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FIRE PROTECTION HISTORY-PART 249: 1918 (HOTEL FIRE SAFETY)

By Richard Schulte

The twenty-second Annual Meeting of the National Fire Protection Association was held in Chicago in May 1918. Among the topics discussed at this meeting was the subject of fire safety in hotels and apartment buildings. The following is a transcript of a portion of this discussion:

"***The President:*** *Yes. Topic B will be presented by Mr. Williams. (Applause.)*

Building Code Essentials.

Mr. Sidney J. Williams, Engineer, Wisconsin Industrial Commission.

Mr. Williams: *There is not a great deal left to say after the very thorough discussion this topic has had. The most I can do is to approach it from a little different point of view. The special hazard to life in a residence building is materially different from that in a theatre or school. In the latter the special hazard results from having a large number of people together; while in the residence building the special hazard lies in the fact that people are in the building at night, and that if fire occurs and fire or smoke spreads rapidly through the building there is every likelihood of some of the occupants being suffocated before they are even awakened. Therefore it seems to me that the first essential in fire protection in a residence building is to do everything possible to prevent a fire from starting or from spreading rapidly. That is more important than the provision of exits, because no number of exits will help the man who is trapped in his room.*

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I hardly need to go into the features of fire prevention, which are well known to all of us, and are the same in a hotel or apartment as any other building,–that is to say, the protection of heating and lighting apparatus, the isolation of oil and paint storage and similar special hazards, and good housekeeping generally through the building. These will be assumed. But beyond that, if we admit that a fire will start occasionally, I believe that the best protection for a building of this sort is incombustible construction, because except on the first floor of a hotel building there is not an unusual amount of combustible material, not as much as in a mercantile building, and if the building itself is incombustible, the rapid spread of fire is materially retarded. This point has been mentioned already by Mr. Jensen, and I will not discuss it any further, except to say that I think the New York regulations, which permit apartment houses to be built six stories high, as I remember, of non-fireproof construction, are absolutely indefensible. I agree with Mr. Miller that hotels and apartment houses should be put in the same class, and I believe that the Chicago Code requirement, which, as I remember, restricts non-fireproof construction to three stories, is a very good basis. There is no reason for any residence building being built higher than 3 stories of non-fireproof construction. The Chicago requirement has had a very good effect in one direction, in making it the fashion to build 3-story apartments, which, from the standpoint of light and air and city planning generally, are much better than the higher buildings. In Wisconsin we now permit four-story apartment buildings of non-fireproof construction, but we are considering a reduction of the limit to three, and I think we shall make that change.

In a building, say, of three stories, which is permitted to be of non-fireproof construction, it seems to me quite important that the first floor at least should be of fireproof construction. This provision is commonly found in tenement house laws, and it helps greatly in cutting off the special basement hazard, the boiler room and the laundry and the storage rooms generally, provided a few doors are used to complete the protection given by the first floor construction. In a very small building, if the first floor is not made fireproof–I am speaking now, perhaps, of a three-family apartment building (three stories, with one family on each floor)– we require the basement ceiling to be at least protected by metal lath and plaster; which is perhaps as much protection as is consistent with the rest of the building. That, I believe, is a very important protection. If the building is not completely fireproof, then the corridor partitions and the partitions between apartments certainly ought to have some degree of fire-resistance, such as would be given by the use of metal lath and plaster on wooden studs; and perhaps, most important of all, the building should be thoroughly fire-stopped in the partitions and floors in the way that is so admirably set forth in the National Board's Code for dwelling houses.

After the matter of fire-resisting construction, the next essential is the protection of vertical openings. Among the sins that Chicago has to answer for is that of permitting open stairways and open elevators in many high buildings, such as the one we are in at this moment, and most of the large hotels. We have advocated in this Association for a good many years enclosing vertical openings, even in buildings of fire-resistive construction. I had an interesting confirmation of the wisdom of this a couple of years ago when I missed, by just a few hours, a fire in a fireproof hotel. If I had known the fire was about to take place I would have stayed over and witnessed it. This was in the city of Minneapolis, in a hotel 10 or 11 stories high, which some of you may know. A fire broke out about midnight in the dining or banquet room on the top floor. There had been a conference or convention of "housing" people there, and whether some housing reformer had dropped his cigarette on the floor or whether the heated arguments that had been put forth at the banquet had induced spontaneous ignition, I do not know, but at any rate, about midnight, a fire broke out in that banquet room, and the smoke went down a couple of stairways, so that housing reformers and hoi polloi alike had difficulty in escaping from their rooms into the lobby in neglige. If that fire had started on the first floor it does not require much experience to imagine what would have happened from the draft upward filling the corridors with smoke.

