

Since the Coconut Grove

ADDRESS BY CHIEF EDWARD N. MONTGOMERY

Bureau of Fire Prevention, Boston Fire Department

In the town of Concord, Massachusetts, some 20 miles from here, on the bank of the Concord River, stands a memorial to the men who fell in battle there. Inscribed are these words:

"By the rude bridge that arched the flood
Their flag to April's breeze unfurled
Here, once, the embattled farmers stood
And fired the shot heard 'round the world."

Here in the City of Boston, hardly a stone's throw away stood what was destined to be another memorial—not to be inscribed with heroic verses, but the story of which was to become known 'round the world. That story began with a tiny flame—the light of which, as it grew in brightness, was to disclose one of the greatest tragedies in the memory of our citizens. In the roar and crackle of fire, a message and a warning was given to our people that still echoes over this broad land.

On November 28, 1942, at 10:15 P.M., an alarm was received from box 1514, located at Stuart and Carver Streets. Upon arrival of the apparatus at this box, the alarm was found to be for a small fire in an automobile at Stuart and Broadway. As the companies were about to return to quarters, smoke emanating from the Coconut Grove was noticed. When the first company arrived at the Broadway entrance, persons were leaving the premises amid cries of "FIRE." The chief in charge ordered a third alarm from box 1521 which was received at fire alarm headquarters at 10:23 P.M. At 10:24 P.M. a fourth alarm was ordered and a fifth at 11:02 P.M. It is not my purpose to discuss the fire-fighting operations. Suffice it to say that before the all-out was sounded 490 persons had died . . . 166 had been injured. Truly a great holocaust!

From every tragedy of the magnitude of the Coconut Grove fire, lessons are learned by safety authorities, as well as by the public at large, concerning conditions giving rise to abnormally great hazards not previously recognized—or recognized but not realized. These lessons were recognized by the Great and General Court of Massachusetts in what is known as Chapter 143. This law defined for the first time a "place of assembly" and enacted stringent regulations and requirements to govern this type of occupancy. Chapter 143 defines a "place of assembly" as a place used or designed to be used for specified purposes wherein fifty or more persons may be accommodated.

Out of the Coconut Grove came three questions as to what caused the great loss of life. Was it revolving doors, was it overcrowding, or was it flammable decorations? Probably all three contributed. However, it is the opinion of those first on the scene—and fire apparatus was literally at the door—that the combination of a flash fire, overcrowding, revolving and locked doors, plus the greatest destructive agent known to firemen—PANIC, were responsible for the great toll. At no time did the fire itself reach such magnitude as to challenge the resources of the fire department. This is testified to by the fact that much of the furnishings and decorations were not burned. . . . Even the artificial palm tree in which the fire was first noticed was not fully consumed. The loss on building and contents was approximately \$125,000—not a large loss as we know them.

The Barn Is Locked Too Late

Following what appears to be an American custom, locking the barn after the horse has been stolen, a wave of hysteria swept the community. All sorts of laws, prohibitory and regulatory, were suggested. . . . Some were reasonable, some otherwise. Fortunately, our state officials were aware of the danger inherent in hasty legislation and acted with sanity and wisdom. True, laws were enacted that proved to be inadequate or inexpedient; but this, too, was anticipated by the creation of a "Recess Commission on Safety of Persons in Buildings" under the very able direction of Senator Ralph V. Clamptit of Springfield. The first report of this committee was made on December 28, 1944. . . . That report contained recommendation for twenty-two specific pieces of legislation. All were subsequently enacted by the General Court and signed by the Governor.

While it was generally recognized that the legislation so enacted would go a long way toward reducing the possibility of a similar disaster in the future, the Commission judiciously felt that further study and investigation was necessary before it could be said that the laws relating to the safety of persons in buildings had been reasonably made to meet prevailing conditions, to say nothing about anticipating the future. The Commission was therefore continued for another year, and it is very probable that it will continue to perform a valuable service to our citizens for some time to come.

It is pertinent at this time to state that Chapter 143, to which reference has been made, deals principally with the construction of and the materials used in the construction of buildings. Sufficient means of egress, the banning of revolving doors, and the control of seating capacity in places of assembly also come under this chapter which is enforced by the Building Department and the Department of Public Safety. The basic fire prevention law of the Commonwealth is known as Chapter 148, and it is with this that I, as the Officer in Charge of the Fire Prevention Division, am most concerned. As a fireman for many years, I do not concede that all the answers to our problems are contained in Chapters 143 or 148. Nor do I subscribe to any belief that there is a halo of omnipotence and infallibility surrounding documents affixed with the Great Seal of any state.

There were few changes made in Chapter 148 for the simple reason that Senator Clampt's committee were apparently satisfied that basically the law was reasonably satisfactory. Locally this law is enforced by delegated authority from the State Fire Marshal, and we, who are charged with that responsibility, are fortunate in having the cooperation of our present Marshal, Edward H. Whittemore.

Flammable Decorations Forbidden

Insofar as the Boston Fire Department is concerned, we have centered our principal activity on prohibiting or regulating the use of flammable decorations. The term "decoration" is not one which has any precise legal meaning, and the regulations of the State Fire Marshal do not contain any definition of the term "inflammable decorations." Likewise, ordinary dictionary definitions are not comprehensive enough to be helpful to a Fire Department Inspector concerned with law enforcement. Under these circumstances, the classification of decorative or ornamental material depends upon the facts in each individual instance. Of necessity, these facts include a consideration of the use to which the article in question is put, that is, whether it is utilitarian or ornamental. This being so, it was inevitable that appeals from our orders to remove certain materials should be taken to the Marshal. With deep appreciation, I tell you that in each case the Marshal denied the appeal and upheld our order. I might also say that despite our invitations to do so, no person pursued his right to take his appeal into the courts.

