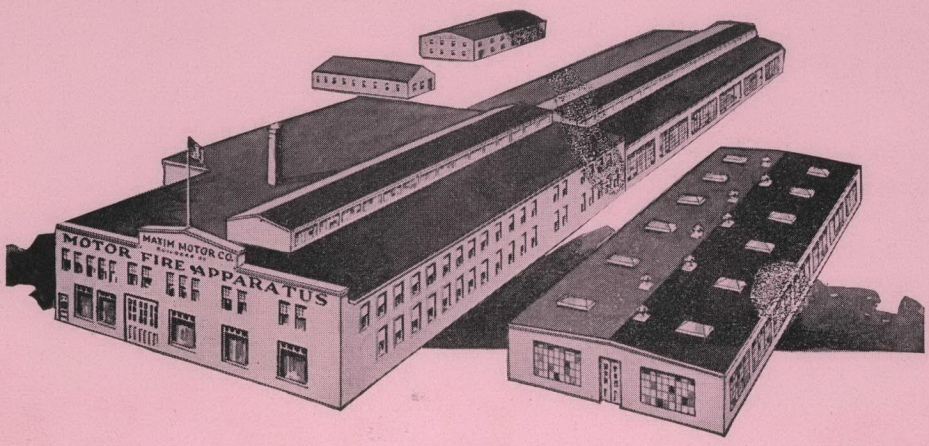
NEW ENGLAND ASSOCIATION
OF
FIRE CHIEFS
1937



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THE LATE JOHN J. SCULLY
President, American Fire Equipment, Boston
Admitted to Membership Aug. 16, 1922, Died Dec. 29, 1937
"We Mourn the Passing of a True Friend"

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Fifteenth Annual Convention

OF THE

New England Association

of

Fire Chiefs

THE BALSAMS, DIXVILLE NOTCH, N. H.

JUNE 22, 23, 24, 1937

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16th Annual Convention

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JUNE 21 - 22 - 23

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PLACES AND DATES OF PAST CONVENTIONS

No. 1 Bridgeport, Conn., June 20–21–22, 1923
PRES. CHIEF JOHN P. DOYLE, Wellesley, Mass.

No. 2 Boston, Mass., June 24–25–26, 1924
PRES. JOHN C. MORAN, Hartford, Conn.

No. 3 Pittsfield, Mass., June 23–24–25, 1925
PRES. PATRICK J. HURLEY, Holyoke, Mass.

No. 4 Manchester, N. H., June 22–23–24, 1926
PRES. DANIEL E. JOHNSON, Bridgeport, Conn.

No. 5 Portland, Maine, June 21–22–23, 1927
PRES. CHARLES H. FRENCH, Manchester, N. H.

No. 6 Burlington, Vermont, June 26–27–28–29, 1928
PRES. WILLIAM C. SHEPARD, Pittsfield, Mass.

No. 7 New Haven, Conn., June 25–26–27, 1929
PRES. OLIVER T. SANBORN, Portland, Maine

No. 8 Rutland, Vermont, June 24–25–26–27, 1930
PRES. LAWRENCE E. REIF, New Haven, Conn.

No. 9 Boston, Mass., June 23–24–25–26, 1931
PRES. SELDEN R. ALLEN, Brookline, Mass.

No. 10 Newport, R. I., June 21–22–23–24, 1932
PRES. JOSEPH LAWTON, Newport, R. I.

No. 11 Lewiston, Maine, June 20–21–22, 1933
PRES. ALFRED H. KOLTONSKI, Rutland, Vt.

No. 12 Burlington, Vermont, June 26–27–28–29, 1934
PRES. DANIEL B. TIERNEY, Arlington, Mass.

No. 13 New Bedford, Mass., June 25–26–27, 1935
PRES. JOHN S. PACHL, New Haven, Conn.

No. 14 Hartford, Conn., June 23–24–25, 1936
PRES. DAVID H. DECOURCY, Winchester, Mass.

No. 15 The Balsams, Dixville Notch, N. H., June 22–23–24, 1937
PRES. CARL D. STOCKWELL, Burlington, Vt.

15th ANNUAL CONVENTION
NEW ENGLAND ASSOCIATION OF FIRE CHIEFS
THE BALSAMS, DIXVILLE NOTCH, N. H.
JUNE 22, 23, 24, 1937

* * * *

TUESDAY, JUNE 22
10:30 A. M.

PRESIDENT STOCKWELL: I now declare the Fifteenth Annual Convention of the New England Association of Fire Chiefs in session. The first on the program is the Invocation by the Rev. J. Desmond O'Conner.

INVOCATION

By Rev. J. Desmond O'Conner

All Saints Church, R. C., Lancaster, N. H.

O Almighty and Everlasting God, we adore Thee, our Creator and Benefactor. We thank Thee sincerely for Thy manifold favors to us. With a deep sense of our unworthiness we humbly petition Thee for further blessings. O Heavenly Father, who did'st give us Thine Only Begotten Son to be our Exemplar in the way of life, as well as our Redeemer in the way of the Cross, deign, we beseech Thee, to send forth Thy Holy Spirit upon this Convention, to fill our hearts with a firmer faith, a keener sense of responsibility and a greater love for our fellowmen. Through the merits, and for the sake of Our Blessed Lord and Savior, Jesus Christ. Amen.

PRESIDENT STOCKWELL: We will have an Address of Welcome by John F. Griffin, Commissioner of Motor Vehicles for the State of New Hampshire, representing Governor Murphy of New Hampshire.

ADDRESS OF WELCOME

By John F. Griffin

Commissioner of Motor Vehicles

Mr. President, Ladies and Gentlemen: Unfortunately our Governor was unable to be present. He had to undergo a minor operation. He had a cold and the result was an abscess in his left ear. I know that he was very anxious to appear before you and he was very insistent that somebody come here and represent him. I say to you gentlemen that we appreciate the fact of your coming here to New Hampshire to have your convention, and I trust you will have such an enjoyable time that in the future you will insist on New Hampshire being your annual meeting place. Of course we are very proud of New Hampshire, particularly of its scenic mountain beauty and all that sort of thing, and I know that you can't find a better place in the United States. You will pardon me for being such a promoter for our state, but when you travel through the country you can't find a more beautiful spot than our state.

I sincerely hope that in the future so far as New Hampshire is concerned that you will see fit to hold your conventions here. The gates are wide open and I sincerely hope you will enjoy your visit here. I extend to you in behalf of Governor Murphy a most cordial welcome to the State of New Hampshire. Thank you.

PRESIDENT STOCKWELL: I would like to introduce to the Fire Chiefs of New England the President of the International Association of Fire Chiefs, Robert A. Bogan, chief of Baton Rouge, La. (Applause)

We will now hear from Gaston C. Cournoyer, City Clerk of Berlin, New Hampshire, representing the Mayor and the North Country.

ADDRESS OF WELCOME

By Gaston C. Cournoyer
City Clerk of Berlin, N. H.

Mr. President, Gentlemen of the Association and Ladies: In the absence of His Honor the Mayor, who is detained in court for legal reasons as a lawyer, it is my very happy privilege to extend to you the official welcome of Berlin and the North Country. The hospitality of The Balsams and Captain Doudera is well known to a host of conventions. I am sure this group will not only receive an educational training in the exhibits but the happy blending of fire and water will mean a lot of relaxation and exhilaration. I am sure that you will have every opportunity of burning the place up and also have the use of modern and scientific safeguards and prevention methods. Again a very cordial welcome on behalf of the City and Northern New Hampshire. We are glad to have you here and hope you have a nice time. Thank you.

PRESIDENT STOCKWELL: Response to Address of Welcome by Chief George L. Johnson, Waltham, Mass.

RESPONSE TO ADDRESSES OF WELCOME

By Chief George L. Johnson
Waltham, Mass.

Mr. President, Rev. Father O'Conner, representative of the State of New Hampshire and Mr. Cournoyer: May I in behalf of this organization extend to you our appreciation for your cordial welcome. I was in hopes His Excellency the Governor would be here that I might explain to him some of the objects of this organization which was founded back in 1922. I was one of the charter members of it and I would have liked to explain to him why we organized the New England Association of Fire Chiefs. It was a set purpose to bring about and codify the laws for Maine, New Hampshire, Vermont, Massachusetts, Rhode Island and Connecticut, so that one state could help the other in fire affairs. How much of that has been accomplished only perhaps the members of this organization know, but it has been a worthy work and all these conventions are bringing about a closer co-operation between the different states. As we landed here at The Balsams it was a regular firemen's reception. However, I want in behalf of this Association to again thank you, and I hope we will enjoy this convention as we always enjoy our conventions and that much good will come from it. Thank you.

PRESIDENT STOCKWELL: We will now hear from Chief Randlette.

CHIEF RANDLETTE: I have an announcement to make at this time for the ladies. The ladies are requested to meet in the lounge room following this meeting.

PRESIDENT STOCKWELL: We have a committee on Courtesies to appoint. I will appoint on this committee Chief Selden R. Allen, Chief Charles H. French, Chief Allen F. Payson.

I appoint the following Auditing Committee to meet with the Treasurer after the afternoon session: Chief Oliver T. Sanborn, Chief William C. Mahoney and Chief M. W. Lawton.

We will now conduct our annual memorial services.

MEMORIAL EXERCISES

PRESIDENT STOCKWELL: The first on the program is a selection by the Quartette.

(Selection by the Quartette.)

PRESIDENT STOCKWELL: We will now have the Roll Call of the members who have passed to the Great Beyond, by the Secretary.

SECRETARY O'HEARN: Ex-chief A. P. Woodward, Danielson, Conn.; admitted to membership, February 10, 1923; died June 27, 1936.

John J. Luby, Chief, Wallingford, Conn.; admitted to membership, June 14, 1929; died July 12, 1936.

Herman W. Fernberger, Deputy Chief, Oquossoc, Me.; admitted to membership, April 3, 1931; died July 18, 1936.

Frank R. Harrison, Chief, Onset, Mass.; admitted to membership, June 22, 1925; died August 4, 1936.

Robert H. Mainzer; admitted to membership, June 22, 1936; died August 6, 1936.

John A. Palmer, Chief, Torrington, Conn.; admitted to membership, June 20, 1923; died December 7, 1936.

Charles E. Hill, Chief, Cape Elizabeth, Me.; admitted to membership, June 6, 1927; died December 28, 1936.

Patrick J. McGrath, Ex-chief, retired, Meriden, Conn.; admitted to membership, February 16, 1931; died January 8, 1937.

Dr. Joseph W. Scannell, Lewiston, Me.; Fire Commissioner; admitted to membership, February 15, 1933; died January 16, 1937.

John H. Neary, Chief, Natick, Mass.; admitted to membership, June 24, 1924; died January 18, 1937.

James M. Casey, retired Chief, Cambridge, Mass., an organizer; admitted to membership, July 12, 1922; died January 25, 1937.

C. E. Sears, Chief, Claremont, N. H.; admitted to membership, May 29, 1924; died May 5, 1937.

G. W. Hoadley, Naugatuck, Conn., retired Chief; admitted to membership, May 21, 1923; died June 9, 1937.

PRESIDENT STOCKWELL: I appoint the following Committee on Resolutions to print in the proceedings of this convention: Chief Burns, Connecticut; Chief Cote, Rhode Island; Chief Koltonski, Vermont.

We will now have a selection by the Quartette.

(Selection by the Quartette.)

The memorial address will now be given by the Rev. J. Desmond O'Conner.

MEMORIAL ADDRESS

By Rev. J. Desmond O'Conner

Mr. President, Distinguished Guests, Members of the Organization, Ladies and Gentlemen: In the opening hours of this 15th Annual Convention of the New England Fire Chiefs' Association, we are gathered to do honor to the memory of the departed. At the outset I wish to add my humble word of praise to the originators and guardians of this Memorial Service. Once a year the nation at large dedicates a day to the memory of its soldier and sailor dead. Indeed it seems highly fitting that an organization such as yours should pause before further deliberations to express its regard for its deceased comrades. And I feel that the same patriotic sentiments should animate us on this occasion, for we are paying tribute to the lives and service of true captains in a gallant blue-uniformed army arrayed for the protection of the lives and homes of the nation. Therefore we may well say that love of country, patriotism in its highest form, plays a great part in this Convention, and in this Memorial Service.

"Responsibility," the sense that we have a work to do in this world, is the keyword to the few thoughts that I would put before you today. That each one of us has a definite place in the life of our country, with definite duties to perform, is the lesson I would teach. This sense of responsibility is a human quality that has existed in every form of civilized society. No protection, no security, no progress is possible without it. It corresponds in peace to the virtue of courage in time of war, but it is finer, more necessary, and its effects more enduring. I have said that it is found in some degree in every type of civilization, but for its more perfect interpretation and exemplification we are indebted to ancient Rome. Responsibility was, as someone has so well put it, the Roman Empire's great contribution to society. It is a quality attributed to its generals and its statesmen. More, it was the possession of the people themselves. In history and legend, in oratory, poetry and sculpture, this Roman ideal is followed and enshrined. The great Romans may have been wise, learned, experienced, courageous and brilliant, but their outstanding virtue was civic responsibility. In it they were the 'classic' people, as were the Greeks in art. "Gravitas" was their word for it.

The Fathers of our Country were schooled in Roman history. They too were men of great civic responsibility. Our Republic was formed and built up by men with the same high ideal. But I venture to say that the crying need of this same nation today is a reawakening of, and a new consecration to living and Spiritual Responsibility. In a time when so many groups within our country seem to be thinking only in terms of selfishness and personal gain, we need, not the academic, socialist, condemning Rome for its militarism, and at the same time striving for all manner of get-rich-quick legislation, but we do need a citizenry and leaders blessed

RESOLUTIONS

The volume of life is not large. Its paths are few. The record, however, of many a life is so imprinted during the day of its existence that it passes on down to posterity with its influence and has its effect for good or for evil.

We know that the names of those who have been enumerated have come with fresh fragrance to our memory and make us all rejoice in the fact that during life we knew them.

Remembrance is the only paradise out of which we cannot be driven, and happy should we be, that we are enabled to recall pleasant recollections of those who have passed on. They have been called from us to join those other brothers who have gone on before.

It is, then, the duty of the living to dedicate themselves anew to the great problems of our service. Our departed brothers expect us to carry on the great work in which they were engaged.

Your committee recommends the adoption of the following resolutions:

Be it Resolved:—

1. That in the death of these loyal, useful members, this Association has suffered in each case a distinct and irreparable loss.

2. That we tender our heartfelt sympathy to the family of each of our departed brothers in their great affliction; and

3. That this resolution be published in the report of the proceedings of the Convention, and a copy of such report be mailed to the widow or other surviving member of the family of each deceased brother.

Respectfully submitted,

THOMAS F. BURNS,
Bridgeport, Conn.

A. J. COTE,
Woonsocket, R. I.

A. H. KOLTONSKI,
Rutland, Vt.

with love of country that begets an active sense of Responsibility, which in turn will bring us back our Roman-American security and strength.

Gentlemen, those whom we honor at this time, leaders in our great and little Fire Departments, were men who knew what Responsibility meant. And they were men who lived up to its expectations. They recognized their dedication, gloried in it, and finished the work they were given to do. We love to believe that the Good God has rewarded them for their service to humanity and to Him.