It is perfectly easy to enclose a stairway. For instance, the Hotel Astor, in New York, has all its stairways enclosed in wired-glass partitions, which is much better than having ornamental stairs in front and a fire tower at the rear which nobody knows anything about and no guest would be likely to use in case there was a fire. Of course, an ornamental stairway may be desired in the lobby, and there is no objection to permitting it for one or two stories, provided it is fire-stopped above that point.

If we first take proper care to prevent the rapid spread of fire, the next essential is exits. It will be agreed that there ought to be at least two separate exits from every building and that the exits ought to be at or near the end of the corridors. In the larger buildings, even if there are three or four stairways, there must be no blind alleys in which a man may be cut off by smoke coming between himself and the stairway. Most important of all, to my mind, is this, that there must be no door, no obstruction between the corridor and the exit. In an apartment building or hotel of the older type, we very often find fire escapes put on the outside of the building which can be reached only through some private room, and we may read on the door of that room, on its glass panel, perhaps, "In case of fire, break the glass and turn the knob," or something of that sort. It is very easy to contemplate in daylight walking up to that door and breaking the glass by a well-directed kick, and crawling through or turning the knob on the inside; but if a man is crawling along the floor of the corridor at midnight, perhaps with a towel over his mouth to keep out the smoke, how is he to tell which is the door before which he is to stand and batter his way through? We have made a strict requirement in Wisconsin in this type of building that there must be no door, whether in a new building or old building, between the

corridor and the fire escape if that is used as an exit; but if the fire escape is reached through a room, the door must be taken off such room and left off. If the hotel is full, the last man will be willing to sleep in that room, anyway, rather than down in the bar; and if it is not full, the hotel can spare the room. Leaving the lock off the door won't do any good, because a man can put something against the door and be as perfectly locked in as if there were a key in the door. There ought to be no door to that room at all.

To my mind, a well-constructed fire escape or outside stairway, built according to the specifications of our Committee on Safety to Life, is quite as acceptable as an emergency exit from a building of moderate height as an inside stairway on account of the great smoke hazard. If you have a good outside stairway reached by a door at the end of the corridor just as easily as an inside stairway, and you get up on that, you are away from the smoke, and I believe, for buildings of three, four, and possibly five stories, that kind of a fire escape is just as good an exit as any other, and perhaps a little better. I am speaking of fire escapes built according to modern specifications, stairways protected and built so that anyone can use them. For an apartment house, say, three or four stories high, I have been very favorably impressed by a type common in some parts of the country, where the stairway is built outside, but within the building line; with a roof over the top, with a concrete platform at each floor-level and with stairs (possibly wooded treads, but steel stringers) leading from floor to floor. This stairway is used as a rear service-stairway; the butcher and baker and candlestick-maker go up and down upon it, and the housewife and her maid also. They know all about it, and if there is a fire they can use it. It serves the purpose of a rear stairway and a fire escape combined. That is a type which I believe should be encouraged.

It is very important that every exit should lead to the street and that the rear exits should not lead down to the kitchen or some such place. I spoke a few minutes ago of the Hotel Astor as being admirable with respect to having its stairways enclosed. A couple of years ago I started down one of the rear stairways to see where it went to. I got down to about the third floor in this nice wired-glass enclosure, and then found that the stairways stopped there, and I had to go off horizontally fifty feet or so, where I found another stairway that took me down to the second floor. About that time I realized that I was in the service part of the building and that I was being regarded with considerable suspicion by the uniformed aliens who inhabited that part of the building. I thought that discretion was the better part of valor, and retraced my steps to my own bailiwick upstairs. I thought it was a cardinal defect in that otherwise fine stairway that it did not go down to the street. In talking with some hotel owners and managers on that point, I have met with the objection that if a rear stairway goes right down to the street somebody is going to use it to jump his board bill. I have heard that from so many sides that I mention it as requiring serious consideration. It seems to me perfectly absurd. If I want to jump my board bill I will walk down the front stairway with my suitcase if necessary and pass through the front

door. No one has ever tried to stop me going out by the front door, with or without a suitcase. The point, however, is made seriously by so many hotel men that I mention it here, and if there are any hotel managers in the audience I would like to hear from them as to whether there is really anything in that argument against having the rear exit lead directly to the street.

