SCHULTE & ASSOCIATES
Building Code Consultants
3500 Creighton Road, K5
Pensacola, FL 32504
fpeschulte@aol.com
847.312.7617

FIRE PROTECTION HISTORY-PART 170: 1921 (OFFICE BUILDING FIRE PROTECTION)

By Richard Schulte

The Report of Committee on Building Construction given at the twenty-fifth Annual Meeting of the National Fire Protection Association held in 1921 addressed provisions for office buildings. The Report was presented by the chairman of the Committee, Ira Woolson. The following is a transcript of the discussion which followed the Committee Report:

"***Discussion.***

Mr. Woolson: This report refers in class to Grade E; former grades recognized by this Committee have been A, B and C. We skipped D, and the reason for that is that the Committee recognized the fact that, following the highest grade of fire-resistive construction, we should introduce another type of construction, either mill construction or a combination of masonry construction with light section steel joists, or something which should precede the ordinary construction that we are going ahead with now. The Committee thought it would be well to skip that other grade and begin with this one. This is a type or grade of fire-resistive ordinary construction which is, by no means, complete. We do not offer it as the last word on the subject, by any means; there is no doubt it will need considerable revision.

Mr. E. P. Boone: May I ask if the Committee did, in their deliberations, give consideration to increasing the allowable height of the building in the event of automatic sprinklers being installed, following the same plan as that for area?

Mr. Woolson: Yes, it was considered, but the Committee felt that for a joisted type of construction we should not go beyond four stories, which has been the standard of the National Board of Fire Underwriters for years (55 ft., that is, for this type.) The idea of the Committee is that there is another type of joisted building which it will have to recognize, and which is, I am sure, more common throughout the country, but still, we thought that this was a practicable proposition and not too severe in requirements for the best.

Mr. Boone: On the subject of area, 66 2/3% increase, I note, is allowed where sprinklers are installed. I feel that in a sprinklered office building cut up in small sections, with numerous partitions on each floor, the area could be very materially increased. As a matter of fact, I have always held the opinion that considerations of area are almost blotted out by standard automatic sprinkler protection, and in view of this light occupancy in offices with small sections and numerous partitions, I thought that, perhaps, the area might be increased to more than 66 2/3%, possibly 100%.
Mr. Woolson: The Chairman appreciates the significance of that criticism. May I ask if you make the suggestion of 100%?

Mr. Boone: I would make that suggestion as a motion.

The motion was adopted.

Mr. Woolson: Under the heading of Foundation Walls, one architect member of the committee has written in protesting against the use of hollow blocks or hollow tile for foundations for even the one-story building. It doesn't seem to me necessary to take up the time of the members to discuss that feature now.

Mr. Cabot: In the last paragraph, under "Party and Fire Walls," I should like to see the figure "6" in the second line increased to the figure "8." I know that this is a big problem, but I should like to make that suggestion.

Mr. Woolson: In all due respect to the suggestion, I can't agree with you. Personally, I would much prefer to have "6" instead of "8." You have the possibility of a direct joint between the timber on one side of the wall and that on the other side of the wall. If you make it 6 inches, you have got to stagger the joists.

Mr. Cabot: Well, put that in.

Mr. Woolson: I thought it was there.

Mr. Cabot: It is not.

Mr. Woolson: For your information, I may say that the Bureau of Standards, at the present time, is conducting a series of tests on moderately large walls (about 10 by 15 feet in area) and they vary in thickness from 8 to 12 inches. We have never had any tests upon walls of that kind that were comparative at all.

Mr. Cabot: I should like to suggest that the word "rubble," under "Thickness of Walls," be stricken out.

Mr. Woolson: That will be taken up with the Committee; perhaps it is advisable. Referring to "Allowable Loads on Walls" two or three requests have come in to omit this paragraph and, personally, I am in harmony with that idea. There is no necessity for it. It should be carried under "General Assumptions," which require that all work shall conform to the best engineering practice.

Mr. Cabot: If it suits the Chairman of the Committee, I move to strike that paragraph out.

Mr. Woolson: I think the Committee will do that in any event.

Mr. Cabot: Then I withdraw my motion.