May the example of your departed comrades be an inspiration to you, their successors, in your great protective army. May you carry on with new fervor and new zeal. May a new sense of responsibility—civic and spiritual—enkindle your lives of sacrifice and devotion to duty. Finally, may your life's work win for you a deserved place in the indestructible kingdom of God.

PRESIDENT STOCKWELL: We will have a selection by the Quartette.

(Selection by the Quartette.)

PRESIDENT STOCKWELL: We will now hear from Chief Randlette.

CHIEF RANDLETTE: I want to take this opportunity, because we have probably the largest number we will have gathered during the session, to introduce to you the Past Presidents of the Association. First, I begin with Chief Pachl, annex, New Haven Conn., on the left (applause); Chief Reif, New Haven, Conn. (applause); Ex-chief Moran, Hartford, Conn. (applause); Chief Lawton, Newport, R. I. (applause). I don't think you know this next gentleman, Chief Allen, Brookline, Mass. (applause); Chief French, Manchester, N. H. (applause); Chief Sanborn, Portland, Me. (applause); Chief Koltonski, Rutland, Vt. (applause); Chief Hurley, Holyoke, Mass. (applause); and Chief Tierney, Arlington, Mass. (applause); and you have already been introduced to our International President. And now the officers of our Association: President Carl Stockwell of Burlington; Second Vice-President Tom Burns, Bridgeport, Conn.

PRESIDENT STOCKWELL: First Vice-President, Chief Randlette.

CHIEF RANDLETTE: And you are all familiar with Chief O'Hearn, I guess. All the meetings after this meeting will be in the auditorium which is over the exhibit hall, and that building can be reached, as I understand it, by an underground passage from this building so it isn't necessary to go out of doors.

PRESIDENT STOCKWELL: The next will be the Benediction by the Rev. J. Desmond O'Conner.

BENEDICTION

By Rev. J. Desmond O'Conner

Almighty God, who art the beginning and the end of all creation, we ask of Thee Thy further blessing at the close of these exercises. Grant to thy servants departed eternal peace and eternal rest, and may the blessing of the Father and of the Son and of the Holy Ghost remain with us forever. Amen.

(Selection by the Quartette.)

PRESIDENT STOCKWELL: Adjournment is now in order and we should all visit the exhibits. This afternoon we have a meeting at two o'clock, and I wish all the Fire Chiefs, all of the members, would be present because it is going to be very interesting and that is what we are here for, to listen to good talks.

TUESDAY, JUNE 22
2 P. M.
FOREST FIRE WARDENS SECTION

Program sponsored by New Hampshire Forestry and Recreation Department

JOHN H. FOSTER, State Forester, *Chairman*

MR. FOSTER: Gentlemen, I did plan to give you a talk myself and maybe I will have an occasion to speak further later, but just at the moment I would like to introduce Mr. W. R. Brown, Chairman of the State Forestry Commission, and we have a number of speakers whom I am very anxious for you to hear.

TALK

BY W. R. BROWN, *Chairman*

State Forestry Commission

Ladies and Gentlemen: It gives me great pleasure to speak for the State of New Hampshire and bid you welcome here. I think you will find that the Captain will be most hospitable as he always is, and I might say the Captain has been in great sympathy with the conservation and fire prevention movement in this part of the country. Fortunately we haven't had fires in this Notch. The Notch itself I am glad to tell you, which is one of our most beautiful places in New Hampshire, has recently become the property of the State so that Mr. Doudera's beautiful home here will be preserved for all time by the State.

Now it is a redundency to speak to firemen in regard to fire being the first requisite of fire conservation, but we are improving all the time on the ways of combatting fire in the woods. I was quite interested to find out the other day that actually the fire lookout stations which we thought were practically perfect, in other words, that we were covering all the state with our mountain lookouts, is not accurately the fact, and the Northeast Forest Experiment Station in New Haven is now making a detailed survey of New England and New York State in order to map the places not seen from the tops of the mountains and we find there are a good many of those, and we are going to increase on that account the number of lookout stations.

There are two or three other things we are deficient in. One of them is fire lines. Abroad in Germany and places of that character they have many more fire lines than we have.

Another thing I want to bring to your attention is timber land fire insurance. That will be started by the Federal government later on and it will be a great impetus. It can be done. We did it in New Hampshire a few years ago. We had a forest fire insurance company. We insured about four hundred thousand acres of land and ran it successfully for two years and finally sold out to Globe and Rutgers. The point now is to get the premium down to the point where large owners can afford to come in.

Another thing that needs strengthening is the town apparatus of individual towns. Only a few of the towns are practically equipped, and you will see downstairs a great deal of apparatus that could be used to great advantage in the individual towns.

I have been asked to speak a moment on the result of raising trees and pro-

tecting them from fire, and a new point there which I would like to bring out is that hard wood is becoming more valuable every day. At one time we thought soft wood was our best timber. Now hard wood is becoming valuable and all sorts of products are being made out of hard wood, particularly rayon silk. Rayon silk is being got out by the Germans and Italians and Japanese, that is, the routine rayon silk made out of the woods. It is made into short lengths about so long and these lengths are being mixed with wool, and the German army today is being equipped with new Rayon silk and woolen suits of clothes which are much cheaper than wool and apparently equally as warm. Much of this hard wood we have here at the present time is being shipped through the Panama Canal to Japan, fabricated in Japan and mixed with wool, and is going to clothe their people. This textile is just in its infancy in this country and before long you will see the mills making this form of cloth. This is an age of cellulose, and other things you will see downstairs on exhibit are string and leather and draperies and washable paper. The Germans are feeding their population, I read the other day, on a sugar they get out of it. I looked into that but found they did not eat the pulp but fed the pulp to hogs and ate the hogs.

I think that is all I have to say. Thank you.

MR. FOSTER: It may be of interest for you to know that in New Hampshire we have five county associations of forest fire wardens. These wardens have voluntarily grouped themselves together in the form of an association for the purpose of social and friendly relationship and also for their instruction and information. These associations have not been formed at one time. They have been formed gradually over the last eight or ten years and we feel that they are accomplishing a great deal of good because it brings the men together from the different towns in a county. They meet once a month during the spring, winter and fall and they have many pleasant times together, and they get acquainted with one another so that when fires are in certain sections between towns they know who their next neighboring wardens are and they know how to handle these fire problems more efficiently.

I am glad to see we have with us the president of the Coos County Fire Wardens Association and I am very glad to introduce Mr. R. E. Hamlin, president of the Coos County Fire Wardens Association.

TALK

BY R. E. HAMLIN, *President*

Coos County Fire Wardens Association

Mr. Chairman, Ladies and Gentlemen: Up until about five minutes ago I didn't know I was to be called on at all and that sort of leaves me high and dry, but if I leave any impression at all with you, please remember that this is very brief. I have a story I often tell at the wardens meetings. It seems a young man went down to the State Senate and it probably puffed him up a bit. When he came back home, it was about the time at the close of the war and they were to unveil a memorial for the Unknown Soldier. They asked him to give the address and he had prepared a speech, and the young man got up and said, "Ladies and gentlemen, just one hundred years ago this country was a howling wilderness," and just then he couldn't think what came next, so he thought he would start in again. So he said, "Ladies and gentlemen, just one hundred years ago this country was a howling wilderness;" still he couldn't think. In despair he tried again. He said again, "Ladies and gentlemen, just one hundred years ago this country was a howling

Chief JOSEPH W. RANDLETTE, President, Richmond, Maine.

wilderness, and I wish the Hell that it was now." Now I don't wish that. I think I can voice the sentiment of Mr. Brown that we are glad to welcome you into this beautiful part of our state.

It is the duty of the wardens in this county as well as the others to watch and see when a fire starts and to see it put out.

I am sorry it is raining. A splendid program has been arranged of outside sports for you, and if it lets up before this is finished we can go out and show the boys from down state something they have never seen. I thank you.

MR. FOSTER: I felt because of the delay in getting this meeting started that there was probably some loose wire somewhere in our arrangement for this meeting. I am now convinced that there was, but we have gone so far in our program that we will continue, but now I understand that it was understood we were to be in the other building.

There isn't anybody in this hall I am sure that doesn't know Mr. Jim Keenan, and I want to extend a tribute to Mr. Keenan for furnishing the music that appeared a short time ago and who has been arranging for the exhibits and entertainment to be furnished afterwards on the lake shore. If the rain doesn't let up, I don't know what is going to happen to our entertainment on the lake shore. At any event I want Mr. Keenan to speak and he has agreed to say something and read some abstracts to give some of you an idea of what this country was in the early days as compared to what it is today. I am very proud to introduce Mr. Keenan.

TALK

By J. W. Keenan

Berlin, N. H.

Mr. Chairman, Ladies and Gentlemen: It is far from my profession to stand in front of a congregation like this and talk. I have been asked to give a little comparison of the woods business forty or fifty years ago and the methods of living and so forth compared with what we have at the present time. Of course forty or fifty years ago is a long time to look back over and remember how things were. I will read you a little sketch and possibly say a few words in the meantime.

My first job in the woods was in the fall of 1885 when I went to work for a contractor on the head waters of the Aroostook River, in the northern part of Maine. I spent the next four years on the Aroostook and Allegash Rivers, both tributaries of the St. John River. Business was small in that part of the country at that time, and in order to get a job it was necessary to go to some town where lumbermen congregated and wait until some contractor came in to hire a crew.

The camps were at various distances from the towns, from ten to twenty miles for the near operations, and from forty to sixty miles for the back camps. Pulpwood was not being cut then and white pine saw logs were in great demand. For saw logs nothing was taken less than 16 feet in length or smaller than 11 inches at the top end. The near stands had already been pretty well picked through for logs, so the operations were getting farther back all the time. Crews usually numbered from forty to fifty men, all hired by the day at wages running from $17 to $24 per month. Piece work was unheard of and labor turnover was practically unknown, it being very unusual for a man to leave the camp before the job was finished.

For a crew of this size two camps were built, each about thirty-two feet square, one for a cook room and one for a bunk house. Rough logs were used for building,

the floors were made of logs, hewn on one side, and the roofs were made from splits. Ventilation was practically all through the door. Windows were scarce, a three foot piece being left out of one log at the end of each camp and the space filled with three panes of glass. If anyone wanted more fresh air at night, he could get a two inch auger and bore a hole through the log behind his bunk.

Logs were landed on the river banks and in some cases boomed on lakes or ponds and driven down the various streams, some to be sawed at local mills along the tributaries in Maine, but the majority went through to the St. John River. When the drive got to the foot of the rapid water, which was about ten miles below the mouth of the Aroostook River, the logs were made into rafts for their journey down to the sawmills at Fredericton and St. John, N. B. These rafts varied in size from half a million to a million feet each, and were made two or three logs deep, 150 to 200 feet wide and 400 to 600 feet long. Each raft was piloted by two experienced rivermen, one on each end, who steered the raft by means of long oars, used as sculls. The trip to St. John took from 60 to 70 hours, depending on the luck and skill of the pilots.

My next move was to the Ammonoosuc Valley in New Hampshire in 1890. This valley contained one of the finest stands of spruce in New England and was fairly easy logging. During the first couple of years that I was there the logs were driven down the Ammonoosuc to the sawmills, but, as the stream was small and the timber long and heavy, the capacity was limited. With the increase in size and number of the sawmills from West Milan to Groveton, the demand for logs became so large that the streams could not carry enough and a logging railroad was built, starting from the Grand Trunk line at West Milan and tapping the upper tributaries of the Ammonoosuc. Yearly cuts after the railroad was built ran from twelve to twenty millions. On the short hauls drag sleds were used, and on the longer hauls two sleds, capable of carrying four to six thousand feet to a load. Oxen were used to some extent on the shorter hauls, but owing to their slowness and clumsiness they were already on their way out.

The Androscoggin Valley was also busy at the job of supplying sawed lumber to the rapidly growing building industry. There were large sawmills located at Lisbon Falls and Gilbertville in Maine, and at Gorham and Berlin in New Hampshire. The Berlin Mills Company, now the Brown Company, had just enlarged and modernized their sawmill at Berlin, and were starting to turn their attention to paper and pulp. I went to work for this company in 1894, and in 1895 I went to Bemis in the Rangeley Lake region. Methods and crews did not differ greatly from the Ammonoosuc, excepting that the hauling distances were longer and the two sled outfits were larger and capable of carrying larger loads. There was also one other important change which came into effect about this time, and that was the introduction of the cross-cut saw. Previous to this time all cutting had been done with the axe. The saw had been in use in the Middle West for some years, but like all new things it was difficult to make men who had placed their entire dependence on the axe look with favor on anything so radical as a saw. They were finally accepted, however, and came to be generally used, with a resultant lessening of skill in the use of the axe, which is now used only for notching and limbing trees and cutting down small trees.

Logs from this territory were landed on the ice of Mooselookmeguntic Lake in books. They were towed across to Upper Dam, then across Richardson Lake and Umbagog Lake and entered the Androscoggin River three miles above Errol, to be sawed at the Berlin Mills Company sawmill at Berlin.

While the company had a towboat to take the logs across the first lake, Richardson and Umbagog Lakes were not equipped with power towboats until two years

later, and the towing was done by men on headworks. This was a raft of logs about 36 feet long and 13 to 15 feet wide, with a capstan and spindle set in the middle. It was usually hitched with a short line to the book, and a 500 foot line was attached at one end to the capstan and the other end to a 200 pound anchor. The anchor and line were carried out in a bateau and dropped overboard and the headworks and boom wound up to it by the crew. This process was repeated until the lakes were crossed, crews sometimes being on the rafts for two days and nights without going ashore.

Methods did not change much here until around 1912 to 1917. Logs were still the fashion although four foot wood had been coming into the mills by rail for some years. However, with the wood getting farther back and the pulp and paper business displacing the lumber trade, four foot wood came into more general favor. By cutting it in these lengths the smaller streams could be driven, and the hauls greatly lessened. By building small dams near the upper ends of the little brooks, they could be turned into good sized streams when the gates were raised and the wood driven out in small bunches of from 30 to 100 cords each. On warm or rainy days in the spring these dams often can be filled and emptied twenty to twenty-five times a day. While these drives lack the excitement and do not require the same skill as the long log drives of former years, they are much cheaper, and brooks and rivers can handle many times the amount of wood.

Around 1930 another change came in the pulpwood game. This was the introduction of a process for making pulp out of hard wood. Previous to this time spruce and fir and poplar had been the accepted fibres for pulp and paper, but this innovation opened up an entirely new field of logging. It meant that the ground already cut over for soft wood could be made to yield another crop, and owing to the poor floating qualities of hard wood it meant a different system of transportation, different kinds of roads and landings. In brief, it meant opening up the forests for trucks, either for all weather trucking or only for winter work when the ground is frozen. This need of roads has brought into use a larger amount of machinery than was ever used in the logging industry. Tractors equipped with trail blazers are used to gouge out stumps, move rocks, and remove the top covering of decayed leaves and vegetation, and smooth the ground. Large scrapers for ditching and rounding surfaces are coming into use and the industry at last is beginning to awake to the machine age.

MR. FOSTER: I have an important announcement to make. An emissary from headquarters in the other building has arrived and I am going to ask Chief Tierney of Arlington, Massachusetts, representing the Association, to make an announcement which he has, and I think probably our program from now on is taken care of.