Of course, there must be exit lights and signs, and there should be (as there are in all the high-grade hotels) good directions for escape, and, preferably posted in each room, a little diagram with the location of the room on it so that the guest, before he goes to bed at night, can ascertain just where he is and in which way he would go in case he should be wakened by an alarm of fire. There must, of course, be some sort of a fire alarm. I believe New York is rather strict in requiring a regular fire alarm system in hotels as in large factories. I would like some information as to whether the house telephone may properly be regarded as a satisfactory alarm. It has some advantages; it generally makes a good deal more noise in one's own room than a bell out in the corridor, unless the bell in the corridor is very big, but I don't know enough about such use of the telephone from practice to pass any judgment. I would like to hear whether a room telephone system may be regarded as a sufficient fire alarm for a hotel. A large hotel is certainly a very proper place to have employees' fire drills. Most hotel managers, I think, issue some sort of instructions to the effect that the first duty of the employees is to get the guests out of the hotel, etc. But considering the comparatively low intelligence of a large part of the hotel help, I should think a fire drill would be a very useful thing in any large building.

Then finally remains the matter of fire extinguishment. The hotel men in Wisconsin were consulted in connection with our Building Code, and agreed that every new hotel, at least, ought to have inside standpipes, that one ought not to depend entirely on chemical extinguishers. The standpipe and hose should not be too large, should be small enough to be handled by a man not especially expert in handling fire hose. A first-aid stream will generally be sufficient, and should be provided in addition to extinguishers, though I know of cases where extinguishers have done very good work in hotels in putting out small fires. Automatic sprinklers are unquestionably desirable in the basement, and especially if there is any mercantile occupancy on the first floor. As to their general use throughout the hotel, that is another point I should like to hear debated. I remember one casualty in a hotel which might have been prevented; many of you have read about it also. The newspapers carried the story a few months ago of a man in a Detroit hotel (about the sixth or seventh story) who was observed hanging from his window sill, with smoke issuing from the window, and before a ladder could be brought he had to let go, and fell into the court and was killed. The furniture was on fire, and the presumption was that he had not succeeded in getting out by the door, and had to hang from the window as his only possibility of escape. I do not know whether that little fire would have set off a sprinkler head in time to save the man or not; but I don't know anything else that would have saved his life.

In conclusion, I may mention another casualty of that sort which a sprinkler might have prevented. A year or two ago our excellent newspaper clipping bureau sent us a clipping which the Secretary of the Commission sent over to me, to the effect that in an Old Ladies' Home one of the inmates had been smoking in bed, and the contents of her clay pipe had set fire to her bed clothes and she had been seriously burned; and so as a last essential for fire protection in this type of buildings I suggest that old ladies should not be permitted to smoke in bed. (Laughter and applause.)

The President: *You have enjoyed this forceful and most excellent informal address and noted, no doubt, that Mr. Williams desires discussion on certain points. The first and foremost is, what are the chances of getting out of a hotel without paying your bill? (Laughter.) I think we are all interested in that and can devote some time to it, inasmuch as this is the last day. (Laughter.)*

Mr. Wentworth: *I was led to believe that Mr. Ernest J. Stevens, Vice-President and Manager of the Hotel La Salle, might drop in this afternoon. Most of us are Mr. Stevens' guests at this time, and he may have heard what the President has said.*

Mr. Stevens *(rising from the centre of the room): I did not come in to discuss anything, but as far as escaping down the back stairs without paying your bill, that is wholly unnecessary, because people can go down the front stairs without paying just as easily, and, as a matter of fact, they do. (Laughter.) I would be glad, as far as the hotel is concerned, to answer any questions as to the practical operation of any of these suggestions.*

The President: *Thank you, Mr. Stevens.*

Mr. Woolson: *I would like to hear Mr. Stevens' comment upon the question which Mr. Williams brought up as to the feasibility of the use of the telephone as a fire alarm. If a fire started in room 913 of a hotel, would it be a practical proposition, if that news were reported to telephone headquarters, to report to all other rooms on that floor by telephone; and how long an operation would it be to signal all the rooms on that floor and the floors above,–not necessarily the floors below?*