Mr. Woolson: Referring to "Interior Partitions" Mr. Ingberg of the Bureau of Standards, the engineer who was in direct charge of the column test investigations at the Underwriters' laboratories during the last few years, has written me urging that the time allotted for this test be changed from two hours to one hour for this occupancy. He does not believe that the contents of an office building would be such as to maintain fire test requirements for one hour. It is generally known, of course, that a two hour test rating would require an excess test of 25% over the two hours, or two hours and 30 minutes. The one hour test is one hour and 15 minutes. This excess is to overcome any variations in type, or inferior construction. One or two other protests have come in against having that particular requirement as high as two hours, and the Committee would be glad to have an expression of the opinion of the members on that point. Hearing none, we will take it up with the Bureau of Standards and the Underwriters' Laboratories.

As to the second paragraph under "Interior Partitions." Strong arguments have been presented against that. I would like to read one which has come from the Bureau of Standards, from a person who is not a member. (Reads.)

The Secretary: Would the Chairman of the Committee like to have these comments appear in the PROCEEDINGS?

Mr. Woolson: I don't think it is necessary. There is a controversy on this matter between the metal lath associations and manufacturers of other non-combustible laths.

Mr. Cabot: Has the question of cracking in this paragraph anything to do with fire protection?

Mr. Woolson: Yes, it was put in with that idea. It was to check the tendency of a crack appearing along the ceiling which the fire might go through and work its way up through the building. I would like to have Mr. Robinson's views upon this subject, as he is better posted on it than I am.

Mr. W. C. Robinson (Vice-President Underwriters' Laboratories): I think the requirements as laid down in the regulations are desirable, for the reason that such tests as we have made have indicated that under the action of severe heat a measure of protection would thus be afforded not present without the reinforcements. I have had some correspondence with the Bureau of Standards and suggested that, as far as practicable, they obtain the results of practical experience by the inspection of buildings where this requirement has been employed. The contention has been that it transfers the cracking to other points in the building. That may be, but I am quite sure that, from a fire protection viewpoint, the requirement is of advantage. Such protection has shown in certain other tests very remarkable results, and I should be in favor of retaining this requirement until better evidence has been advanced against it. I think the controversy over it emanates from certain industries, who, perhaps, don't quite agree with it for other reasons than they have stated.

Mr. Woolson: Referring to "Floor and Roof Construction," I have here a protest from the National Lumber Manufacturers Association, signed by their consulting engineer, Mr. C. E. Paul, respecting the specification for thickness of joists for floors other than that directly above the boiler room. If the floor joists were only one inch thick and we should have a fire that would produce one-quarter inch char, you can readily understand that we would have a very serious danger point in floors of that character; whereas, if the joists were three inches thick, a one-quarter inch char would not be a serious proposition. That was the thought the Committee had in mind in this case. However, for this occupancy, two inches might be suitable.

Mr. Robinson: I have made tests of this sort of construction and the evidence is very conclusive that two inch joists, protected as specified, would be sufficient. It would be very possible, in the ordinary application of metal lathing, as was evidenced in San Francisco in the big fire, to drop the entire protection away from the wood, if it were not especially anchored. In our tests a heavy wire, nearly as heavy as a telegraph wire, was inserted at intervals under the lath and tied by loops over the joists, which was the method developed as a result of previous tests on sttuco and other cement plasters. I would move you that the three inch specification and other cement plasters. I would move you that the three inch specification for the thickness of the joists be changed to two inches.

Mr. Woolson: I think the statement just made by Mr. Robinson, is one of the most important and far-reaching in regard to fire-resisting construction that has been made before this Association in a good many years. It means that there has been developed in the joisted type of building, a partition or floor construction that is going to stand a fire with a reasonable degree of safety for an hour, and a severe fire at that. We have had no such authoritative testimony before, that I know of. It shows what good systematic engineering investigations will do, and the possibilities that we have in the future for doing more in that particular direction; that is, in the line of protecting, without an excessive cost, this grade of building that we are talking about this morning, which constitutes about eighty or ninety per cent of the total construction of the country as a whole. I am gratified, personally, at one thing that Mr. Robinson has said, because it justifies a requirement, and a warning that has been put out in the publications of the National Board of Fire Underwriters for the past five years. This is the necessity for special and separate supports for metal laths for ceilings where they are apt to be attacked by fire. The ordinary methods are quite insufficient. The one method that Mr. Robinson refers to is quite unique, because it is new and it can be made most effective. I would like to ask, Mr. Robinson, if lath supported by six penny weight nails would hold or not?

Mr. Robinson: In slightly thicker coating of Portland cement plaster on metal lath, I have known the expansion under heat to draw the nails, which were driven two inches into the studs, completely out of the studs before even the studs were charred. You must define the points which will not give away and you must admit between those points the relief for this expanding slack. I have been told by some of our boys, who witnessed this test, that they believed that it would rupture 3/8 inch bolts. I don't know, but the expansion has got to go somewhere. It would either do that or tear the cement to pieces. The thought is prominently before us that we must provide relief for this expanding member, which we are using and relying upon and professing to use and rely upon as a protection to wood construction.