CHIEF TIERNEY: Gentlemen, I am just an errand boy from Roger Babson who is to give a talk this afternoon, and at his request the meeting is where we had the memorial exercises this morning. This is a forest fire wardens meeting but I think you would all like to hear Mr. Babson, and Chief O'Hearn sent me over to see if I could bring you back with me. I know all want to hear Mr. Sipe, and if you do you can stay in this room. What shall I tell them?

MR. FOSTER: I have been talking with the chiefs and I think we ought to go over there. I want to emphasize what he said. We have Mr. Sipe here and he has come a long way to attend our meeting and I sincerely want you all to hear him speak after Roger Babson talks, so after we get through in the other hall will you please stick around until we get a chance to finish our program.

(Adjourned to Hotel Ballroom.)

JUNE 22
3 P. M.

Secretary John W. O'Hearn opened the meeting and Chief George L. Johnson of Waltham, Mass., introduced Mr. Roger W. Babson.

TELEPHONE CALLS VERSUS MUNICIPAL FIRE ALARM BOXES? WHAT OF THE FUTURE?

By Roger W. Babson

Statistician, Wellesley Hills, Mass.

Since the great increase in the use of telephones for calling fire apparatus, there has been a lull in the purchase of the little red municipal fire alarm boxes. Progressive fire chiefs, however, believe this lull is only temporary. More and more it is becoming evident that the secret of fire fighting is to shorten the time between the start of the fire and the notification of the fire department. The old saying that there never was a fire which could not have been extinguished with a bucket of water when it first started is still true. Moreover, practically all fires at the start are of the same size. The municipal fire alarm box continues to be the greatest aid in cases of serious fires for shortening these precious moments. Furthermore, although *speed* is vital, sureness is even more vital. The municipal box gives SURENESS.

GREAT IMPORTANCE OF STREET BOXES

Before discussing my subject, let me prove to you the above statement by asking each chief to apply a simple test. This is the test:—Keep a list of your calls and the accompanying fire losses. Divide these calls and losses into four groups,—viz.: (1) Daytime fires in occupied buildings; (2) Fires in vacant buildings; (3) Fires discovered at night; and (4) Incendiary fires. Statistics will show that the greatest number of fires are under the first group and that the calls therefore come 80% by telephone. Yet, by far the greatest losses of both life and property come from the other three groups. For the notification of these latter fires the department is almost wholly dependent upon municipal street boxes. In short, statistics show that telephones are unavailable for notification of the really serious fires and may be unwise to use in the case of any fires. To put it another way, 70% of the number of fires are for losses under $100 and they cause only 4% of the total annual losses, while 30% of the fires cause 96% of the total annual losses.

To a statistician therefore this means that one of the most practical ways today to reduce loss of life and property by fire is to increase the number of municipal fire alarm boxes. "A box for every block" is more necessary today than ever before. There are several statistical reasons for this. Let me first give you four of these reasons before giving you my solution. These simple reasons show that great care should today be given to every means of shortening these precious moments.

EFFECTS OF INFLATION, CHEAP ELECTRICITY, STREET CONGESTION, ETC.

Perhaps the FIRST factor of importance is the danger of inflation ahead of us. By inflation I mean a great increase in building costs and hence replacement costs for destroyed property. This applies also to machinery and furnishings. Inflation

however especially affects a municipality because, in practice, citizens do not rebuild during inflation. This results in throwing employees out of work and throwing buildings off the tax rolls. This means that, *in terms of replacement costs*, fire losses during the next few years may be very much greater. Hence, interest in fire protection should greatly increase. Even today—when considering what the fire department saves a city in insurance premiums—fire protection is costing the cities absolutely nothing. Therefore, as inflation continues to *creep* slowly upon us, the need of shortening these precious moments increases very fast.

THE SECOND serious factor is the rapidly increasing use of electrical appliances, especially amongst people of limited intelligence. The present Administration at Washington is doing much to reduce rates for electricity. When all of the great water power projects now being built are completed, electricity may be as cheap as water. Already electric appliances are being sold in the Woolworth and other chain stores. Families in humble circumstances are extending their own wire systems from receptacles to flat irons, motors and even stoves. House wires are already being overloaded. Our cities may soon begin to suffer through greatly increased fire losses from this extended use of electricity. This is a very real fire danger for future years.

The THIRD serious factor is the increasing street congestion. Already some cities have entirely given up the public alarms; while many cities no longer publicly sound an alarm for a school, theatre or other public building blaze. The automobile congestion sometimes makes it impossible for the fire department to reach the fire. Highway congestion is bound to increase. The country has 35,000,000 cars on the roads today. The automobile manufacturers say this will be 50,000,000 in a short time. This is another reason why every possible effort should be made to shorten these very precious moments between the start of the fire and the call of the fire apparatus.

Finally, fire chiefs must face the growth of air conditioning in every community. What is an air conditioned building? It is a building where every room is exactly like the old fashioned coal stove which heated our rooms when we were boys. You will remember that the stove had a draft in the ash door at the bottom. This ash door let fresh air into the stove. There also was a damper in the flue which permitted the carbon dioxide to escape up the chimney. When both the draft and damper were closed, the fire slumbered and ultimately smothered itself out; but when both the draft and damper were open, the coal "burnt like a house afire." Well, a room not air conditioned but with windows and doors shut, is like a stove with draft and damper shut. On the other hand, an air conditioned room with fresh air continually being pumped in, with carbon dioxide continually being pumped out, will turn any spark into a conflagration. Of course, after the firemen arrive, they can have means for turning off the air conditioning system; but the harm has then already been done.

The above are only a few reasons why we must do everything possible to shorten the time between the start of the smallest fire and when the word gets to the fire department. Statistics on fire losses will show that a simple municipal fire alarm box on every street corner would be the cheapest and simplest way of doing this, short of complete automatic sprinkler and thermostatic protection. In order, however, to accomplish the desired results, the number of such boxes in most cities should be doubled or tripled. Almost every city today is miserably underboxed. Those cities over 25,000 are said to need 30,000 more boxes. Municipal appropriations for street boxes should be increased greatly. I say this, moreover, as an unbiased statistician and not because of my interest in any company. In fact, let me remind you that of the places under 25,000 very few now have any

Chief THOMAS F. BURNS, First Vice President, Bridgeport, Conn.

municipal fire alarm boxes and yet these smaller places account for 70% of the losses.

A PRACTICAL SOLUTION

Here is a suggestion. When talking with large property owners, I am convinced that they can be educated to supplement municipal appropriations with private gifts for municipal master boxes on the street directly in front and rear of their own factories, stores or homes. We are just approaching the time when civic minded citizens will gladly contribute such municipal fire alarm boxes as they now contribute to the Red Cross, the local hospital and other worthy municipal objects. I even believe that the time will come when it will help a Community Chest Campaign to include money for fire alarm boxes in the poorer parts of a city. Certainly, employers who are interested in protecting their own profits and the jobs of their workers will gladly pay for a municipal fire alarm box at the front and rear of their plants *if the fire chiefs suggest that they do so.* Hence, I visualize the day when fire chiefs will no longer need use as an alibi "the city will not give me a sufficient appropriation for boxes."

I further believe that the rate making bodies of the fire insurance companies are going to give more consideration to municipal street boxes in the future. If there is one thing for which fire chiefs and superintendents of wires can be criticised, it is their failure to get the insurance companies to give lower insurance rates for increased box protection. Sometimes it almost seems that insurance companies are profiting more from the unselfish devotion of fire chiefs and their firemen than are even the citizens themselves profiting. Certainly fire insurance companies should make a handsome contribution to the family of any fireman who loses his life or suffers an accident in a fire. Every fire chief should have a committee of public citizens of his community to see that insurance rates are lowered for such sections as are 100% boxed and for such buildings which install at their own expense a street box at their entrances.

CONCLUSION

I am not coming to you this afternoon to discuss fire protection *per se.* You all know far more about this than I know. Furthermore, I am not discussing automatic fire detection problems. This is an entirely different subject. I find that you chiefs yourselves are divided as to the advisability of having the municipality install or supervise wires on private property *even although you are obliged to enter private property to fight fires.* I do dome to you as a statistician calling your attention to the great deficiency in municipal fire alarm boxes while the need therefor is today greater than ever. This is true even with so many competing telephones. I especially come to you as a business man, with large financial interests in factories, colleges, stores and other buildings.

I believe that with a proper approach manufacturers, merchants and other owners of business property would gladly contribute the money to help you chiefs make up this street box deficiency. Moreover, I would not be content to ask a business man to pay merely the cost of these municipal fire alarm boxes which should be on the sidewalks by his front and rear entrances. I should ask him to contribute in addition a proportional amount (1) to pay for connecting the box with the central station, and (2) toward a financial reserve for a new panel at the central station as the number of boxes increase. I believe that if business men are properly approached, they will gladly spend money for the public distinction of and reputation for thus protecting their businesses and the jobs of their employees. A freshly

painted municipal street box by their entrance doors could be made a hall-mark of real distinction.

I may be wrong. Only a fair test, after properly plowing the soil in advance, can tell whether this plan will work. This however is the message which I, as a business man and property owner, bring to you. Surely it is worth a real test under trained leadership in every community.

PRESIDENT STOCKWELL: Are there any questions you would like to ask?

CHIEF SLAMAN, Wellesley, Mass.: Mr. President, I move you, sir, that we give Mr. Babson a rising vote of thanks for his able talk.

(Motion seconded and carried.)

MR. A. C. HUTSON, National Board of Fire Underwriters: I have come to conventions without getting into any of these arguments but I have got to start a little argument. There is one point Mr. Babson has not brought out and I think he can very well include it in the next talk he gives, and that is duplications. We have the telephone. We will always have the telephone and a great many of us will use the telephone for notification of a fire even if there is a box out in front of the plant or store or building. But the telephone service is not designed with that degree of dependability that is necessary for fire alarm purposes, and even though it might be pretty near complete with every house in the city providing telephone service, even though the telephone service may be very complete, you must have a certain amount of duplication and the fire alarm system gives you that duplication.

Just a short time ago, last week I believe it was, the telephone operators in Warren, Ohio, went on a strike. They claimed that they were going to give emergency service covering fire and calls for doctors and so on. I would very much question if they did give emergency service in the degree they should. If that town does not have a fire alarm system, I think that town is very apt to have a very great catastrophe. So that the duplication furnished by a municipal fire alarm system is worth the cost of it.

There is another thought that Mr. Babson brought out. He spoke of the dial phones. Now you men that know anything at all about the telephone service know you can do a great many things with dial phones. Pretty near thirty years ago a man had a scheme which he put up that by dialing a certain number or punching a certain button on a dial phone he could automatically call the fire department irrespective of anything else. It is possible under the dial phone system to make every single telephone in every single home a direct connection to the fire department. The telephone company does not want to do that. I know that. I talked with them for quite a number of years. They do not want to assume that responsibility. They say that the responsibility of calling the fire department is up to the municipalities, but if we don't put in our fire alarm systems, the telephone company will be forced ultimately to go into that class of service whether they want to or not. So I can agree with Mr. Babson one hundred percent in the thought that one of the greatest needs of America today is the installation of sufficient street boxes that anybody can get to and anybody can operate.

I want to pass this word to Mr. Babson that I believe one of the greatest setbacks in having that occur is the cost of the fire alarm box. I have talked to a great many fire alarm superintendents and fire chiefs, and I believe that the cost of the box is too high. That may mean a simplification. It may mean that we have gone too far and tried to mechanically do the things that should be taken care of by public maintenance. There are places in the United States that are getting a good

fire alarm system in a box which cost a great deal less than the present box. I am not in a position to say that that is perfect, but it is along the lines of simplification. The tendency has been too great to try to take care of the various failures of maintenance by adding complications to the box, and any of you men who have watched the fire alarm service for the last thirty years have seen that happen one time after another and I don't believe it is along the right lines. So I want to pass that thought to you, if you can reduce the cost of boxes.

Now Mr. Babson spoke about having a box on every corner and a box in front of the various stores and places of that kind. I hope that he lives to see it, but here is another thought for him to carry back to one of the companies that he is interested in, that you can put boxes around and they are of very little value because they won't be seen. I have talked to the fire alarm industry, the fire alarm associations, for the past five years and have tried to get them interested in some means of letting the public know that there is a fire alarm box at that position. I walked up a certain main street of a city a few months ago and walked for ten blocks and didn't see a fire alarm box, any indication of a fire alarm box. I met the superintendent or went up to his office and said, "Don't you have any boxes on your main street?" He said, "Yes, we have one on every street corner." I said, "Where are they?" and he took me down and showed me the boxes. They were on a pedestal that high and were all on the east side of the street and I was on the west side of the street, and there was a string of cars parked on that side of the street and you couldn't see the boxes because of the cars. A light stuck on that box about eight feet in the air would have been worthwhile, but unfortunately the lighting company in which Mr. Babson is interested charges something like $2800 a year.

MR. BABSON: You have made that a little high.

MR. HUSTON: Maybe that is another company, but if it is more than five dollars a year it is highway robbery; but everybody will agree that none of you can go to the electric company and get them to put a light on for five dollars a year, and we would appreciate it if he would go back to his company and say to them, "We are going to be a little public-spirited; we will reduce that price." Mr. Babson is very optimistic, his talk was very optimistic, and that is the reason I am being optimistic in believing he can go back and tell the Niagara & Hudson that they can do this for less, so that it will not happen as it has time and again that they will pull a box that is far from the fire. I don't believe there is anybody here but what can tell where a person has run by the closest box and pulled a distant one.

I am glad that Mr. Babson talked as he did to you Fire Chiefs because I have felt that the Fire Chiefs very often consider the fire alarm system as a step-child. They put it in charge of a man as superintendent of fire alarm, and when he comes up and says, "I want ten more boxes," you say, "well, our appropriation is limited to so much and I need hose," and the man doesn't get the boxes. So if Mr. Babson has done anything at all in stressing to you that as Fire Chief it is your duty to ask for more boxes and not leave it up to the poor superintendent to ask for those boxes he has done a good job. I can agree one hundred percent in the thought that a vital part of the fire alarm system is more boxes, and it rather hurts me every once in a while to see a city go down and spend thirty thousand dollars on new headquarters equipment and not one cent on boxes, and then they come around and ask the Underwriters to give credit for the thirty thousand dollars they have spent when, as a matter of fact, they have not improved the fire alarm system one iota. It may not have happened in your town but I have seen it in a lot of towns where a large amount has been spent on equipment and none has been spent on boxes. If Mr. Babson can take this along to the Chambers of Commerce and get

it to the citizens that it starts with the box and you have got to have the box first, he has done a good job.

PRESIDENT STOCKWELL: Any other questions?

CHIEF ALLEN, Brookline, Mass.: I believe a year from today it will be proven that this is the most expensive address that Mr. Babson has ever made. It means a reduction in the earnings of his electric company and the Gamewell Fire Alarm Company he is also interested in. To us fellows it is the old, old story, I preached it some time ago at the International, about stopping the gap between the discovery of the fire and getting word to the fire department headquarters. As to giving notification of fire over the telephone, I want to stress this fact that is so apparent in the larger cities, and that is the danger of duplication of names of streets. Chief Pope is here from Boston, and to support my contention, Chief Pope, will you tell how many Washington Streets you have in the City of Boston? Isn't it something like eight or ten Washington Streets?

CHIEF POPE: It is easily that.

CHIEF ALLEN: So this thing is even more dangerous than it appears in Mr. Babson's address. So I think one of the greatest projects we could dedicate ourselves to is the increase in the number of boxes and thereby decrease the state of dangerous affairs of transmission of alarms by telephone.