Mr. Stevens: *Say we have 62 rooms on a floor, it would probably take about twenty minutes. We did have a fire on one floor that was confined entirely to the room. The occupant stepped out in the hall and said, "There is a fire in the room; I dropped my cigarette in the wastebasket and it ignited the lace curtains." A man with a fire extinguisher had it out in ten minutes. The La Salle is pretty well protected against fire. We comply with all the regulations and have never had a fire that got outside the room.*

Mr. Speed: *The balance of the guests on that floor did not find out that the fire had occurred until next day from the papers, did they, if they found it out at all?*

Mr. Stevens: *No, they never knew it.*

Mr. Speed: *I think a hotel like the La Salle might have a considerable fire, and if the guests found it out at all they would not find it out from the hotel. The hotel people take it for granted that they have a fireproof hotel and that a fire is not going to spread, and all that is necessary for them to do in spreading the news of it is to see that the people in close proximity to it are protected. They are not going to ring a bell for any sort of fire, and a fire that would necessitate an alarm would have to be a big fire. I was in a hotel in New York once (and, by the way, it happened to be the Astor, that has these splendid closed stairways Mr. Williams has been praising), when one of the elevators fell from the roof garden just outside my window. I never heard such screaming in all my life; it was full of men and women. I picked up the telephone and asked the office what was the matter, and they said, "Not a thing." I said, "Something terrible has happened in the elevator." They said, "No, we have no news of it down here." A year after I happened to be in the hotel and mentioned to a gentleman with me, "This elevator fell a year ago and there was quite an accident." The elevator boy smiled and said, "Yes, I was running it." It took me a year to find out what happened just outside my window in a big hotel, and I think that as long as we have fireproof hotels of the character they build now we need not worry about what kind of an alarm they put in. By the time they get ready to ring a general alarm everybody in the hotel will already know of the fire.*

Mr. C. Heller (San Francisco): *In San Francisco when the Palace Hotel caught fire they had no alarm system and the telephone operator stayed at her post and notified every room individually by telephone, and in that way got the people out of the building, but that took a long time. Under the present telephone arrangement I do not believe there is any way of notifying all the rooms by one connection; it must be done separately. As to having a hotel fire and not notifying the guests, I think that is a mistake, particularly at night.*

Col. Young: *I have seen an apparatus which coupled up any number of telephones and they all might be rung up at once. I do not know to what extent it is on the market. I would like to ask Mr. Stevens what he thinks of the suggestion of Mr. Williams of an enclosed stairway above the second floor?*

Mr. Stevens: *We have never had a big fire and I do not know just how the smoke might go up through the stairways, but there is every opportunity. The stairways in front are open; the rear stairways are enclosed,– they have to be. It seems to me it might be easier to get out if the stairs are open than if they are closed, unless the stairs are in a well like those we have in the rear,–but I really cannot answer that question.*

Mr. Dana: *A fire occurred in Boston about three years ago in the Hotel Lenox, a modern fireproof structure of 10 or 11 stories, not a very large area hotel. There was an open stairway in the center; the elevators, as I recall, were not enclosed; there was an enclosed stairway near the center with doors, but the main open stairway had very little combustible trim around it. The hallways had very little combustible trim; the doors were of wood and there were carpets on the floors. I cannot recall the full details of the fire, but I remember it occurred on a very windy day, starting in one of the rooms, was blown into the hotel corridor from the room, and practically cleaned out the floors above, sp*[r]*eading from the open stairway. This is an example of what can happen in a hotel of this class, which was certainly first class construction. To my mind, it is very impressive as showing the absolute need of enclosing stairways. The stairway which was enclosed was not well known and was not much used.*

Mr. Small: *It occurred to me that Mr. Stevens in answering Col. Young's question thought that perhaps Col. Young was seeking information from Mr. Stevens as a fire protection expert. As I understood Col. Young's question, he intended to ask Mr. Stevens to express his thought if he cared to as to whether or not from a hotel operating or management point of view there were any objections to enclosing stairways.*

Mr. Stevens: *There would be no objection at all, because the stairways are very seldom used. People use the elevators. Hardly one man a day walks down stairs.*

