steam radiators, recessed beneath windows, having metal flush covers louvered at the top and bottom. The windows — four-section awning type, with ordinary glass in metal frames — were covered inside with heavy-gage security screens in metal frames. Both the screens and the windows were opened by means of cranks that were kept inside the various offices in the building. The fire-resistant integrity of the concrete floors had been nullified by holes cut in them for pipes, electrical conduit, and ventilating ducts (see the lower photo, page 8).

The undivided attic also had a concrete floor. Two-inch-thick combustible fiberboard insulation was laid on top of the attic floor. The attic was not used except that the fan on the ventilating duct system exhausted through the roof.

The sleeping areas within each ward were separated from each other by floor-to-ceiling partitions, but they were separated from day rooms and corridors only by four-foot-high partitions, which allowed the attendants to see what was going on in all the sleeping areas. The bathrooms, storage closets, intensive-care rooms, offices, and entrance corridors were enclosed by floor-to-ceiling partitions with solid-core wooden doors. Some of the doors had wired glass lights, and some had ordinary glass.

All the day rooms had television sets, chairs, and tables, and some of them had cabinet-type sinks. The sleeping rooms had metal beds with cotton mattresses; some of the mattresses were covered with fire-resistant waterproof covers. Nine portable wooden storage cabinets — used primarily for bed linens — occupied one corner of the day room in which the fire started. The cabinets, which had been made in the hospital's maintenance shop of %-inch plywood, were four feet wide by six feet high by two feet deep, with a hinged door to each of the two compartments in each cabinet. They were reportedly painted with fire-retardant paint, although their performance in the fire did not reflect this.

Small electrical appliances — including coffee makers, hot plates, irons, and radios — were used in the

The numbers on the drawing indicate 1) the west office; 2) the east office; 3) the intensive-care rooms; and 4) the enclosed passage way to the next building. The fire spread from the day room across the combustible fiberboard ceiling throughout the east ward of the east wing, except the rest room, the intensive-care rooms, and the office, which were enclosed by floor-to-ceiling partitions. No exit directly to the outside was provided from the intensive-care rooms. The only exit at the east end of the wing was from the day room, and fire cut off that exit. The six victims were in the intensive-care rooms in the second story. The arrangement of rooms was the same in the first and second stories.
wards by the attendants. Inspectors had found some of the appliances to be defective. When not in use, the heat-producing appliances were reportedly kept locked up, either in storage cabinets or in the offices.

Smoking was allowed in the day rooms but was not supposed to be permitted in any other areas. Patients were allowed to keep cigarettes, but they were supposed to get their lights from the attendants. The attendants were to decide whether a patient was reliable enough to be allowed to smoke. Actually, the patients smoked in almost all areas. The cotton mattresses were pockmarked with holes, and the fire-retardant covers, where they were present, showed small brown spots indicating smoking in bed. Ash trays and several books of matches were found beneath beds. Possibly patients obtained matches from visitors.

The doors enclosing the various wards were normally kept locked, as were the closet doors and office doors. The doors to the intensive-care rooms opened only from the corridor side (the intensive-care rooms occupied a dead end of one wing; inspectors had recommended that those rooms either be provided with adequate exits or be left unused).

There were 158 patients in the building — 74 women in the south wing and 84 men in the east wing. At the time of the fire there was only one attendant to care for the 43 patients in the two wards in the first story of the east wing, where the fire started. The other attendant who normally would have been on duty in the first story was on leave and had not been replaced. There were two attendants on duty in the second story of the east wing.

It was customary to turn lights out in the sleeping areas at 9:30 pm and to dim the lights in the corridors. Patients outside the intensive-care rooms might be up and around at all hours of the night if they happened to be restless or could not sleep.

The fire started just inside the right-hand window in the first story. Heat broke the first-story windows and flames extended up the outside of the building to the eaves, breaking second-story windows and igniting the combustible fiberboard insulation just inside an eave vent in the attic. Two of the second-story windows (off the picture to the left) were open at the time of the fire, allowing smoke to enter the second story.
THE FIRE

A showy time after the midnight shift had started to work, the lone attendant in the first story of the east wing was in the office at the west end of the wing working on medical records. How long he was there is uncertain — probably about 10 to 15 minutes. When he left the office, he looked down the corridor and saw the glow of fire in the day room at the opposite end of the corridor. One of the double doors at the center of the wing between the two wards was open; the other was closed. The attendant found a fire burning at one of the wooden storage cabinets in the corner of the day room. He immediately attempted to call the superintendent, but the superintendent's line was busy, so he dialed the switchboard operator and asked her to call the fire department. He then ran down the corridor, waking his patients and unlocking the doors to the intensive-care rooms.