PRESIDENT STOCKWELL: Any other questions?

CHIEF EAMES: The matter was brought up of the advisability of fire alarm boxes and many may have found out it is not feasible to paint bands on the poles which have been put up. If you will take strips of lattice about one and one-half inches wide, paint them red and tack them on, you will overcome the difficulty. Some advise painting metal, but it is tough on the linemen and tears their clothes, but if you take strips of lattice and paint them red, you will overcome the difficulty.

PRESIDENT STOCKWELL: Any other questions? If not, we will now hear from Mr. Foster of the Forest Fire Wardens, and I want to apologize for the delay and mixup we got into. We would like to hear from you very much.

SECRETARY O'HEARN: Before Mr. Foster goes on I want to make a motion. Due to a misunderstanding of the time of meal hours here, there is a confusion in the time of the program. You will notice we went to lunch at one o'clock and the program was set for two. This evening's program is scheduled for seven o'clock and dinner does not start until seven o'clock. I move you that tonight's session open at 8:30. We have all night and you can stay as long as you want. Mr. Cushman will not be here and these five or ten minute speeches will be just as it says, no longer. I move you that we have the meeting tonight at 8:30 rather than 7.

CHIEF ALLEN: I would like to make an amendment to that that the meetings be held in this hall from now on.

SECRETARY O'HEARN: I will accept the amendment.

(Motion seconded and carried.)

MR. FOSTER: Mr. President and Ladies and Gentlemen, I have an announcement to make, also. We have had sort of a misunderstanding here this afternoon in that we have been conducting a meeting over in the other hall and we have adjourned our meeting to come over here and enjoy yours. We have had some

of our speakers, and there are one or two others that we are going to pass up because of a very important part of our program which may not appeal to you but I wish it might. We have secured the services of an entertainment for your organization, and we have a number of woodsmen, upwards of sixty, who have come here to participate in a real north country series of contests. These contests are to consist of log rolling, a race between two northern boats, each manned by six men, and a chopping and sawing contest. I know it is still raining but I still hope those of you who can, as soon as this meeting has adjourned, will go to some vantage point towards the lake where you can enjoy the spectacle of these men who just for today have been taken out of their lumber camps back in the woods just for your special entertainment. If it's is not asking too much of you, I will ask you to get out where you can see, and if by chance it stops raining, to come down by the lake where you can see closely and enjoy the latter part of our entertainment.

In behalf of the State Forestry and Recreation Department I trust you have an enjoyable conference and I only regret that it has not been possible for our speaking program and yours to coincide more perfectly. Thank you very much.

CHIEF RANDLETTE, Richmond, Me.: Mr. Foster has said that some of his program has been omitted so he can go on with the entertainment. I am going to move that those parts of the program which have been omitted be given to our President so they can be printed in the proceedings of the convention.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: I think it is in order to adjourn to some vantage point where you can see the sports that these gentlemen have prepared for us. The next session will be at 8:30 tonight.

FOREST FIRE PREVENTION

By John H. Foster

State Forester, State of New Hampshire

Prevention and suppression of forest fires in New Hampshire are under genera supervision of the State Forestry and Recreation Department. Other public agencies involved are the 250 towns and cities of the State and the White Mountain National Forest administered by the Forest Service of the United States Department of Agriculture. The New Hampshire Timberland Owners' Association, owners of the greater part of the wild lands of northern New Hampshire, contribute directly by a system of patrol paid from assessments levied upon member owners of the Association.

Forest fire laws, under police power of the State, provide the authority to prevent as well as suppress forest fires. Prevention measures include control of brush burning and camp fires, disposal of slash along public highways and railroads, and around sawmills, camps and property lines, use of spark arresters on portable sawmills and railroad locomotives, closing of forest lands by proclamation during periods of severe drought, registration and licensing of all portable sawmills and permits to operate at each new setting, posting of warning fire notices, penalties for throwing out burning cigarettes, matches, etc., in or near woodland and all other violations of the fire laws of the State. If there were no violations of law, our forest lands would in the main be safe from fires except those caused by lightning and burning buildings which are of infrequent occurrence. The human element and carelessness, rather than intent, are responsible for most of them. I am happy to

say that incendiary forest fires are no important part of our troubles in New Hampshire.

To facilitate administration, the State is divided into ten districts and a District Chief co-ordinates in each one the work of local units. Forest fires respect no town lines and co-operation between towns is essential. Fires are investigated and laws enforced by these District Chiefs who also supervise the work of the lookout watchmen and perform other work of an educational or regulatory nature. Each one of the nearly 250 municipalities has a State appointed Warden and the necessary number of Deputies. There are more than 1200 in all, including railroad and state highway patrolmen who are appointed as Deputy Wardens, the patrolmen of the New Hampshire Timberland Owners in the North Country and men otherwise in a position to render valuable services. The entire staff of the White Mountain National Forest is vested with this State authority and the closest co-operation exists. All of these men have authority to summon men and equipment for the purpose of extinguishing fires and it is a violation of the law to refuse aid thus requested. They are on the alert at all dangerous times, equipped and ready for action at a moment's notice. Portable pumps and other facilities of the State and towns are available from beyond town borders if necessary and speedy attack as well as unrelenting work are stressed when fires occur.

The twenty-six State lookout watchmen and seven others maintained by the Government in the National Forest stand guard daily in modern towers with accurate maps and dependable telephone facilities. When the first wisp of smoke is discovered, the nearest Warden or Deputy is immediately warned and suppression of the fire begins.

The construction of hundreds of water holes in rural sections under the emergency programs has added greatly to the use of water for both power and hand pumps to reduce and control building and forest fires. Nashua under the leadership of Fire Chief Melendy has constructed 64 in rural sections of the town.

New Hampshire holds an enviable position among the States for its record of forest fire control. The 27 year average for New Hampshire is 371 fires per year with an average of about 24 acres per fire and a little over 8,000 acres burned over per year. During 1936 there were 387 fires and only about 2,000 acres burned over. The size of the average fire has been reduced through the years from about 22 acres to 5 acres in 1936. Records indicate that our more recent efforts show a marked reduction in the size of fires but that the number of fires during a season remains about the same. When the relative humidity reaches 30 percent, which is near the extreme danger zone according to our system of hazard determination, a real fire hazard is upon us. Weather forecasts and humidity readings are obtained daily from the Weather Bureau and our own recording instruments at different places in the State.

Forest protection has greatly benefited by the formation of county forest fire warden associations which bring their members and others together for monthly meetings at different places for social as well as business purposes. Two such associations in Grafton County and in Coos County have been formed within two years making six altogether in the State. Two delegates from each of these associations are present here at this convention today. Forest fire protection has come to pass without greatly increasing the annual expenses of the department or the towns and the benefits are shown in decreasing costs per fire and damage to property as well as acres burned over.

The force of voluntary wardens and deputies deserve the closest co-operation. Their greatest source of trouble is the careless smoker on the highways and in the

woods, berry pickers, thoughtless campers who leave fires unextinguished in illegal and unsafe places and others who start brush or debris fires at dangerous times and without a permit. During windy days of low humidity when slash, dry grass and accumulated vegetation extend over large areas, it is possible for a carelessly dropped match or cigarette to start a fire which will burn over hundreds or even thousands of acres, cross highways and streams, destroy buildings and create devastation which fifty years of time cannot restore. The cost of extinguishing such a fire may run into thousands of dollars which must be shared equally by the State and the town and paid for by the taxpayers. And the owner who may have lost all must suffer his loss in silence. Forest property in this country carries no insurance.

The woods and hills of our State, both public and private, are for the most part ours to enjoy. We should, however, practice and teach respect for the property of others. In no other way is this so important as in preventions of fires. Our constant effort is to keep New Hampshire forests green—for the beauty that they have, for the wild life whose home is there, for the owner whose income is in the trees, and the State whose welfare we ever try to serve.

PAPER

By F. H. Sipe

Assistant Supervisor of the White Mountain National Forest

The 700,000-acre White Mountain National Forest, one of about 150 such areas in the United States administered by the Forest Service under the Department of Agriculture, comprises about 11% of the total area of New Hampshire and over forty thousand acres in Maine.

The objectives of management to be attained under Forest Service supervision are vital and varied. Protection of forest cover to lessen erosion and floods was the main factor responsible for the creation, by purchase from private owners, of the National Forests in Eastern United States, by passage of the Weeks Law in 1911. The effect of forested stream headwaters on flood control is today being given more and more consideration by engineers as well as foresters.

Following 1911, other objectives were recognized as fundamental. Of prime importance in furnishing steady employment to thousands of workers near the Forest, both on farms and in mill towns, the timber producing capacity has been developed so that the last twelve months have seen 20,000,000 board feet of timber sold. This means not only continuous food, clothing and shelter for local families but 60 to $70,000 in receipts for Uncle Sam's treasury, of which 25% is returned to the local State, County and Town governments for their use on roads and schools. Contrary to belief in some quarters, the loss of Federally owned lands from local taxation has *not* increased local tax rates. Actually, tax rates in national forest towns have been maintained consistently *below* the tax rates of comparable towns outside the National Forest.

Systematic plans have been laid to conserve and develop our wildlife resources. A fish and game technician has been added to the staff. The policy of how many, what kind and sizes of fish are to be planted in our streams is being formulated in co-operation with the State Fish and Game Departments.

Wildlife management by the Service of several areas on the Forest appears definitely in the picture beginning within the next year. By this means, the amount

Chief SAMUEL J. POPE, Second Vice President, Boston, Mass.

of game to be killed by hunters will be correlated with the carrying capacity of the land. Depleted areas will be restocked.

Of steadily increasing importance in recent years in New England is the tourist trade, and the White Mountains furnish a large share of the attraction to the thousands and even millions of recreationists who visit the Northeast. The Forest Service, by its Forest Camps, Adirondack-type shelters, and high country cabins, has provided places for camping, picnicking, and bathing for thousands annually. Additional throngs hike and ski up and down the many miles of trails already constructed. Outdoor use of leisure time is a factor being given major consideration in National Forest recreational plans.

As an adequate safeguard to the people of New England and her visitors of the benefits previously described, fire-tight forest fire control *must* be provided. Burn the forests—and erosion increases, families go hungry, wildlife is destroyed, and the recreational visitor goes elsewhere. What then, is your Federal Government doing along the lines necessary to protect adequately these natural resources?

All dangerous areas and sources of fire are surveyed, analyzed, and plans laid to eliminate or lessen such dangers. Areas of spruce and fir slash left after logging provide one of the most dangerous kegs of dynamite in the forests of New England. Some of the slash is disposed of by piling and burning, while watchful patrolmen guard the remainder. Fire breaks, where all inflammable material is removed down to mineral soil from a strip 5 to 10 feet wide, are built around and through plantations, grass, and slash areas.

Individuals who might start fires or assist in preventing them are contacted currently by Forest officers. These include railroad officials, hunters, fishermen, motorists, hikers, brush burners, sawmill owners, logging crews, and other local residents. Permits are issued to build campfires at all points away from regular camping places. Newspapers, motion pictures, and radio are used to put across the fire prevention idea. Posters cautioning the hiker, motorist, and smoker dot the trail and roadside at appropriate places.

In addition to local fairs, this year at the Sportsmen's Shows in Boston, Hartford, New Haven, New York, and Philadelphia, fire control exhibits brought home to many the need for continued care with fire in the woods. Co-operation with State Forestry officials has been close in protecting areas adjacent to the National Forest. Closure of the Forest to public use is resorted to in extremely dry and dangerous weather.

Each Government employee or local resident who may be called upon to take charge of fire fighting crews is given maps of his immediate area, and charts listing available manpower, fire tools, food, and transportation equipment. He is given one to three days' training each year, consisting of discussion and demonstration fires in the woods. Plans are made to cover severe emergency conditions as well as average situations, so that every fire that starts may be surrounded and controlled by 8 o'clock in the morning of the day following its discovery.

Not only Government work crews, but logging and mill crews, and local residents are organized into fire suppression units, so that when word of a fire comes, the crew can get away in 10 minutes or less, and arrive at the fire not over one hour from its discovery, prepared with proper tools to begin the job of stopping the fire. Sufficient equipment in the form of council tools, pumps, axes, lanterns, saws, mattocks, and shovels are available at the most accessible points.

The use of portable power pumpers of light weight is being practiced more and

more. Such pumps, which two men can carry, weigh only 60–100 lbs. exclusive of 1000 to 2000 feet of 1½-inch hose, gasoline, oil, and spare parts. Instructions now call for taking one of these pumps to every fire. They are usually packed on a special fire truck of which there are four on the Forest. These special trucks carry extra fire tools, food and bedding.

Lookoutmen watch unceasingly throughout the fire season from April 1 to November 30, in their towers located at strategic high points in the forest. At present an exhaustive study is being made to determine if new towers are needed or if existing ones should be moved. The forest is to be so covered with lookouts and patrolmen that every fire may be discovered within fifteen minutes of the time it starts.

Another study about to get under way calls for mapping the various kinds of fuel types such as grass, ferns, duduff, leaves, hardwood and softwood slash. Fire weather records are being kept so that the precipitation, temperature, wind, and relative humidity may be plotted upon a chart and the relative fire danger determined. This fire danger factor will in turn be plotted and action taken as called for by the danger meter.

Let us look briefly at the forest fire record of the White Mountain National Forest. From 1931 to the present day only 8¼ acres of National Forest land have been burned over. During the same period 49 fires have been suppressed, largely on private lands adjoining the National Forest. Of these 49 fires, 13 have been caused by lightning and often in extremely inaccessible areas.

During the last twelve month period, the Rangers and Assistant Rangers—totalling 9—have spent 34 days each on various phases of forest fire prevention, preparedness and suppression. The activities and results I have discussed here have all been accomplished at an expenditure of not over three cents per acre per year.

The White Mountain has been called an "asbestos" forest. Past history has shown that large and serious fires *have* occurred, and they *may* occur again when the conditions are right. The battle must continue all along the fire control line.

TUESDAY, JUNE 22

8:30 P. M.

PRESIDENT STOCKWELL: I declare the meeting in session, and the first on the program is "What the International Association is Proposing to do to Assist Firemen's Training Schools" by Chief Selden R. Allen of Brookline, Mass.

SECRETARY O'HEARN: Mr. President, while Chief Allen is smoothing the wrinkles out, I have some telegrams I would like to read at this time. One is from Newton Upper Falls, Mass., addressed to the President:

"Carl Stockwell,

President, New England Association of Fire Chiefs,

Balsams Hotel,
Dixville Notch, N. H.

Regret that I cannot be with you at this convention. Kindly extend to the Association my best wishes and good luck to you, Carl.

F. M. TIFFANY."

One from Washington, D. C., addressed to the Secretary:

"Chief O'Hearn, Secretary,
New England Fire Chiefs' Association,
The Balsams.

Please convey my greetings and best wishes to all for a very successful and enjoyable convention in the beautiful White Mountains.

NELL ANTHONY."

One addressed to the President from New York:

"President Stockwell, I sincerely regret my inability to attend this session. Confer good wishes to all. Hope you'll have a big success.

TOM DOUGHERTY."

"WHAT THE INTERNATIONAL ASSOCIATION IS PROPOSING TO DO TO ASSIST FIREMEN'S TRAINING SCHOOLS."