A Member: *Has anybody ever seen the stairways in the Astor with the doors closed? I have been stopping there for years, and I never did.*

Col. Young: *You will find them closed at night.*

A Member: *I didn't know there was any night time in New York.*

Mr. Miller: *On that point of closing the doors in the Astor stairways, I think the arrangement is such that they can all be closed at the same time from the office. I believe the Astor originally had a system by which all trouble was reported to the office and communicated from there.*

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The value of the enclosed stairway, I think, was illustrated in the fire which occurred in the Vanderbilt Hotel in New York soon after it was opened, before they had it fully equipped;– when it was partly occupied in the upper stories. An immense amount of furniture was stored in the corridors of the third story, but the stairways were all enclosed. The excelsior packing of that furniture somehow caught fire, and an employee who knew no better opened the window to give it plenty of air, so there was a pretty good-sized fire. The people above in the hotel knew nothing of it until they read of it in the papers. Those in the basement below, however, did know it, because the water that was thrown by the Fire Department flowed under the door and down the stairway, making a fine cascade into the basement.

Mr. Hoagland: *I would like to add a postscript to that story. I personally investigated that fire in the Vanderbilt Hotel, and found that the smoke from the combustion in the third story was carried out through a bath room ventilating system, and a chambermaid on the tenth story was overcome by the smoke.*

Col. Young: *The only experience we have ever had in North Carolina with open stairways occurred in a building in Raleigh,– 7-story fireproof office building. I made an inspection and ordered outside fire escapes. The owners objected and thought it was a hardship, but while they were seeking permission to use the space over an adjoining property someone threw a match into less than half a bushel of trash, and the result was the smoke went up the elevator into the open stairway and the whole building was filled with smoke. There was no danger whatever, and yet it was all they could do to restrain the stenographers and people working on the ninth, tenth and eleventh floors from jumping out. This incident proves that you don't need to have much fire to endanger life.*

Mr. Robinson: *Mr. Williams dealt a little more at length with the question of enclosed stairways than Mr. Jensen did, but I think that this is the most important feature of building design from the fire protection standpoint. I will even place it ahead (with certain reservations as to height, etc., and perhaps basement protection) of the fireproof construction of the building itself. I believe if architects will give as much attention to this feature of hotel and apartment building as they do to others they will reduce fire losses and danger to life to a remarkable extent. I have seen a number of buildings of fireproof constructions burned completely. Looking up information as to how fires progress through buildings, in the last few years I have taken occasion to investigate five or six fires in this city that had what firemen call a good start. One occurred a number of years ago in the sixth story of the Great Northern Office Building. A tailor shop took fire. Among the first things that happened was the breaking of an exterior window. That immediately admitted the necessary air. The next thing that occurred was the breaking of the glass in the doorway to the corridor. This established the draft (or opened the damper at the other end of the stove!), and the fire travelled through that corridor, which was lined with marble to the ceiling, entered the elevator shaft and impinged upon the plaster across the shaft, leaving its*

trace as clearly as if it had been pencilled. There was very little side trim in the corridor, and yet the wooden doors were burned so that you could shove a lead pencil through them from the corridor side. That was one case. Another was in the Venetian building, where a similar occurrence took place; a little hair-dresser was burned out. This fire even took the wooden window frames out of the building; there wasn't a vestige of anything combustible left in that hairdresser's establishment. The fire travelled down the corridor and divided, part of it going up the air shaft and part up the elevator shaft. Several other fires I know of have behaved in the same way, showing the tendency of a fire to follow a draft through the building. Stop those dampers! Don't make good stoves of our buildings, and you'll reduce fire losses and loss of life.