Mr. Rowley: Does this type contemplate the ordinary one inch, or one and one-quarter inch groove and tongue flooring?

Mr. Woolson: Yes, double flooring.

Mr. Rowley: Might I inquire, then, if it would stand the fire test?

Mr. Woolson: That all depends on the construction. If the fire goes into the concealed spaces, it will burn all around the floor, irrespective of what the floor is made of.

The President: We will now consider Mr. Robinson's motion, which is, that the second paragraph under "Floor and Roof Construction," reading,: "All other floors may be built of wood joists three inches thick," etc., be changed to read "two inches thick."

Mr. Dana: I will second that motion.

The motion was adopted.

Mr. Woolson: Referring to "Stairway Construction," there is one requirement upon which the Chairman would like an expression of opinion. The sixth paragraph reads as follows: "All stairs and landings, if of wood, shall be protected on the under side by material giving one hour protection." I don't know how that happened to get in. I don't remember the details at all, but, in looking it over last evening, it occurred to me unnecessary. If the shaft is closed, there is no necessity for that requirement. I don't know whether that question was discussed or not. Has any one any comment or criticism to offer on the question of stairways being properly enclosed?

Mr. Cabot: Mr. Chairman, I think that came from the Secretary of the Committee, who, having been an inspector for twenty years or more finds that such stairways are often used for storage or something of that sort.

Mr. Woolson: That may be the case.

Mr. Quackenboss: Speaking of the first paragraph under "Protection of Exterior Wall Openings," isn't that specification a little too indefinite? We might have an exposure 25 feet above a fire-resistive building, or an exposure might be 30 feet from a large building, filled with combustible contents. Wouldn't we want protection for 60, or 70, or 80 feet, don't you think?

Mr. Woolson: A minimum of 25 feet with this type of construction would seem to me to be very reasonable.

Mr. Cabot: If the Committee were willing to put in the words, "not of fire-resistive construction," after the word "buildings" in the first line, I think that would meet the issue fairly. Try and conceive of a first-class office building at 25 feet, exposing an office building of this type, and ask the owner to put in fire windows. I think he will ask the question, "What did you make me build this thing fireproof for?"

Mr. Woolson: I grant you that it is a high requirement.

Mr. Cabot: I can't believe, with the experience that I have had, that any first-class building, except that occupied for extremely hazardous purposes, will make an exposure at 25 feet.

Mr. Woolson: Personally, I can't agree with you. I think that the tendency for large window areas in buildings at the present time (all the way from 75 to 90 per cent.) constitutes a distinct exposure. Although built of fire-resistive construction, you meet a terrific fire hazard.

Mr. Cabot: Well, as to a building which we are constructing being exposed by the burning of a larger building of supposed fire-resistive construction, is it required to have this building constructed with fire windows or their equivalent?

Mr. Booth: No, I should say not.

Mr. Quackenboss: I would like to ask Mr. Booth the reverse of that question regarding the exposure of 25 feet. In many instances large frame buildings have done a great deal of damage to buildings of splendid construction at a distance up to 50 and 60 feet. This particular paragraph requires fire windows up to an exposed distance of 25 feet. As I understood your opinion, that is not deemed severe when exposed to high grade buildings. Would that not be the reverse in the event the exposure consists of a larger area of frame buildings or buildings where extreme hazards exist?

Mr. Booth: In that case, I would say that 25 feet is too short distance.

Mr. Quackenboss: That is the reason I think that some elasticity in that paragraph would be most acceptable, so as to allow for a distance greater than 25 feet.

Mr. Woolson: I gather the force and reason of your argument, Mr. Quackenboss, but it may be best to put it to a vote and get the opinion of the members. We must bear this fact in mind, however, that this has not been adopted as a law. It may be. A city may incorporate such specifications in its building laws, but in that case another ordinance would control a matter of that kind.

Mr. Robinson: I would like to suggest that the Committee consider these requirements according to the degree of exposure. It is a question of degree of exposure, not distance.

Mr. Woolson: Will you make that a motion?

Mr. Robinson: I will make that a motion.

Mr. Woolson: I will second it.

The President: It has been moved and seconded that the Committee express the exposure by degree of exposure instead of distance, in the first paragraph under the heading of "Protection of Exterior Wall Openings."