BY CHIEF SELDEN R. ALLEN

Brookline, Mass.

Mr. President, Gentlemen of the Convention: Each succeeding major disaster in this country in the last decade has accentuated the need of the co-ordination, standardized training and co-operation of the emergency forces of the nation, especially those of the fire and police departments.

The use of airplanes and high powered motor vehicles moving over super highways and the speedy railroad trains of today has solved the problem of distance and time.

The feasibility and value of the scheme of sending emergency forces long distances was proven during the recent floods in the middle west when police officers were sent from the City of Boston by plane into this stricken area and served efficiently until their need had passed. It was proven again when members of the Coast Guard with their boats from the Atlantic Coast rendered meritorious service in this same area.

The need is generally for men to replace those worn out through long hours of strenuous service, rather than for additional equipment, but it is my firm conviction that everything that goes into the emergency equipment of every department in this country should be standardized so it can become interchangeable and used anywhere when needed, particularly lighting plants, syphons and portable pumps.

The International Association of Fire Chiefs will establish for the fire service of this nation uniform drill standards, including evolutions, procedure, subjects for special attention and proper forms of reports and records thereof. These reports should and will be comprehensive and include all vital facts of departmental activities assigned to a unit or an individual.

No other organization in the world is so well equipped to assume this responsibility of education and training for the fire service, for its members possess factual knowledge gained through experience, the value of which is beyond computation, and in the last analysis the members of this organization are the ones who will be held responsible for final results. It is also allied with the Vocational Training departments of the various states.

The entrance of commercial organizations into this field of education and training of the fire service should be watched very carefully and should in all cases be allowed only after a careful investigation and approval of the Educational Committee of the International Association of Fire Chiefs and the National Board of Fire Underwriters. Any other policy will inevitably produce a chaotic state of affairs.

PRESIDENT STOCKWELL: Are there any questions you would like to ask Chief Allen?

CHIEF JOHNSON, Waltham, Mass.: I move the paper be received and placed in the proceedings and a vote of thanks be given to Chief Allen.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: The next will be on the topic "Activities of the International Association and Co-operation with National Board of Underwriters," by Mr. Fred Shepperd, Headquarters, Manager.

ACTIVITIES OF THE INTERNATIONAL ASSOCIATION AND CO-OPERATION WITH NATIONAL BOARD OF UNDERWRITERS

By Fred Shepperd

Headquarters, Manager

The title assigned to me is rather confusing, "The Activities of the International Association and Co-operation with National Board of Underwriters."

Chief Allen has already very ably outlined to you the activities of the Association, particularly with relation to the educational program. The Association today has a very ambitious program under way. The educational part of it is but one factor. In order to make the methods of training throughout the country interchangeable, it will be necessary to have the same methods of evolutions performed in each section. That, of course, is next to impossible. Those of you who have worked on the educational program in the past have found a very wide diversity in different sections in, for instance, the methods of performing evolutions. For that reason the task of setting forth in any form information which you hope can be used by all departments is a stupendous one.

We also discovered that in the work of the Association when we were trying to formulate our civil service law. After getting what we thought a perfect law completed, we checked up and found that it would be unconstitutional in most of the states of the Union. We had to retrace our steps and try to rewrite the law. When we got through, we found that we had no law worth recommending to the Association. Instead we outlined certain essential points which should be incorporated in the law and so worded as to be legal in any state. That suggested outline has already been employed in working up a civil service law in several states.

Going back to the question of education. Chief Scott, who is chairman of the Educational Committee, has done some very fine work this last year. His report of progress will be presented at the meeting of the International Association at Oklahoma City in October. In order to be of value to the field the information compiled or prepared by Chief Scott and his committee should be put in printed form so that all the members may benefit from it. Just how we are going to do that I don't know because quite a bulky compilation has already been prepared.

The policy of the International Association is unique. If you compare the money spent by this association with other associations, you will find this difference. Since this association was formed, I think it was in 1881, there hasn't been expended a dollar or any energy to benefit the work of this association. The work of this association has been entirely unselfish. All the work we have done is for the benefit of the public we serve. We have today less than three thousand members. We never can hope to have more than four or five thousand active members, chiefs. Therefore, our revenue is limited. The association has not gone ahead so far as it would have if it had been working for its own interests alone.

The association plans to follow the school movement. If you go back to the action taken at Winnipeg in 1930 when Scott was president, you will see the tremendous amount of work that has been done. Of course the association hasn't gone into each neighborhood and planned schools. What has been accomplished in the past by district organizations and others, all should be credited to the International for starting the ball rolling.

Now with regard to the National Board of Fire Underwriters co-operation, Dan Tierney, our next year's President, conceived the idea of both organizations working more closely. In the past both felt that the other wasn't playing ball with them. We really didn't know them. It was up to Dan to get the two boards together. We found them a fine group of men, willing to go with us more than half way. They have worked with us on this committee, and the Board by its actions has been only too glad to forward the work of the association. To be specific, they issue quite a variety of technical pamphlets. They provide the association's headquarters office with any number of copies of those that we want without any cost to the association. Secondly, when they had the question of protecting against floods, they called upon the association to be represented there and I think three of our members were present at that conference. That tells me and I think it tells all of us that the National Board is not only conscious of what the association and its members do but that they are willing to participate.

Now as to how far the National Board will go, we have not found yet at what point they are anxious to stop. For example, there has been a lot said about the published fire losses. Those figures are based on reports of the chief of the local department. We have a department, say, in Ohio that has a pretty bad fire record. The chief wants to be shown up pretty well in the National Board records and he underestimates on the fires. Therefore, he has less fire loss. Because of the lack of accuracy of those reports and the apparent lack of any benefit secured by the publication, the Board has withheld the publication of those figures. Today those figures are not being broadcast. We have found the men down there only too anxious to work with us. I thank you.

PRESIDENT STOCKWELL: Are there any questions you would like to ask Mr. Shepperd?

CHIEF RANDLETTE: I move you a vote of thanks of this Association be extended to Mr. Shepperd for his paper and that it be incorporated in the minutes of this meeting.

(Motion seconded and carried.)

CHIEF ALLEN: Before we go onto the next subject, I believe on every topic submitted here we should have a full and frank discussion on the facts brought out. These men have come great distances, some at very large expense. Instead of having a yes-yes chorus I think we should have a discussion on every topic as presented, and so I want to bring to you the standardization of equipment for emergencies.

Chief JOHN W. O'HEARN, Secretary-Treasurer, Watertown, Mass.

It was shown in the flood in the Connecticut Valley a few months ago that lighting outfits sent into that area were absolutely useless. The same thing was found in the use of syphons, and so I believe we should have standardization extending beyond the limits of a state, extending into an area like New England or beyond that, a standard for connectors and for everything that enters into the activity of a fire department. If Chief Root of Springfield is in this audience, I think he can tell you that much of the equipment that might have been useful was practically useless because we had no standardized connectors.

CHIEF SANBORN, Portland, Me.: In connection with the standardization of equipment, one serious thing has been overlooked and that is the standardization of suction hose threads. We had an example of this in Maine a few years ago when there was a fire in Auburn. The water system was severely taxed and several hydrants had been tapped with the result that a great amount of water was going to waste. There was a wonderful opportunity there of going to the river, but because of the distance, the two lengths of suction hose that were carried would not reach. It was absolutely impossible to connect the suction hose from one make of machine onto another in order to get a line to connect. The manufacturers have different threads on their suction hose, and I believe that is one thing that should be standardized as soon as possible.

CHIEF TIERNEY, Arlington, Mass.: Regarding fire equipment, I have here something relating to that. Percy Charnock was planning to be here but he was unable to be present, and he gave me a letter to read to the convention. Incidentally, it is the first time since this organization started that the New England Insurance Exchange has refused to send us a man. Chief O'Hearn, Allen, Charnock and myself were up in Vermont helping them on fire prevention rules, and on the way up and back we were talking over equipment and we were talking about lighting equipment for each piece of apparatus, and this is the letter I requested him to write:

Boston, Mass., June 15, 1937.

Mr. Daniel B. Tierney,
Chief of Fire Department,
Arlington, Massachusetts.
Dear Chief Tierney:

You requested me to give you a memorandum of my conversation with you the other day when Chiefs Allen and O'Hearn drove with us to Rutland. It was something like this.

I see no excuse for a Fire Department maintaining a separate flood lighting automobile. There have been, as you know, a number of departments which have developed a wagon which they term a "flood light wagon" which, of course, does carry some other equipment. In a good many instances this piece of apparatus has been rather an expensive development.

My reason for saying there is no need for maintaining this separately is that means are at the disposal of the fire apparatus manufacturer, or for that matter the mechanician of many fire departments, to make every piece of apparatus in the fire department a flood lighting unit. I am wondering if any of the departments which are maintaining a single lighting truck have given thought to the idea if the department is tied up at a fire with this unit and at about the same time another fire, accident or otherwise occurred where suitable lighting is necessary, the department would be crippled in such cases.

With automobile fire apparatus there is ample horsepower available to generate more light than we would ordinarily find available from the present so-called lighting units but I believe many of the departments are not making use of lighting facilities which most of them already have. For instance, in most fire departments it is common practice to have a so-called searchlight mounted on the apparatus. Generally, this is a stationary light with facilities for rotating horizontally and it is also movable in a vertical plane to a certain extent. These lights in most instances I believe have a 50-watt lamp and furnish a fairly satisfactory light. My suggestion would be that the fire departments arrange these serachlights so they can be detached from the apparatus and that reels of electric cord be carried so that the lights can be taken into the fire ground by connecting the cord to the lamp and to suitable plugs on the apparatus. A number of such searchlights on the fire ground would be of a great deal of advantage. The generators which are a part of the gasoline engine on most of the larger pumping engines and ladder trucks I believe have a capacity of about 200 watts which would permit a department to use a 100-watt flood light or possibly larger, bearing in mind, of course, that headlights on the apparatus and other smaller lights must be supplied at the same time. I think it also would be possible to increase somewhat the capacities of these generators so that a larger lamp could be used on these searchlights.

One of the things which it has been difficult for me to understand is why manufacturers have not attempted to solve this problem by installing a separate generator for flood lighting purposes, using a power take-off. I have been rather reliably informed such an arrangement could be furnished and not increase the price of the job by more than $200. Here practically unlimited wattage would be available and the generators could be furnished to give direct or alternating current. My preference would be for alternating current as with this type of generator, in addition to furnishing lights, certain power tools designed for alternating current could be used and emergency lighting service could be provided for hospitals or fire alarm headquarters, such as was necessary during the flood of 1936. Some persons may argue there will not be room on the apparatus to carry the flood lights and the reels of wire but I believe through proper engineering the bodies can be designed to take care of this feature and, as a matter of fact, with several pieces in the department equipped for furnishing electrical power, probably not more than two searchlights would need to be carried on any one piece.

This development which I speak of I am certain would be very popular with the fine departments. It only rests with the chiefs to specify the provision of this equipment. Some one of the apparatus builders will pick it up and make it a feature of their equipment.

Even if the departments do not elect to make use of the horsepower of the motors of fire apparatus for generating electric power for flood light purposes, all of them could carry at least one of the portable types of electric generators and thus overcome my objection to putting the eggs in one basket so far as flood lighting is concerned. I believe the Town of Hull has a portable generator on practically every piece of apparatus. I am under the impression the cost of the portable generator would be considerably greater than for the same size generator driven by power take-off from the motor of the apparatus and, of course, would take up space on the apparatus which could be devoted to other uses.

I would be interested in presenting this suggestion to the Chiefs' organization to obtain their reaction. From my observations of the modern fire department operating at night with flood lights available the operations of the department which is not so equipped are at a decided disadvantage. I want to emphasize again

the great desirability of spreading the lighting equipment out to all motor driven pieces of apparatus.

Very truly yours,

(Signed) P. C. CHARNOCK,

Department Manager.

Mr. President, I would make a motion that we go on record as making this part of the equipment of every piece of fire apparatus; that is, pumpers and ladder trucks.

CHIEF KELLEY: I second the motion.

(Motion carried.)

SECRETARY O'HEARN: I may say a word in connection with what Chief Tierney said in reference to the New England Exchange. We were disappointed. It is the first year since we have been in business that we haven't had a representative with us and Engineer Charnock was invited especially, and what Chief Tierney has reference to was one of the subjects he was asked to talk upon and especially that of standardization of suction hose threads. Mr. Charnock was asked to go into that and see what recommendations they might have. Unfortunately he was not permitted to come to our convention and I am very grateful and I think all the members should be for the letter that Chief Tierney has read here as a result of the conversation we had.

CHIEF ROOT: I question very much that vote that was taken endorsing Engineer Charnock's suggestion of making every piece of fire apparatus a lighting unit. I think that that is at least fifty percent superfluous. Most of us are badly in need these days of the replacement of antiquated apparatus, and a reasonably sized fire department with one, two, three or four good portable lighting units will be pretty nicely equipped if they can supplement the antiquated apparatus they now have by up-to-date apparatus and with a reasonable amount of lighting equipment, without going beyond reasonableness. I think we would be better off

PRESIDENT STOCKWELL: Are there any other remarks? The next speaker is Mr. M. Norcross Stratton, Supervisor, Firemen's Training Classes.

THE VALUE OF THE ZONE SCHOOL PROGRAM FOR FIREMEN

By M. Norcross Stratton

Supervisor of Firemen Training, Massachusetts Department of Education

Mr. President and Members of the New England Fire Chiefs' Association: The firemen-training program is now in its fourth year. Fourteen zone schools with service to over 2,000 firemen and to over 300 cities and towns has been rendered by the drill master instructors. The classes are under the joint control of the Massachusetts Fire Chiefs' Club and the Department of Education. Our plan of organization is included in a bulletin which I have available for distribution.

I. FOR THE DEPARTMENTS

(a) *Extension of mutual good will and understanding in the ranks below that of chief.*

The total accomplishment of the educational program for firemen in service as organized in the Massachusetts State Department of Education, Vocational Division, under the auspices of the Fire Chiefs' Club and co-operating agancies is much more impressive and worthwhile than may be made a matter of record in the statistical report of numbers invovled, money expended, and other such data. Behind the mask of things done and recorded, there is always a more human story of things done and achieved. I propose in the time allotted to me to present this latter kind of a report of the work accomplished in the zone schools for firemen training in Massachusetts.

Every department which has participated in the program has been affected, in some measure at least, by its contact with the program. Probably an outstanding achievement is the knitting more closely together of the fire-fighting forces in neighboring communities in the bonds of good fellowship. In every one of the certificating exercises held at the close of each unit of work this note of friendliness has been touched upon by one or more speakers. It is inevitable that, as men from various towns meet together over a period of twelve weeks or more with common interests and expend together common efforts toward a common goal, there should spring up as a consequence a feeling of real friendship in service among the men thus meeting. This particular advantage is one that cannot be gained in fire schools organized solely for a single department, nor can it be as fully achieved when the fellow from the outside comes in as a visitor to a local drill school. In the zone school, the school belongs to each man in membership as much as it does to any other men in membership. Service to a group from a particular department need not be kept paramount. This sense of common ownership and common effort on an equal basis cannot fail to be productive of a spirit of mutual aid and good followship.