The President: *Is there any further discussion on this subject? Mr. Williams asked specifically for some expression of opinion on the efficacy of sprinklers in hotels.*

Mr. Wentworth: *I would like to ask Mr. Osgood if he is familiar with the facts of that fire in the Hotel Lenox which came out of a room, as related by Mr. Dana, and ran such amazing distances and did such considerable damage in such a short time. Does he think that fire would have been arrested if the corridors of the hotel had been sprinklered.*

Mr. Osgood: *It was very difficult to see why that fire did progress so rapidly, as there was so little combustible material present, but it appears to be due principally to the presence of vertical openings, and I do not believe sprinklers in corridors would have prevented the access of that fire to the elevator shaft. It was another such fire as those Mr. Robinson has described.*

Mr. Woolson: *Leaving the sprinklers out of the case, do you think the fire would have travelled around the building and done the damage it did do if the stairways had been cut off and the elevator shaft enclosed?*

Mr. Osgood: *I do not think it would; I think it was the vertical draft that caused the trouble. The former Boston Fire Prevention Commissioner made it a requirement (in addition to requirements for basement sprinklers in certain apartment houses) that the stair shaft and the corridors be protected with sprinklers. His idea in making that requirement was to effect a sort of blanket on the smoke which might accumulate in the corridors. That is rather a new viewpoint, I think, to put in sprinklers to stifle smoke.*

Mr. Robinson: *A friend of mine was in that Lenox Hotel when the fire occurred, and told me that evidently the person in the room left his door open. His outside window was open also, and the high wind blew the fire into the corridor and up to this vertical communication. From there the fire was carried up, not only by the feed draft, but by the natural pull of the shaft. A suburban hotel in this city has been equipped with automatic sprinklers in the working end of the house and up through all of the stairways, but not, I think, in all of the corridors. Since those sprinklers were installed one fire has occurred from a basket of either rubbish or dirty clothes in one of the corridors, and the sprinklers opened and extinguished the fire without alarming any of the guest in the hotel.*

Mr. Hoagland: *One detail that has not been touched upon is the question of transoms over the doors. I think if they could be avoided fires would be very much less likely to extend from the rooms into the corridors. With respect to the application of automatic sprinkler protection to hotels, I would like to refer to an incident in Virginia. The owner of an old hotel was confronted with the competition of a new fireproof hotel, and to save his business he installed sprinkler protection throughout the hotel, and did save his business by that means. In the course of a few months a fire occurred in the dining room of the servants' quarters, and was successfully extinguished by the sprinklers. A fire occurred in a Minneapolis hotel from approximately the same cause, and was successfully extinguished by two of the sprinklers in the room. Hotels have been quite extensively equipped with automatic sprinklers in the last three or four years.*

Chief McDonnell: *I am especially interested in this discussion because we have an ordinance in Chicago requiring sprinklers in parts of non-fireproof hotels. I would like to ask if sprinklers were in the corridors and the elevator shaft and the stairs, if they would not act as a protective curtain and thus minimize the effect of the draft. I am not trying to defend the ordinance we have here; if it is not right, we shall work to repeal it.*

Mr. Robinson: *You would place your dependence on the sprinklers, as I take it, Chief? You would not have them in the corridors, would you?*

Chief McDonnell: *Yes, in a non-fireproof building.*

Mr. Robinson: *Sprinklers would prevent the spread of fire through the building itself, not so much by their draft-killing properties as their fire-killing properties.*

Chief McDonnell: *Their cooling properties?*

Mr. Robinson: *I do not know that a spray of water would have a very great effect against the chimney pull of an open elevator shaft with a fire in it. I doubt the efficiency of that method of preventing the spread of fire, other than what would be furnished by the extinguishing qualities of the water discharged in that neighborhood.*

The President: *Does that answer you, Chief?*

Chief McDonnell: *Yes, sir.*

Mr. Wentworth: *It is amazing how effective sometimes a very insignificant draft stop may be. I know of a case of an open stairway equipped with only a thin matched-board trap door. A fire in the lower story practically consumed everything in it. The fire was kept out of the upper story by this thin trap door. If you stop your draft you can handle the ordinary fire pretty easily.*

Mr. Charles E. Worthington (Boston): *In a big fire in New Haven a single board partition, painted with cold water paint, stopped a really heavy conflagration, so sometimes very little will do it. There is one item I want to add that may be of some interest to the members in view of Mr. Jensen's address. We have on the statute books of Massachusetts at this time a law known as the Act for Tenement Houses in Cities which complies in almost every detail with the principles and ideals advanced in Mr. Jensen's paper. That has been submitted for adoption, I believe, to two or three Massachusetts cities. It is significant that its defeat in every case has not been due to the structural or the fire-prevention provisions, but simply to the opposition that has developed on the ground that to comply with the condition of this act brings all converted buildings under the Sanitary Act. Otherwise we should have had it in three or four cities. It was drawn up by the Civic League of Massachusetts as a model act, and if there is any contemplation of undertaking any legislation to improve the character of the tenement houses (we call them tenement houses in legislation, and when we speak to the people who live in them we call them apartment houses, because it makes them feel better !) I imagine a note to the Secretary of State will bring a copy of that act, and it ought to be of very material assistance in framing legislation.*