The motion was adopted.

Mr. Dana: It would seem to me that it would be well to divide "Service Equipment" into several sections. It would make the subjects more clear and bring them out better.

Mr. Woolson: I presume it would be so, but this is simply one of those specifications which we present from year to year, wherein all Service Equipment is grouped. It might be advisable to sub-divide it and it may be done.

Mr. Cabot: The last page of this report has got a very queer thing on it.

Mr. Woolson: I might have known that Mr. Cabot's lynx eyes would discover something that nobody else could possibly be expected to see. What is it, Mr. Cabot?

Mr. Cabot: "Roof tanks may be supported on wood or unprotected steel supports."

Mr. Woolson: The Committee discussed that, and thought that if the floor and roof offered a one hour fire protection, and if the building was under any kind of fire protection service, a fire would be under control before it would get headway enough to burn down the building so the tank would collapse.

Mr. Cabot: But I have seen a tank collapse in twenty minutes.

Mr. Woolson: Not in this kind of building.

Mr. Cabot: Oh yes, I have, and from exposure from the building across the street or adjoining. This building is not isolated.

Mr. Woolson: I don't know whether that point was considered.

Mr. Quackenboss: That particular thing mentioned by Mr. Cabot has happened twice in the City of Nashville.

Mr. Cabot: I move then that this paragraph on tanks be stricken out.

Mr. Quackenboss: I will second that motion.

The motion was adopted.

Mr. Woolson: I offer this report, Mr. President, as a tentative specification, to be referred back to the Committee for further consideration of the criticisms and opinions received by letter and on the floor of the convention.

Mr. Rowley: Mr. Chairman, one or two of the large building industries presented to me on the first day of this convention, some matter on this tentative specification, in which there is some objection to the class of material specified, and they asked me to present it so as to have it incorporated in the proceedings of this meeting, in order that the Committee might consider it this year.

Mr. Woolson: We shall be glad to receive it, either orally or by letter.

Mr. Hoagland: May I ask a question concerning the report? Credit is given automatic sprinkler protection in connection with the area within enclosure or fire walls. My question is, would it not be just as easy to give the same consideration to an increase in height?

Mr. Woolson: That question was raised before you came into the room, Mr. Hoagland, and it was decided that it would not be advisable.

The Secretary: May I ask the Chairman if he thinks it would not be of advantage to make some reference to tanks, now that this paragraph has been stricken out on motion of Mr. Cabot?

Mr. Cabot: That was my motion. I don't know how to word such a paragraph.

The President: The motion was to strike out the whole section.

Mr. Woolson: We will leave that question to the departments having jurisdiction.

Mr. Cabot: My reason for making that motion was the fact that we get an extreme variety of conditions for this type of building. We see them in the middle of a great big foundry construction yard and we see them up against a lumber yard. I don't believe that we are capable of drawing a proper specification for the support of those tanks. I don't think that it can be done. I think it has to be left to judgment in view of the conditions that exist at the building and in its immediate vicinity.

The Secretary: That is the thought I wished to bring out. Why ignore so important an item? Would it not be wise to make a reference to it?

Mr. Boone: Would it not be decided in every case by the municipal authorities what the nature of the supports for such tanks should be?

Mr. Woolson: Municipal inspectors are usually only interested in the strength of the structure. I would make this suggestion, if Mr. Cabot is willing, that his motion be reconsidered and that the section be made to state that the question of the proper support of tanks for buildings be left to the authorities having jurisdiction.

The President: It has been regularly moved and seconded that the motion adopted to strike out all reference to tanks be reconsidered. What is your pleasure?

The motion to reconsider was adopted.

The President: What is the motion now?

Mr. Woolson: The motion is that the method of support for tanks on buildings shall be determined by the authorities having jurisdiction.

Mr. Cabot: I second that motion.

The motion was adopted.

The President: Mr. Woolson moves that the report be accepted as tentative and referred back to the Committee. Will you discuss that motion? I want to say, gentlemen, that while I know only a little about the work of all of our different committees, of this particular Committee I can truly state that its members have spent as much time on their work as any committee that we have ever assigned to any subject. I have seen them start their discussions in the morning and not adjourn until night on the third day. I know this Chairman pretty well, and it is largely due to his efforts, I can state, that you have had the privilege of hearing this splendid report today. In behalf of this Association, I want to compliment him and the Committee for all the work they have done as indicated by this splendid report.

Mr. Cabot: I wish to second Mr. Woolson's motion.