It is probably quite well illustrated in its ultimate outcomes in the very serious fire which confronted the Clinton department in the burning of their high school three years ago. As a common problem, members of the zone school class from Clinton, Bolton, Sterling, Berlin, and other communities near Clinton had worked out a method of fighting a fire in this very building. When the fire actually occurred, members from each of those departments were called upon to fight together to keep it under control and limited to the least possible loss. The story is told of the fire that an experienced news writer from one of the largest of the metropolitan papers by chance, and chance alone, was on the spot as the first fire fighting outfits were arriving. Sizing up the situation in terms of the fire itself and the force at hand to fight it, he hastened to get word to his newspaper as soon as possible, with the good reporter's instinct of achieving a scoop. He was *not*, however, aware of this "*work together spirit*" that had been developed in the zone school sessions and so sent his message, "Clinton High School totally destroyed by fire." Even the layman viewing the scene the day after the fire could recognize what chiefs of experience have since declared was a *wonderful stop*. There can be little doubt that this spirit of co-operation with known friends was a factor in this particular achievement.

(b) *Improved practices and information.*

This story just told points out another achievement of the zone fire schools. Fire fighting procedures and practices have been improved. Experience is said to be the best teacher. The experience of men in a single town cannot be so wide as the pooled experience of men from a number of towns. Your zone school organization has the advantage of pooling the experiences not from the men in one department or town, but from men in a number of departments and towns. Experience is a

good teacher, but unless one learns to analyze, organize, classify, and apply the knowledge that experience brings him, his experience falls far short of its potential value as a learning process. The zone school does base its training upon actual or potential experience of the type involved in the above story. There is a chance to analyze, to organize, to classify, and to apply knowledge based on experience in the zone school classes. Improved practices will necessarily result. Members of a zone school class held in Springfield responded to an alarm in their own little town. They had been instructed in regard to the importance of ventilating in their zone school. Arriving at the scene of the fire, they discovered it to be the home of one of their most prosperous and influential fellow citizens. Smoke was pouring in volume from practically every point of egress in the building. It looked like a bad fire. Applying the principles taught under the head of "Evolution," the firemen proceeded to effect ventilation. They were ready with water at the nozzle to back up the men ventilating and to knock down the fire when it could be seen. As the building cleared itself of the smoke and the men were able to get in, they discovered that the fire itself was confined in a metal waste container located in a laundry closet in the basement of the home. They removed the container to the outside, extinguished the flames, cleared the building, and *secured it* without ever a drop of water in the house or on its contents. Under older practices they might have deluged the building with water and destroyed much property with water. Onlookers at the fire who were loud in their criticisms of the firemen in getting to work, because they could see no water, probably learned their lesson, too. At least the owner of the property understood and appreciated the change in practices and expressed his appreciation in the form of a very substantial subscription to the relief association of that fire department.

Perhaps in no phase of fire work more than in the phase of salvage and overhaul has there been a greater advancement in improved practices. The superintendent of the Protection Department of the Worcester Protective Association has instructed over 2,000 different firemen in zone school classes from over 300 Massachusetts towns and cities in the value and practice of salvage. A fire occurred in a home in the town of Holden. The men in that department who had attended the zone school had been greatly impressed by Superintendent Walden's instruction. Very carefully and expertly they proceeded to carry out salvage operations at the fire in question. Much water had to be used to extinguish the blaze, but comparatively little water damage resulted, by reason of the fact that the salvage covers had been promptly placed. This instance is another one in which the owner of the property recognized superior service and rewarded it. He presented to the department six new salvage covers. Men in the Department had stated that their experience in the zone school had made them conscious of the value of salvage work. These salvage covers came to that particular department at the expense of a single individual.

Captain Jacobs of Wakefield told me this story. He is second to the chief in command at that department. In twenty years of service in the department he had never seen a water chute until Superintendent Walden presented his demonstration before the drill masters. Within a month, at a fire on the third story, the captain had occasion to use such a chute. The story below the fire was occupied by a printer who had on hand a great deal of material of expensive stock and much more expensive work in process. The sprinkler, having let go on the fire floor, filled that floor with a considerable depth of water. The captain, in sizing up the situation, determined that a water chute from the window on the printer's floor could be used effectively. He ordered his men to set it up, bored the necessary holes in the fire floor, and took out the water without any damage whatever to the printer's stock.

(c) *New equipment and apparatus.*

Chief CHARLES H. FRENCH, Board of Directors, Manchester, N. H.

The zone schools have without question stimulated the sale of equipment and apparatus for fire-fighting purposes in many of our Massachusetts communities. Salesmen are on record as holding the belief that the zone schools deserve a real share of credit in this particular. They have noted that greater powers of discrimination have been exercised in the purchase of equipment. One such salesman has said that he has found that in departments purchasing new nozzles the firemen responsib.e for the purchase have a more practical grasp of the requirements of such equipment as related to apparatus and water pressure in their own towns. He says that he believes that this is in a measure at least due to the fact that many of them have had practical instruction in the elementary principles of hydraulics.

A newly-organized company had a 1,000 gallon pumper turned over to it. No one in the department knew of its proper operation, but a zone school was organized in the neighborhood and men were assigned to that zone school with the express purpose that they might learn to operate the pumper in service. Without the school organization, this would have been a much more difficult undertaking.

A chief in one of the communities in the western part of the state had repeatedly requested an appropriation to cover the cost of a 55′ ladder, but without any success. He sent men to the nearest zone school with the definite suggestion that they learn to raise such a ladder in first-class fashion. After the instruction had been secured, he arranged for a demonstration by an equipment company in his own home town before his own selectmen. He so ordered the affair that a crew of his own men were permitted to raise and lower the ladder. The purpose of the demonstration achieved the hoped for results. The selectmen present were impressed when they became aware that their men could properly handle such a ladder, authorized its purchase and the department now has the ladder ready for emergencies.

We are not willing to leave this subject of the stimulating of departments in the matter of securing new equipment without paying tribute to the ingenuity both of our drill masters and members of smaller departments where money is not available and equipment must be improvised. Our drill masters have in a number of cases pointed the way to members in their zone school classes by which home-made devices might be made a substitute for those commercial devices which the department is unable to secure by reason of lack of money or for other cause. The chief of a call department in a small community attended the zone school class himself and became primarily nterested from his own viewpoint in the many little items of instruction dealing with the safety of the men. He told me later that he had not known much about means for dogging a ladder. Seeing and handling the dogs and chains in the zone school, he became aware how easy they might be made by any clever blacksmith. He thereupon had a sufficient number made to equip his own department and is using them.

We in the State Department have been interested in seeing the drill masters themselves in their own conferences come upon some new device. In the very first conferences the drill masters held at the beginning of the whole scheme, the Springfield department drill masters exhibited a very simple but extremely useful type of rope reel. We have been pleased to have several of these drill masters use our local trade schools to build them similar reels for their own departments.

(d) *New drill schools.*

Probably there is no more dominant characteristic of American life than the going to school. To be sure, the school in many instances takes its form in the convention and the conference such as the one in which we are now engaged. It is in keeping with this American tradition and spirit that the success of the zone

SEAGRAVE 85 ft. STEEL AERIAL LADDER TRUCK,

100% Hydraulic power, operated by three levers and powered by a 240 H. P. V-12 cylinder engine
Delivered to Arlington, Mass., Chief Daniel B. Tierney, September, 1937.

school should stimulate the development of departmental drills and conferences in those communities not already having them. There is not a single one of our zone school instructors who has not, as a direct result of his relationship to the program, been asked to assist local departments to establish local schools of instruction.

The Vocational Division of the State Department of Education has received an increasing number of calls from all over the country for assistance in organization of fire schools. We are happiest, however, that many of our local department heads have asked us to assist them in the organization features of their monthly meetings and of special units of instruction based on the zone school plan. Chief Welch of Williamstown, Chief Brock of Southborough, Chief Carlson of Ashland, and Chief Stobbart of Yarmouth are among the chiefs who have asked for and received such service from the Vocational Division and from our traveling corps of drill instructors.

(e) *Public Support and Publicity.*

Local pride is a loadstone for favorable publicity. The towns and cities involved are proud of their firemen who have taken any part in these programs. The Chiefs' Club, when taking the first steps to organize a training program, had in mind (quote) "the elevation of fire service in the public esteem" (unquote). It is difficult to measure such an outcome. Newspaper men by training and experience are adept at gauging public interest in the affairs of the community. Accepting as a standard of estimate the amount of favorable newspaper comment, the public is both interested in and willing to support the training of its firemen. It has been heartening, too, to learn of a number of instances in which appropriating officials in towns and cities have expressed their interest by paying the expenses of men traveling to the zone schools.

II. FOR THE DRILL MASTERS

(a) *Improved instruction.*

The functions of supervision in the zone schools by the State Department of Education include the improvement of instruction procedures and methods. This is accomplished by the setting of a pattern of good teaching, and the constructive elimination of ineffective efforts and misapplied energy in the teaching process. Starting with a group of men who had already proved their innate capacity to lead by attainment of officer grading in their several departments, this task has been relatively easy. Men from the State Department visit the zone schools from time to time. These men are accustomed to rate the quality of teaching in many types of schools throughout the state. It is their unanimous opinion that the drill instructors have profited by their study of teaching techniques. This progress is further made evident in the instruction material furnished by the drill masters for general use in the zone schools.

The improvement, as instructors, affects not alone their service in the zone schools, but also a similar service in their own departments. One of the interesting by-products has been their adoption of a program of professional improvement within their own drill masters' association.

(b) *Collection of instructional material.*

Out of the drill instructors' interest in doing a good job there has been a gathering together of instructional notes and material for firemen-training classes. Much of this has been developed by the drill instructors themselves, but it has

come also from all over the country. The State Department office has made much of such material available in mimeographed or printed form to all the members of zone school classes. Our office has edited, compiled, and distributed a great deal of special material to the drill masters. Experts in the field of chemistry and explosives, in oil burners, in salvage—arson, fire laws—building construction—as well as outstanding fire fighters have contributed to this collection. The State Department has acted and will continue to act as a clearing house in this particular. No other agency is more favorably situated to render that type of service. Its main effort will be to provide the drill masters with the best and most practical supplementary material for use primarily in the zone schools, but available also for their use in their own department schools.

Our instructors have received nothing in terms of coin of the realm for their services. We know, however, that the experience for each has been a broadening and developing one. First, in their regular meeting with other men of superior standing from all over the state, an exchange of information and ideas has taken place which has made every man a bigger man and more effective in his vocations as fire fighter and instructor. The concrete definite value in this has been apparent as these men have had occasion to take civil service examinations for promotion in their own departments. All have stood high in the comparative ratings and every one without exception has given expression to a personal conviction that his participation in the zone school work and the drill instructors' association have been of direct advantage in this connection. (The same manifestation has been noted among members of the zone classes.)

III. LIFE

The first duty of the fireman is the saving of life. The zone schools have contributed to the furtherance of this principle. Capitalizing on the excellent service of this type rendered by a number of Massachusetts Fire Departments, competent men from those departments have been used to train men of the zone school membership in rescue and first-aid work.

Let me cite one instance. In one of the communities in which we conducted a special unit, the chief of the (call) department had requested that his men be taught how to use the gas masks and the inhalator. As instructor, a member of the Rescue Squad of one of the city fire departments proved especially effective. During the course of his instruction in the use of the inhalator, he told the class of its possible uses in pneumonia cases. He urged them to let the local doctors know that the apparatus was available and that the firemen had received training in its use. Within the week the wife of one of the members of the class was stricken with pneumonia. Her case rapidly became critical and hope was practically abandoned. The husband remembered the suggestion offered by his fireman instructor and asked the doctor in charge to try the inhalator as a last resort. The doctor agreed—men and the inhalator were brought to the scene and put to work. The oxygen began to give out and it was remembered that the instructor had advised the turning to a garage in such an emergency. A new supply was secured and the treatment persisted in without interruption. At length a definite turn for the better was noted and from that point on there was no doubt of a full recovery.

The same sort of incident has occurred, of course, before the zone schools were ever thought of or were in operation. But I submit that in any organized and systematized effort to extend the advantages of the school to *all communities*—as do the zone schools—there will be less of an element of coincidence in this and other life saving stories.

For all concerned in this program in Massachusetts there has come much satisfaction in the country-wide and world-wide recognition of a real contribution. Letters of commendation have reached us from every state in the Union and from foreign countries.

The ability of the federal and state vocational educational services to render assistance to this and other programs of instruction having to do with helping men and women to learn and earn has been recognized by Congress. That body has recently appropriated $14,000,000. additional funds for vocational education. The firemen-training and police-training programs are specifically mentioned in the legislation. We may confidently look forward to greater and more effective service in this type of enterprise.

The span of life, as one looks backward, seems short at best. To the man of vision and worth, there comes a very natural desire to achieve one measure of immortality in the records of accomplishment which will stimulate and help those who come after him. I wish to pay my tribute to the Massachusetts Fire Chiefs' Club and to those men whose ideal it was to leave for those who come after them the means of learning and advancing which they acquired only in the process of fortuitous and unguided experience. The chiefs responsible for development of the zone schools for firemen training deserve the tribute that is embodied in the poem which I will now read to you in closing:

An old man traveling a lone highway
Came at the evening cold and gray
To a chasm deep and wide.
The old man crossed in the twilight dim
For the sullen stream held no fear for him.
But he turned when he reached the other side
And builded a bridge to span the tide.

"Old Man" cried a pilgrim stranger near,
"You're wasting your strength by building here,
Your journey will end with the ending day,
And you never again will pass this way.
You have crossed the chasm deep and wide,
Why build a bridge, at eventide?"

The builder raised his old gray head,
"Good friend, on the path I have come," he said,
"There followeth after me some day,
A youth whose feet will pass this way;
This stream which has been naught to me,
To that fair-haired boy may a pit-fall be,
He too must cross in the twilight dim,
Good friend, I am building that bridge for him."

CHIEF RANDLETTE: I move you that we extend to Mr. Stratton a rising vote of thanks for his excellent paper.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: The next will be the topic, "Training for Public Service," by Frank Cushman, Chief, Industrial Education Service, United States Department of Interior.

SECRETARY O'HEARN: Mr. President, on June 16th I received the following letter. That was after our program had gone to press. This is from Mr. Cushman addressed to me.

"Dear Chief O'Hearn:

Some months ago I promised Mr. Stratton, of the State Department of Education, that I would spend two or three days with him at Fitchburg, in connection with the teacher-training program of which he has charge. That engagement was scheduled for June 29 and 30.

For me to attend the 15th Annual Convention of the New England Association of Fire Chiefs at Dixville Notch, N. H., on June 22nd, would, therefore, necessitate either two trips to New England within a period of ten days, or would leave me with time on my hands between the time of closing your convention and the beginning of the Fitchburg program. These points considered in relationship with the pressure of my work here in Washington force me to the conclusion that I shall have to cancel one of the appointments in New England. I am sure that you can appreciate the fact that the work at Fitchburg with the trade school teachers and directors from all parts of Massachusetts must, from my standpoint, be regarded as the more important of the two engagements.

I had looked forward with considerable pleasure to attending your convention, but in view of the fact that Mr. Stratton will be there I feel sure that vocational education will be well represented. I am therefore forwarding herewith a copy of a brief discussion of the topic "Training for the Public Service" which I agreed to present.

If you wish to have the paper presented by Mr. Stratton I know he will do a good job.

Some time ago I stated that if I found it impossible for me to attend your convention I thought that Mr. James R. Coxen could represent me. Now, I shall have to recall that promise as it is not possible for Mr. Coxen to make the trip at this time.