Mr. Fertig: *I do believe if in existing buildings it is found practically impossible to put in fireproof shafts for enclosing stairways and elevators that if a curtain board 12 or 18 inches deep be placed around those openings and sprinklers put in the corridors, the banking of the heat would cause the sprinklers to open quickly, providing a water curtain to stop the spread of flame and, to a certain extent, the draft, because there is a down draft caused by the falling of water.*

Mr. Hardy: *I think an interesting use of sprinklers not only for fire protection, but as an economic measure, is illustrated in connection with a New York hotel, rather a large structure, not fireproof. The Bureau of Fire Prevention called on the owner to make certain changes involving an expenditure of $150,000.00, and which would have put out of commission at least 50 rooms in the hotel. A counter proposition was submitted that they equip the structure with sprinklers throughout,–not merely the corridors and halls, but the rooms also. That proposition was accepted, and thus nearly all the structural changes were avoided, and the use of those 50 rooms was not interfered with.*

Mr. Lindstrom: *Mr. Jensen brought out one point in his paper which I think should be driven home to this Association. He mentioned the fact that the architects are getting co-operation from this body in designing buildings. Generally the architect is blamed for a lot of things that are not really in his province to decide. We have assembled here for three days and heard very good papers, very good committee reports, for what purpose? For the purpose of educating the other fellow. Educational work by all national associations is the vital point at this time. Locally, organizations get together and do things, but we are doing things nationally, big things, and I think this is a time when all national organizations should get together on topics they are interested in. The architects wanted architecture recognized in colleges and universities,-architectural courses. One of the members of the American Institute of Architects attended a meeting of the Deans of all the universities of the United States, and as a result they are going to establish courses in architecture. I think it is of vital interest to start the education of fire protection with the children. A year ago I was a member of a committee on ventilation. We wrangled for three years until somebody awakened us. He said: "We have been talking together about ventilation, but only to ourselves; we want to educate the public." This ventilation proposition was an attempt at better housing of the poorer classes. Somebody suggested: "Let us teach the value of ventilation in the public schools and educate the children." It was done, and the ventilating system throughout Chicago today is much better on account of the education that the children got in the school and brought to the home. Therefore I wish to offer the motion that the National Fire Protection Association appoint a committee known as the Educational Committee to co-operate with like committees of other associations interested in building construction for the purpose of introducing courses in fire protection into the public schools.*

The President: *Is there any further discussion on either one of these topics?*

Mr. A. J. Mylrea (Canadian Fire Underwriters' Association): *Very few people who go to a hotel take the trouble to find out where the exits are. I recall a fire in a hotel a few years ago. At the end of the corridor was located a great big thing with some decorations around it. The fire occurred at night; the guests came rushing into the hallway, and before they discovered their bearings three or four perished overcome by smoke. There was nothing to locate the exits; the lights went out; the guests thought they were rushing into the flames, and it was a mirror.*

Mr. Jensen: *I think the provision is common that the lighting of all exits is to be done by means of current from sources outside the building.*

The President: *Mr. Williams, do you care to add anything?*

Mr. Williams: *Only this: I think a hotel of any size should be of fire-resisting construction. The use of sprinklers in the rooms should be a last resort unless possibly one wants to preserve an old wooden building of five stories or more, in which case the sprinkler is a cheap method of fire prevention. We have required them in Wisconsin hotels as low as three stories where the building was of wood, and the conditions were generally favorable to the spread of fire.*

The President: *The Chair feels that the Association is deeply indebted to Mr. Jensen, Mr. Stevens, and our member, Mr. Williams for the part they have taken in this interesting discussion. Thank you, gentlemen! If there is nothing further, we will complete a report which was postponed yesterday after the first section of it was disposed of.*

The above is quite a lengthy discussion of fire safety in residential buildings. Of particular interest is the discussion of whether sprinkler protection should be provided in hotels and, if so, the extent that sprinkler protection should be provided.

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