The motion was adopted.

Mr. Geo. A. Madison (St. Louis): Mr. President, there is no doubt that this report is a great big piece of work, but it appears to me it doesn't quite touch the vital subject which is agitating many communities at this time; that is, the housing problem. There is a great demand for a moderate-priced class of residence and communities are a great deal more agitated as to how to construct them than how to construct four or five-story office buildings. This housing scarcity has led to a demand for immediate modifications of present building ordinances, at least over the entire Middle West, and I believe that this Association should try to direct those proposed modifications into safe channels. The ordinary brick, joisted construction which is now used for residence purposes, is so high in cost that the demand for its modification has gone up practically over the entire country. As modifications of this type of construction, many substitutes have been proposed: hollow tile, bricks with open space between, hollow concrete blocks, stucco, are being resorted to without any regulations as substitutes in an effort to meet the shortage of housing. Citizens come to the Underwriters and say: "It is proposed that we construct such and such a type of dwelling, but we have no regulations, no directions or specifications; we want to be reasonably safe, but we have no one to lead us in the right direction. What shall we do?" Now, this is a subject which we, that is the Association, cannot ignore. The housing problem is a subject which has been agitating every community; Chambers of Commerce and all other civic organizations have taken it up, and it doesn't seem to me that this Association can afford to ignore it. It appears to me that this Committee on Building Construction, under the able direction of Mr. Woolson, should be able to do something to relieve the tenseness of this housing problem. I think it would be in line for us to ask this able and competent Committee to draw up something in the way of specifications for a modified type of construction to be used for this class of building, the residence, because we can't get away from the fact that it is a trying problem with all of us. Since we are going to modify the ordinary brick, joisted construction, it was my thought that this Committee could direct developments into reasonably safe channels, so that our outlying districts of cities will not fill up with extremely flimsy construction. I think there is need for us to direct our endeavors in that direction by issuing tentative specifications for types of building construction between the two types, ordinary brick, joisted and frame construction. Mr. President, I would suggest, in fact, I move that this Committee, under the direction of Mr. Woolson, be requested to draw up and issue tentative specifications for safe and reasonable construction of residence buildings of a less fire-resistive classification than the ordinary brick, joisted construction, as it is known now.

Mr. Robinson: Mr. President, I would second that motion with a slight change. I don't think we should specify anything less fire resistive than we are now getting. It may be that the Committee would like to ask for greater fire resistance than we are now getting, and possibly it could be accomplished with cheaper materials or a better assembly of materials now being used. I can't imagine anything less fire resistive than we are now getting. Even cheap pulp is now used, jeopardizing the people living in such houses. It is a menace.

Mr. Madison: It is not the idea to have less fire resistance, though that, probably, would be the result. Less expensive construction is the object we are driving at and every community is driving at, to modify building ordinances so that less expensive construction will be permitted than the ordinary brick, joisted construction. I would suggest that motion be changed to leave the fire-resistance out and to direct the Committee to draft specifications for construction of buildings of less cost than the present ordinary brick joist construction.

Mr. Woolson: As Chairman of that Committee, I would like to have the word "cost" struck out, as that is a matter with which this Committee is not concerned. We should not be called upon to determine whether a particular type of building is going to cost more or less. We might call it a moderate degree of fire resistance, a medium between frame construction and the ordinary joisted construction of high grade; in other words, we might emphasize the idea of quality and not upon cost.

Mr. Quackenboss: I would like to move that the motion be amended to refer the entire question to the Committee without instructions, directions or suggestions from the Association as to how they should handle the matter.

The Secretary: I second that motion.

Mr. Madison: The question of cost is the crux of the whole matter; that is vital. Less expensive construction is demanded; it is going to be adopted. My idea was that the Association should try to direct that less expensive construction development into safe channels. This Committee is fully able to direct and ward off the serious effects of building ordinance modifications, for which there is a demand and a demand which is going to increase continually.

Mr. Quackenboss: Mr. President, we can safely leave that question to the Committee. There is no more efficient Committee in the Association, and I hope that my amendment to the original motion will prevail.

The President: Any further discussion? If not, the question before you is Mr. Quackenboss' amendment to Mr. Madison's motion.

Mr. Woolson: The Committee, Mr. President, would be very glad to have this whole thought in mind, but not to be tied down to say that a particular type of building is going to cost more or less. The moment that we attempt to do that we create trouble with the industries and get into all sorts of difficulty.