With kind personal regards and assurance of my great interest in the Fireman Training Program in my native State, as well as the work of the New England Association of Fire Chiefs, I am,

Very truly yours,

(Signed) FRANK CUSHMAN."

With an enclosure of a nine page manuscript. If there are no objections, Mr. President, I shall embody the manuscript as presented by Mr. Cushman in the proceedings of this convention.

TRAINING FOR THE PUBLIC SERVICE

By Frank Cushman

Chief, Trade and Industrial Education Service, Office of Education,
United States Department of the Interior

During the past fifty years greater changes have occurred in methods of living than in all the centuries which have preceded the present era. Those of us who can remember things that occurred a half century ago can recall that houses and public

Chief WILLIAM C. MAHONEY, Board of Directors, Peabody, Mass.

buildings were then lighted by kerosene lamps or gas jets. The domestic water supply was delivered through a pump in the kitchen or out of doors. Fire protection, except in the larger cities, consisted largely of bucket brigades; the telephone was a novelty and radio was not even thought of. The few who believed that the flying machine might be a possibility were regarded by the many as being more or less crazy. In short, people lived in much simpler ways. They travelled less and in every way followed a simpler pattern of life. Small street cars drawn by horses, lighted by oil lamps and heated in cold weather by small stoves constituted the principal public transportation in the larger cities, and as there were no automobiles, good roads for travel between cities and towns were not needed. During Colonial days the few Post Roads which had been built with the help of the Federal Government had mostly fallen into a greater or lesser stage of dilapidation due to lack of care which, in turn, was the natural consequency of limited use in the days when the steam railroad was the only important means of travel between cities.

In connection with the great changes which have occurred during the last half century, there has been a remarkable growth in urban population. For various reasons people moved from the farms to the cities and the building up of great metropolitan areas has presented problems which were either non-existent in the old days or which have been changed to such a degree, by the new conditions surrounding them, that they are hardly recognizable.

To list just a few of the public services which are now rendered by Governmental agencies, which under a simpler plan of living, individuals or small groups of individuals in villages took care of for themselves, the following may be mentioned: Fire prevention and fire extinguishment; policing the community in the interest of safety to life and property; making available an adequate supply of water safe for domestic use; the disposal of sewage, garbage and trash; the maintenance of roads, streets, sidewalks, parks and playgrounds; the protection of the public health; the inspection of weights and measures; the inspection of buildings with respect to structural features, plumbing, electrical installations, light and ventilation; and, the regulation of traffic.

In order to perform, in an efficient manner, the necessary duties involved in carrying on the work of public service, public employees must be trained for their jobs. In private employment, some degree of competition still prevails, so that the most efficient and capable people tend to be successful in getting good jobs while the inefficient and incompetent workers fall by the wayside. Unfortunately, this factor of competition does not always operate up to its theoretical capacity in the public service, but the gradual extension of the merit system due to an increased appreciation on the part of the average citizen of the desirability of efficiency in the public service, is having a salutary effect upon the situation. The fact, however, remains that for many public service occupations, training facilities either on the job or off the job are wholly inadequate to meet the needs. The net result of all this is that in all too many cases public service employees know just enough about their jobs to "get by," having learned what they know from their mistakes and blunders on the job.

In view of the ever increasing demands upon governmental agencies, it is becoming more and more clearly apparent that the expenditure of public funds for training people for public service occupations can be made a highly profitable investment. With this general idea in mind increased attention is being given to training for this field of work by State and local governments, also, to some degree, by the Federal Government.

The training programs now being conducted in different parts of the country are being carried on under four principal sponsoring agencies, i.e.: Governmental

units themselves, colleges and universities, organizations of public officials, and public vocational education. Among the more popular fields for training are fire-fighting; the police service; water supply, purification and distribution; highway maintenance; elevator, smoke and other inspections, such as weights and measures; sanitary inspection concerned with checking up on restaurants, lunch counters, soda fountains and swimming pools; the enforcement of codes for building construction including plumbing and electrical installations; the inspection of boilers and many other classifications of public service employment.

According to a survey by the National Fire Protection Association and reported in the "volunteer Fireman," 433 fireman training schools were operated in the United States in 1936. More than 31,500 firemen received some training in these schools and through the work of travelling instructors approximately 15,000 additional firemen received some training. It may be noted that these figures do not include enrollment in drill schools organized as a part of the work of a large city fire department where the training is an integral part of the regular operations.

The members of the New England Association of Fire Chiefs are familiar to a considerable extent with what has happened in the field of firemen training as a result of co-operative effort between the International Association of Fire Chiefs and the Office of Education of the United States Department of the Interior. Under the general auspices of the latter agency, operations in the field of fireman training sponsored by State or District Chiefs' Associations in co-operation with one or more State Boards for Vocational Education have made a remarkable showing. The record in New England under the general auspices of the New England Association of Fire Chiefs is a notable one, and every individual who has helped to achieve the results secured has reason to feel proud of the record which has been made.

The outstanding example in the field of training for the police service is the training program operated by the Federal Bureau of Investigation of the United States Department of Justice. That agency not only trains its own agents, "G" men, but also operates schools for selected representatives of police departments from cities throughout the United States. For the latter group an effort is made to select men who will return to their local communities and pass the benefits of their training and increased knowledge of efficient police methods on to others employed in the local departments.

In addition to the F.B.I. School, there were in 1936 twelve cities in the United States which operated police training courses for periods as long as three months. Six cities offered ten weeks of training, six cities four weeks of training, and seventeen additional cities periods of training of more or less indefinite length. Police training is well organized in many cities, including Washington, D. C., Chicago, Louisville, St. Louis, Cincinnati, Newark, N. J., Wichita, Kansas and Berkeley, California.

The League of Virginia Municipalities has conducted a total of 132 schools and classes up to the present time, with an enrollment of more than 7,000 public employees. The training program for firemen in Virginia was started in 1933 with assistance given by a representative of the Vocational Division of the Office of Education. The program now comprises 24 zone schools for firemen. The State-wide training program has now been expanded to include training for police, water works employees, welfare officials, building inspectors, and inspectors of weights and measures.

Variety of Instruction Offered in Particular Fields.

To illustrate the scope of training for a particular public service occupation such as the fireman it will not be necessary to review here either the extended outlines printed in Federal Board Bulletin 155, Fire Fighting, or the specific training courses in "Practical Evolutions" and "Skull Practice" as worked out in Massachusetts. Information on those matters is easily available to members of this group. It may, however, be of interest to refer to certain training courses which have been provided in different areas for types of public service employees whose work is of definite interest to fire chiefs. Consequently, illustrations are here given of subjects of instruction which have recently offered for building inspectors and for watchmen as follows:

For Building Inspectors

1—Labor Laws and the Building Department.
2—Model housing code.
3—The administration of building codes.
4—Classification of and general requirements for various types of structures.
5—General building code restrictions.
6—Plumbing, sanitation, light and ventilation from the standpoint of the building inspector.
7—Means of egress.
8—Loads.
9—Precaution during building operations.
10—Fire resistive construction.
11—Chimneys and heating equipment.
12—Elevators.
13—Electrical installations
14—Fire prevention equipment.

For Watchmen

1—The importance of the watchman in fire prevention and control.
2—Fire hazards.
3—The watchman's duties.
4—What a watchman should know about fire extinguishers.
5—Co-operation of the watchman with the fire department.
6—Accident prevention.
7—Principles of first aid.
8—What the watchman should know about sprinkler systems.
9—What the watchman should know about signal systems.
10—Importance of salvage.
11—Co-operation with the police department.

Necessary Steps in Providing the Training Program.

Experience has verified the soundness of the general method which has been followed in setting up vocational training programs for public service occupations. Briefly stated the procedure is:

1—To analyze the problem and determine the nature and extent of the need for training.

2—To prepare a general outline of the instruction and training to be given.
3—To organize a tentative training plan based upon the assumption that men who are *thoroughly experienced in the particular occupation to be served* will be used as instructors.
4—To select, with great care, prospective instructors on the basis of their experience and probability of their functioning as instructors because of their place in the organization, their experience, and their personal characteristics.
5—To provide a sufficiently extensive and adequate training program in "methods of instruction" for these prospective instructors and, in connection with that training, ro refine and further develop the outlines of training previously developed.
6—To provide the necessary working conditions to that the training program, when started, will have a fair chance to be successful.
7—To provide the necessary supervision and administrative control in order that the program may function in an orderly way, supported by accurate, reliable records, to the end that the completion of a unit of training and the granting of a certificate may mean something.

At the present time the Vocational Division of the Office of Education has in preparation a study of the duties and responsibilities of police officers. This study was undertaken at the request of the International Association of Chiefs of Police and in carrying on the necessary work the Office of Education has enjoyed the co-operation of the Chiefs of Police of many cities throughout the country. In addition, officials of the Federal Bureau of Investigation of the United States Department of Justice have assisted the Office in many important ways. Within the next year, training programs for police officers may be expected to develop in many localities in much the same way as fireman training programs were set up several years ago. Later on, it is probable that organized training in some form will be established for many other types of public service work. In the long run these training programs will be justified in the degree to which they contribute to the efficiency of the public service. To live, they must be worth more than it costs to provide them.

PRESIDENT STOCKWELL: "Progress of Training Schools in New England," and the first will be from Chief Sanborn of Portland, Maine.

TRAINING SCHOOLS IN MAINE

By Oliver T. Sanborn

Chief of Fire Department, Portland, Maine

Mr. President, Members of the Association, Ladies and Gentlemen: While the State of Maine was one of the first to support the idea of training schools for firemen, yet it is far from being one of the leading states today in this most important work.

In the spring of 1932 an instructors training conference was held in Portland, under the direction of Mr. Kleinfelter, special agent for the Federal Vocational Board of Education, and assisted by Mr. Patrick, State Director of Vocational Education. This conference was attended by representatives of Fire Departments from Caribou to Kittery, and those of you who know your geography realize that this is a distance of some 400 miles. This conference was very successful.

In 1934 the Fire Chiefs of Maine assisted to some extent by the State Department of Education, established schools in Portland and Biddeford. Out of a total attendance of thirty, at these two schools, twenty-three were entitled to certificates, which was a fairly good average.

In 1935 schools were held in Portland, Lewiston, and Bangor. The total registration at these schools was forty-six, but only twenty-two of the men attended the required number of sessions to entitle them to certificates. At one of these schools with a registration of twenty, only five completed the required amount of work. This was very discouraging to the men who were interested in carrying out the educational program. For instance, on one occasion I drove 140 miles in one afternoon, gave two lectures, and returned home that night. In the class that evening were representatives of but five departments in that section of the state that we wanted to reach, although there was a good attendance from the local department.

This condition in Maine may be due to several things; it may be indifference; lack of interest in the educational work; insufficient support from the State Department of Education; or it may be due to the large area of the state, with but few cities and towns having the proper facilities for carrying out the program. Personally, I prefer to believe the last one is the correct answer. It is true there are but few real thickly populated centers in the State, with any appreciable number of surrounding towns. This means that the men from the majority of the Fire Departments, which are mostly volunteer, would be required to travel a considerable distance and at their own expense, in order to take advantage of the schools which have been held in the past. In other words, lack of finances is another answer to the present educational situation in Maine.

Speaking of finances reminds me of a letter that we received from a selectman of one of the small towns in the northern part of the state to whom we sent a notice of a school that was to be held, and inviting representatives from the Fire Department to attend. He replied that expenses were already too high, and there was no need of starting schools for firemen and making soft jobs with big salaries for some people.

However, in spite of the rather discouraging results obtained in past years the Maine Fire Chiefs have recently appointed a very active Educational Committee, and plans are now being formulated for the establishment of additional schools this year.

PRESIDENT STOCKWELL: Next will be Chief Charles French from New Hampshire.

TALK

By Charles H. French

Chief of Fire Department, Manchester, New Hampshire

Mr. President and Fellow Members of the Association, Ladies and Gentlemen: I am sorry to say that I don't think the State of New Hampshire has probably made the progress on this firemen's education that some of the other states have in New England. Some of our cities, which are few in the state, have endeavored to start the zone schools.

Here three years ago we had a session in Concord of a week's duration. All the departments in the state were invited to send representatives to this school. They

Chief A. J. COTE, Board of Directors, Woonsocket, R. I.

had an attendance of something like forty-eight men from the different departments. That created quite a lot of interest and some of the chiefs of the cities thought that things looked pretty promising, but there wasn't much done for a year and we held another session of a week.

It has created some interest throughout the smaller departments of the state, and the cities themselves who have their own schools have sent invitations to the smaller towns to send representatives to their schools, which I am sorry to say have not been very heavily attended. We do feel encouraged, though, for the reason that the smaller towns are sending to the cities for men from their drill masters or officers of the department to come to them and give them lectures at different times at their meetings.

We do feel encouraged and think some time very shortly we may be able to start zone schools, and about all I can report for the State of New Hampshire is progress on the question.

PRESIDENT STOCKWELL: The next will be from Chief Alfred H. Koltonski from Vermont.

TALK

By Alfred H. Koltonski

Chief of Fire Department, Rutland, Vermont

Mr. President and Members of the Association: The State of Vermont has been a little backward in training schools. We held one school in Rutland in 1935 through the co-operation of Chiefs Allen and Tierney. They sent their drill masters up and we had a school lasting two days. We had sixty-five men from twelve towns.

The next month we had a school at Woodstock, Vermont. Again Chief Tierney and his drill masters drove up there, and being a foreign country, they performed drill evolutions in a snow storm.

The next school was held in Montpelier, Vermont. The attendance there was very small, and again we had to depend on Massachusetts for the drill masters.

Last year we held a school in Bennington, Vermont. Chief Allen and Chief Tierney again sent up drill masters, and we had a school there of fifty-six members from nine towns. It was very successful. The men worked all day Sunday from early morning through the dinner hour. When a man will work through dinner hour to run up and down ladders, he is interested.

This July we are holding a school in Springfield, Vermont. We will again have to depend on outside assistance. The Federal department fell down on us. The money that was coming from there didn't come, so we have to do our own financing, but I think we are going to get some new Federal money. We are trying to get Vermont back in the country, and if the appropriation goes through, we will get some money.

PRESIDENT STOCKWELL: The next will be Chief M. W. Lawton of Connecticut.

PROGRESS OF THE FIREMEN'S DRILL SCHOOL IN CONNECTICUT

By M. W. Lawton

Chief of Fire Department, Middletown, Conn.

Mr. President, Ladies and Gentlemen: After about two years of agitation among some of the Fire Chiefs and the County Mutual Aid Associations, talks by

Chief Dan Tierney of Arlington, Mass., and Chief Charles McCarthy of Worcester and others before the County Associations, the Connecticut Fire Chiefs' Club took up the task of getting the school started. A committee was appointed to get in touch with the State Department of Education and ask their co-operation in organizing and promoting a statewide plan for training firemen.

A committee of twelve chiefs with Chief John C. Moran as chairman was appointed to present the matter to Dr. E. W. Butterfield, Commissioner of the State Board of Education.

This committee met with Dr. Butterfield and explained the need for training firemen on a statewide basis and the desire of the Fire Chiefs to secure the help of the staff of the Department of Education in providing such training. The Commissioner of Education agreed to have the staff of his department co-operate, within the limitations of the departmental budget and the experience of the staff members, with the Connecticut Fire Chiefs' Club in organizing a statewide training program for firemen.