The attendant picked up a portable soda-acid fire extinguisher at the east office. Not having been trained to use it, he thought the top was to be unscrewed to operate it. When he could not loosen the top, he turned the extinguisher upside down to bump the top on the floor in an attempt to loosen it. When he did that, the extinguisher started to operate, and he directed the stream toward the fire, with some success. When the extinguisher had been emptied, the attendant started to move his patients out the door at the west end of the wing. The exit from the east end, which opened from the day room, was blocked by fire.

On his way back down the corridor, the attendant picked up the portable extinguisher at the west office, returned to the fire, and discharged it, too, but by that time the fire was beyond control by portable extinguishers.

It cannot be ascertained just how long an interval there was between the time the attendant in the first story discovered the fire and the time the two attendants in the second story became aware of it. At any rate, the second story quickly filled with smoke, and the attendants had difficulty rescuing their men patients. Although they managed to unlock and open the doors to the intensive-care rooms, they could not reach all the men because of the smoke. When the fire department arrived, five patients were rescued from the second story, but it was too late to help six of the men in the second-story intensive-care rooms. Four of them had perished in their beds, and the other two had collapsed and died in the adjoining lavatories. The women patients in the south wing were evacuated without incident.

The fire completely consumed the cabinet in which it had started, and the other cabinets were severely damaged. Flames ignited the combustible ceiling tiles and spread along the ceiling into the corridor and the sleeping areas throughout the east ward. Most of the furniture in the day room, along with some in the adjoining sleeping area, was consumed.

Heat broke out the windows of the day room, and flames and smoke rolled up the outside brick wall. Smoke entered the second-story day room through two open windows, but no fire entered the second
story. Smoke also spread upward to the second story and the attic through the nonfirestopping openings around steam pipes, electrical conduit, and ventilating ducts. Smoke coming from around the outside of the ventilating ducts where they terminated at registers in the walls blackened the two lavatories in the intensive-care section of the second story where the six men died. The floors throughout the second-story east ward were covered with soot, but the walls and ceilings in the day room and the sleeping areas showed remarkably little smoke stain.

FIRE DEPARTMENT ACTION

LAS VEGAS is divided into two separate municipalities, a town and a city, each having its own separate government. Fire alarms go only into the city station, but both the town and city fire departments respond. The call from the hospital was received at about 12:50 am. The two men on duty drove the town's two pumper to the fire from three miles away. An instructor from the State Fire Marshal's Office who had been drilling the town fire department during the previous evening accompanied the town's two pumper. When the apparatus arrived at the hospital, flames were coming from the windows of the first-floor day room and extending to the eaves of the building. Although they were carrying a key to the gate in the chain link fence to the southeast of the building, the firemen did not take time to use it but rammed a pumper through the gate. The first volunteers, who arrived simultaneously with the apparatus, started to lay lines and began rescue. The city's two pumper and rescue truck arrived shortly after the town's pumper, having traveled two miles farther. Some of the firemen pulled four booster lines from pumper and directed streams through the first-story day-room windows as others laid 2½-inch lines into the building. By the time the fire apparatus arrived, attendants had unlocked outside doors. The firemen knocked the fire down in about ten minutes.

The patients were moved into another building temporarily, and an investigator from the State Fire Marshal's office, who was later joined by State Police, started inquiry into the cause of the fire and the surrounding circumstances.

THE SECOND FIRE

UNKNOWN to anyone, the flames licking up the side of the building had reached a small air vent in the boxed-in eaves above and had ignited the combustible fiberboard insulation on top of the attic floor, which started to smolder (see the top photo, page 8). During the afternoon following the fire in the first story, firemen and investigators noticed a buildup of smoke in the attic, but they thought the smoke had accumulated there from the fire downstairs. Firemen brought in an exhaust fan and set it in the attic beside the access hatchway near the junction of the two wings. At about 5:00 pm they discovered that after the fan had been set up, fire had spread almost the length of the east wing in the attic, charring the insulation and the roof braces and rafters. The second fire was quickly extinguished, but hose lines were left in the attic and the first story in case of a rekindle.

CONCLUSIONS

QUESTIONING of patients and employees by the State Fire Marshal's investigator and by State Police led the authorities to believe that the fire probably had been set by one of the patients. All other causes were ruled out. The most important lesson, however, lay in the lack of fire protection for the patients. There was no automatic sprinkler system to provide quick detection and control of the fire and to warn employees and transmit an alarm. Nor was there a manual alarm system. Moreover, the employees were not trained even to use the portable extinguishers that were available.

The open design of the wards, although highly practical for patient care, allowed the fire to spread over a wide area of the combustible ceiling, which had not yet been removed in the wards. The openings left around pipes, conduit, and ducting that pierced the concrete floors allowed smoke to spread into the intensive-care section of the second story and kill six patients. The single attendant caring for two wards in the first story could not possibly have kept track of everything that was going on in the entire first story of the east wing.