Mr. C. C. Taylor: Mr. President, I think we are treading on dangerous ground when we undertake to modify the construction of buildings to lessen their cost. We all know that any effort in that direction will increase the fire hazard. The City of Chicago undertook to relieve the trouble that now exists in the way of housing and tried to pass an ordinance allowing frame dwellings to creep into the prohibited zone, but the populace raised a serious objection. I think that we should encounter a great deal of trouble, not only in our own line of work, but in facing objections on the part of civic authorities, as well as the people at large, if we should undertake to specify a dwelling that might be constructed in a district where a fire zone prohibits any other than a brick dwelling. I, therefore, move that the entire question be laid on the table.

The President: Is that motion seconded?

Chief McDonnell (Chicago): I will second that motion.

The President: The motion is that this whole subject, presented by Mr. Madison of St. Louis in regard to building construction, be laid on the table. What is your pleasure in the matter?

The Secretary: Mr. President, I would like to ask if the adoption of that motion will preclude the consideration of this important question by the Committee on Building Construction?

The President: The Chair does not so understand it. As the Chair understands it, it leaves the Committee as free as when this discussion began, without any direction from the Association.

Mr. Madison: Then it means that this organization ignores the subject entirely?

The President: No, sir, it means that the Association does not direct this Committee to do this particular thing at this particular time. The motion now before the meeting is the question of laying this whole matter on the table. What is your pleasure?

The vote was taken.

The President: The Chair is in doubt. All those in favor will signify it by saying aye; those opposed to laying this matter on the table will signify it by saying no. The motion is lost. Now we revert to Mr. Quackenboss' amendment to the original motion of Mr. Madison.

Mr. Arthur Kempston (San Francisco): Mr. President, we have in San Francisco a fairly good building ordinance which takes into account the question of fire protection. My experience is, speaking of dwellings of the ordinary type, that our building cost is thirty or forty per cent greater than would be the cost in co-operative communities and smaller communities that are building up. That situation is undesirable from the fire protection standpoint, for the reason that these buildings are erected in communities not so well able to have fire protection as are cities with a well organized fire department and fire alarm system. I am afraid the Committee would have a great deal of difficulty in trying to make a reasonable code to fit a certain type of construction, which will not handicap the other cities in their desire to grow; one set rule cannot be applied to all communities.

Mr. Madison: I will agree to Mr. Quackenboss' amendment so long as the Committee will consider the subject.

The President: Then the question is on the motion as amended, because the original mover accepts the amendment that this matter of dwelling house construction be referred to the Committee for consideration without instructions.

The motion was adopted.

Mr. Woolson : There is just one matter I would like to speak about before I sit down, which concerns this subject of housing we are now discussing. Some of you are probably aware that Secretary Hoover of the Department of Commerce has recently appointed a committee, composed of various architects and engineers throughout the country, to study, particularly, this very important subject of housing, of which the speaker, unfortunately, happens to be the chairman. That committee is going to begin operations at once this summer and we will do the best we can to aid in this work, which seems so extremely desirable. I think the committee has one thought in mind, judging from the one preliminary meeting we held in Washington last week, and that is that we should not sacrifice quality for quantity. Also that we do everything we can to reduce the cost and promote the production of buildings; remove conflicting requirements in the various cities, and standardize building laws, so far as possible, aiming to preserve a safe and sane type of construction, which concerns property as well as life. The first thing we will consider, of course, is life, health and comfort. I thought I would mention this new activity because it is parallel with the work that is asked for by this resolution, and I want to say this to each of you, personally, that if you have any suggestions to offer in the way of accomplishing this object, they will be very gratefully received by the committee. Suggestions can be sent to me, personally, at my office with the National Board of Fire Underwriters, or addressed to the Building Code Committee of the Department of Commerce at Washington, D.C. We shall be glad to get all the help we can, and will appreciate any personal appeals on your part to sources that will be of assistance to us."

Of particular interest in the Discussion above is the reference to the exposure produced by a fire in an office building. Even in 1921, it was understood that the fire exposure produced by a fire in an office building would be limited to the equivalent of a one hour fire exposure in the fire test. Hence, the questioning of the need for structural members to develop a fire resistance rating of more than one hour.

Also of interest in the Discussion above is the reference to the need to address the cost of building construction, in particular the cost of constructing dwellings. Should cost be an issue that should be considered when developing fire safety requirements? Obviously, it can be concluded from comments above that there were two schools of thought on the subject of cost.

* * * * *

Source: "*Proceedings of the Twenty-fifth Annual* [NFPA] *Meeting*", San Francisco, California, 1921.