When the obligation was placed upon us to prohibit or regulate the use of flammable decorations, we found ourselves confronted with a tremendous task. There were thou-

sands of establishments within the purview of the law where decorations were to be found. Naturally, serious objections were raised to removing valuable material or to having it flameproofed. However, we adopted the principle that the burden of proof that an article was flameproof rested upon the owner or user. We required that the test be made in the presence of our inspector. Very soon we found that there was a wide difference of opinion among inspectors. To correct this situation, we issued "Guides to Inspectors" which gave us a standard for inspections. This method worked fairly well for some time but differences in interpretations cropped up. The work of inspection was then given to two inspectors whose sole duty it is to inspect all places of assembly as they are defined in Chapter 143. We now have no difficulty whatsoever in controlling the use of flammable decorations, and I am quite certain that there are none now in this city—in places of assembly.

In cooperation with the Boston Retail Trade Board, we have eliminated flammable decorations in our department stores, either as window or store displays. The use of Christmas decorations is strictly regulated through the cooperation of the store officials. They have taken over the policing of their own industry, for which we sincerely thank them.

The use of Christmas trees is forbidden, regardless of conditions surrounding their use, in all buildings over which we have authority either by law or as a condition of any license or permit. I have found it difficult to prohibit Christmas trees in schools and children's hospitals, for instance, but no exceptions have been made. This course was amply justified by the Hartford fire of last Christmas eve.

At the present time the use of artificial leather and leatherette is causing us some concern. Generally speaking, we do not permit their use in places of assembly when used for upholstery unless our chemist has passed on its fire-resisting qualities. It is apparent, however, that this vexing problem will soon be solved, since acceptable products are now on the market.

Drapes, curtains, back drops, etc., are forbidden under any circumstances unless flameproofed. We require that samples of new material be submitted for test in our laboratory. Material already in use must be tested on the premises in the presence of our inspector. In all cases where material has been found satisfactory, a certificate of flameproofing is issued for a period of one year; the flameproofing process must be repeated annually.

When we started this procedure, considerable opposition was encountered. Fabrics were installed without our knowledge only to be found later by an inspector. When called to account, the owner would plead ignorance or produce a statement of one kind or another purporting to prove that the material was flameproof. Tests, in many cases, did not support the claim. Again we found that strict enforcement of our regulations was the quickest way to secure general voluntary compliance. Little, if any, difficulty is now met in securing compliance.

Public and private celebrations where bunting and flags were used was the next problem. Decorators persisted in using material not flameproofed. This problem was solved by insisting that all the decorations in a large hall be removed. The result—no more complaints. However, on general principles, the use of cotton bunting is discouraged or kept to an irreducible minimum.

I feel safe in saying that as a result of insisting upon strict and complete compliance with the regulations in the beginning, with due consideration for the problems of merchants involved and full consideration of our duty to the public, the use of flammable decorations is no longer a problem.

In conclusion it may be said that those who died on that November night did not die in vain. As is true of so many of the catastrophes which have occurred in this country—good came from the Coconut Grove. From the *Morro Castle* disaster came new laws to ensure the safety of persons at sea, from the Iriquois Theatre came new laws for the safety of persons in theatres, and from the Coconut Grove came new laws to provide safety of persons in buildings. In memory of those who had to die that others might enjoy life, is it not fitting to say in the language of an ancient church that prayer for an end we all desire, "Requiem aeternam dona eis Domine." (Applause.)

Synthetic Plastics,

What They Are and Their Hazards in Fires

ADDRESS BY FOSTER DEE SNELL, PH.D.

Plastics is a magic word to the public today. It connotes something in sparkling color or transparent crystal-like appearance, a replacement for wood, pottery, metal, and glass, if not for a lot of other materials. The public expected magic from plastics and often got it during the war.

We will not define plastics here in technical terms. But I cannot fail to mention that they vary from hard solids to flexible films, from colors and transparent to black and brown, and properly include the synthetic rubbers.

To give a picture of the field there are 25 suppliers of the basic materials, largely subsidiaries of the major chemical companies. There are 200 custom molders who do 90 per cent of the 170 million dollar business and 650 smaller ones who do the rest. There are 2,000 extruders, laminators, and fabricators, the gross business of which can hardly be estimated. Production in the next year or so with over 100 million dollars of plant expansion is expected to reach five times the amount of 1939 volume. Current production is around a billion pounds a year.

Now what went into planes, and radar, and ships parts, and what have you will be in the home as chairs, strings of beads, ash trays, radio cabinets, coffee tables, desk tops, electrical insulation and the thousands of other uses shown at the Plastics Industry Show in New York in April. All of this is an expansion, not something new. And there are just a comparatively few plastics, in many variations of the basic compositions. If you know more about how widespread the use of plastics is and recognize that you have been living with them in your homes and meeting them in the factories for 25 years, then you will be better able to judge them.

That plastics are no greater menace to fire fighters than other materials with which you have long been familiar by name, I hope I can show you on the basis of authoritative scientific work. When you talk of fire fighting, it is in terms peculiar to your own field. That is also the case with chemists. We have a tendency to draw upon technical information but this seems necessary now and then in order to make a point. I shall try not to use strictly scien-