The Chiefs' Club accepted the full responsibility for all promotional work. The State Department of Education staff, according to the arrangement agreed upon, is to

A. Train experienced firemen in the teaching methods suitable for fire department training.

B. Advise with regard to the organization and administration of a statewide educational program for firemen.

C. Develop, with the help of vocationally experiences fire fighters, subject matter outlines, drill masters manuals and instructional materials.

D. Supervise the instruction given in the various centers included in the training program.

E. Co-ordinate the activities of the various training centers included in the training program.

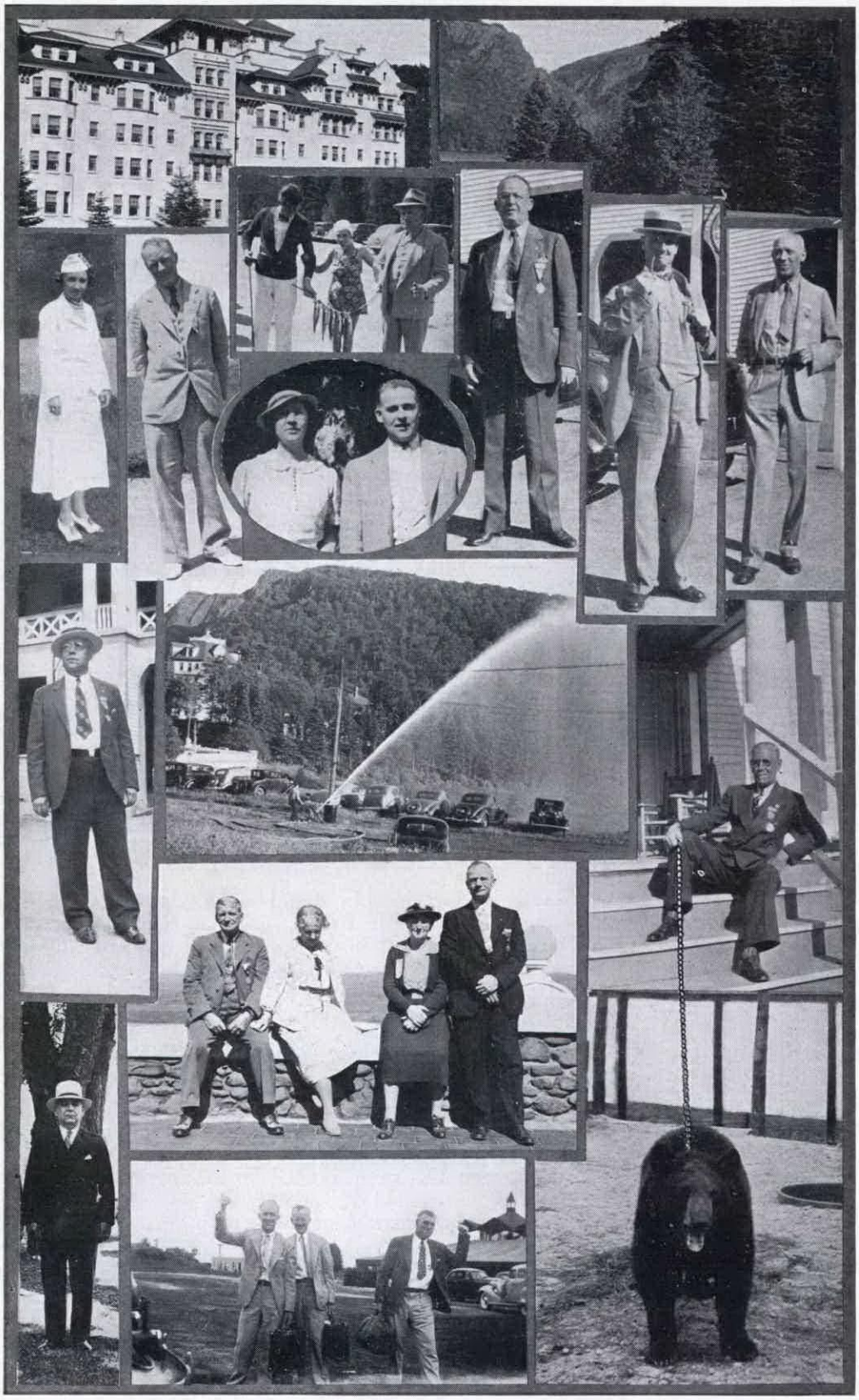
F. Certificate drill masters and regional school graduates.

A tentative program was later developed by a sub-committee appointed by Chief Moran, working in co-operation with Mr. Frank Cushman, Chief, Industrial Education Service, United States Office of Education, Mr. A. S. Boynton, State Director of Vocational Education, and Mr. H. S. Hall, State Supervisor of Trade and Industrial Education. This plan was announced by President Henry R. Taft of the Connecticut Fire Chiefs' Club as an activity of the Club.

The plan chosen contemplated starting in a small way and expanding as experience pointed the way and determined the need.

The first step was to provide teacher training for a group of selected drill masters. These men met eight hours a day for five and one-half days in the Hartford Fire Department headquarters and were drilled in the elements of teaching. This was in October, 1936. Nineteen men were enrolled for the course. The men were selected geographically. Thus, a trained drill master was provided for each of the points in the state where a training program was to be set up.

The drill masters were also selected on the basis of their knowledge of fire department work and their apparent ability to train others. Most of the men were officers; many of them were Chiefs or Deputy Chiefs.



BIG AND LITTLE "SHOTS" AT THE BALSAMS.

The teacher training was conducted by James R. Coxen, Agent, United States Office of Education, Washington, D. C., and Herman S. Hall, State Supervisor of Trade and Industrial Education for Connecticut. To those men the fire departments of the state are very grateful for the wonderful work they have done, especially Mr. Hall, who has worked hard to make this training course a success.

During the conference the group members organized as the Connecticut Fire Department Drillmasters Association. This organization met one day each week for six months. At these meetings the standard evolutions adopted by the International Association of Fire Engineers at Toronto in 1920 were studied and the evolutions actually performed. At the same time the proper methods of teaching these evolutions to others were discussed and determined.

Much mimeographed material for the use of drill masters was developed by the association and published by the State Department of Education.

The Drill masters Association and Mr. Herman S. Hall, whom the Department of Education had detailed to work with the Drill masters' Association, recommended to the Connecticut Fire Chiefs' Club the material that should be taught by fire department drill masters. The Chiefs' Club approved the outline and proceeded to organize a number of regional schools, each in charge of the local fire department chief and one of the trained drill masters.

To these schools each fire department in the state was invited to send one or two carefully selected men. The men attending the regional schools will receive a certificate from the State Department of Education, and it is expected that they will be detailed to train other members of their departments. In this way a large number of men should be trained in a relatively short time.

On May 24th, 1937, our hopes were realized when the first regional schools were opened at Middletown and New Haven. These regional schools so far organized are as follows:

Annex Fire Department, New Haven
Bristol Fire Department
Middletown Fire Department
New Haven Fire Department
New London Fire Department
Stamford Fire Department
West Hartford Fire Department
Willimantic Fire Department

Other regional schools are expected to be opened in the near future, probably at:

Norwich—Hartford—Waterbury—
Danbury—Milford—Torrington.

The total number of men in training at the present time is 155. Many applicants for training have not been assigned to a regional school because no arrangements have been completed for such a school within traveling distance of the registrants.

The regional schools hold two hour sessions in the early evening or on Saturday afternoon, according to the convenience of the group members.

The subject matter for the regional schools has been broken up into several courses of ten sessions each. The first course, "Elementary Hose and Ladder work," will be followed by another course designated as "Advanced Hose and Ladder Work."

No salary is paid to drill masters or those attending the regional schools. Such work is considered part of the regular work of the departments. Both the drill masters and the school members from paid departments give their time when the school meets on their "off time."

Great enthusiasm has been shown by the drill masters. The fire department chiefs in the state have shown much interest, and the trainees in the regional schools are taking the work very seriously.

The State Department of Education has been of great help in training the drill masters, organizing the subject matter and in supervising the instruction in the regional schools.

The Connecticut Fire Chiefs' Club has every reason to be proud of the progress so far made in providing the fire departments, paid, call and volunteer, with an opportunity to learn to perform their hazardous tasks with efficiency and at the same time with a minimum danger to themselves.

To all those who have worked to make the drill school a success we thank you.

MR. STRATTON: In connection with the Massachusetts drill masters training program, and I am glad to note Connecticut has worked the same way, I might say up to date we have trained about three thousand men in fifteen zone schools. That whole program hasn't cost the Commonwealth of Massachusetts nor any individual town or city one nickel. The only cost has been my traveling expenses and my assistant's traveling expenses, which they would get anyway because we have to travel throughout the state, and the printing of bulletins which the State Department does. You don't need any appropriation to carry on drill schools.

PRESIDENT STOCKWELL: The next will be Chief A. J. Cote of Rhode Island.

SECRETARY O'HEARN: Mr. President, Chief Cote doesn't respond and I think in fairness to him this should be said. I have had a great deal of trouble in Rhode Island in getting anybody to respond to anything. I had a great many refusals and I said to them, "You must break in new men," and still I got no response. Gus Cote has been through a severe illness and I asked Gus as a favor, "If you come, will you give us some report of encouragement as to what is being done in your state? Now probably Gus is not able to say anything, and should be excused, due to his physical condition.

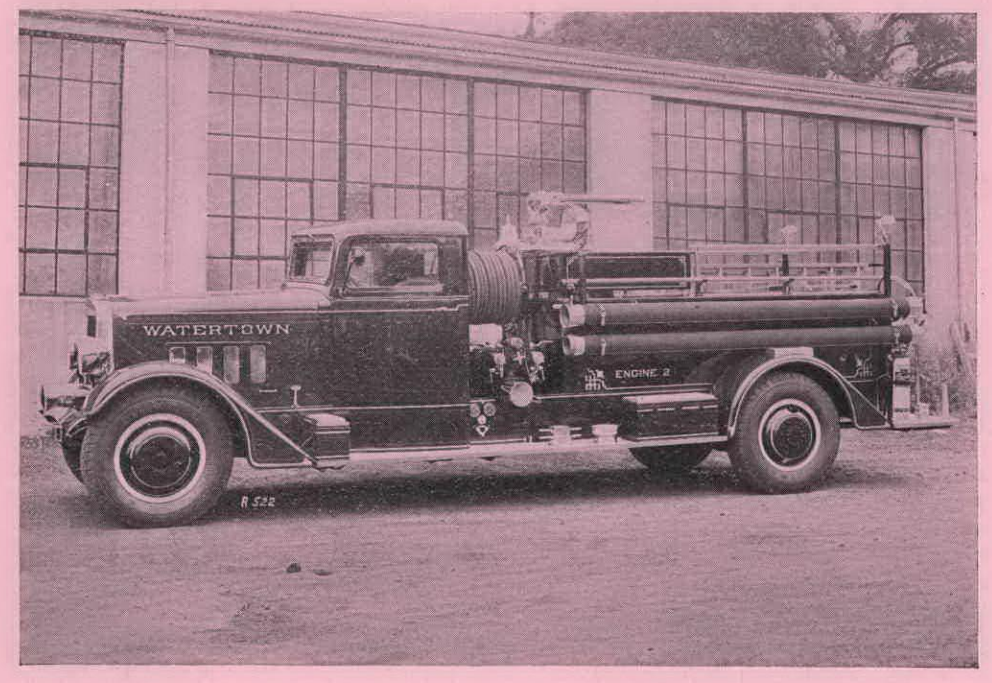
CHIEF RANDLETTE: If it is in order, I move that the report of these different state representatives be included in the report of the meeting.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: "American Red Cross First Aid Training for Fire Departments," Chief Allen F. Payson, Camden, Maine.

MAXIM

First closed cab unit exhibited at a New England Convention. Delivered to Town of Watertown, Mass., Chief John W. O'Hearn.



750 gallon pumping engine. pressure volume type centrifugal pump, has 138 horsepower, hat, coat and boot rails on both sides of body, equipment basket above the body, 300 ft. booster hose reel, turret nozzle and ground pipe combination with body capacity of 1500 ft. of cotton rubber lined hose.

ERNEST L. MAXIM, *President*
Middleboro, Massachusetts

Gamewell Fire Alarm Company Tender Banquet to Fire Brigade

TO ASSIST NEWTON, MASS. FIRE DEPT. IN EMERGENCIES

Front row, left to right: Chief G. T. Dunn of Gamewell Co., member New England Association, Mayor Edwin O. Childs of Newton, Deputy Chief Ritschel, Gamewell Co., and Chief Clarence Randlett of Newton Fire Dept., member New England Association.

Mayor Edwin O. Childs of Newton at a banquet at the Braeburn Country Club in honor of the **GAMEWELL** Company Fire Brigade, commended the spirit which inspired corporations to foster the organization of a fire brigade and to place this trained fire fighting force at the service of their cities or towns in the event of a fire emergency. Arrangements have been made whereby Chief Randlett of the Newton fire department will call the **GAMEWELL** Brigade to all three-alarm fires, thereby giving the City the benefit of a supplementary, fully trained and fully equipped fire fighting force. The Mayor emphasized the need of all companies organizing fire brigades in order to protect the continuity of employment of their people and, in so doing serve the community as a whole. He pointed out that fire disasters in industrial establishments are definitely reflected throughout the community by reason of loss of employment, loss of taxable valuations, reduction of community purchasing power and injuries to and possible loss of life of employees. Fire Chief Clarence Randlett also addressed the Fire Brigade and formally established their status as ex-officio members of the Newton city fire department.

The **GAMEWELL** Fire Brigade is a well organized department consisting, of two trained squads. Fire Fighting and Salvage,—each headed by a squad foreman in addition to a Chief and Deputy Chief. The brigade is provided with every modern appliance. The extensive plant is protected by twenty latest type **GAMEWELL** boxes, all of which are connected direct with the Newton Fire Department, through **GAMEWELL** private box 614.

At the conclusion of the dinner, Fire Chief Dunn was presented with his chief's badge by Mayor Childs and Deputy Chief Ritschel was presented with his deputy badge by Fire Chief Randlett.

Chief ALFRED H. KOLTONSKI, Board of Directors, Rutland, Vt.

AMERICAN RED CROSS FIRST AID TRAINING FOR FIRE DEPARTMENTS

By Allen F. Payson

Chief of Fire Department, Camden, Maine

Mr. President, Members of the New England Association and Guests: After receiving the invitation to speak here from our Secretary Chief O'Hearn in which he said, "You must have something to get off your mind and this will be a good place to do it," my first thought was the American Red Cross Training for fireman, which was first brought to my attention by a clipping sent me from the Boston Post a few years ago. I read the following quotation:

"Boston Firemen, Peoples Editor: I would like to say a few words of praise for a Boston fireman. On the morning of September 21, while waiting for a train to Boston, a young lady was struck and run over. The train severed both feet and caused other injuries to the girl. The train stopped. The train crew got out and did nothing at all for the victim. There was a crowd waiting to board the train, and not one of the men standing there offered to do a thing. A fireman pushed his way through the crowd, looked at the young lady under the car, and immediately got into action. He took his coat and cap off and then crawled under the train and removed the body to the platform. In a few seconds he had two tourniquets on her legs. His prompt action surely prevented the young lady from bleeding to death under the train. This man was off duty at the time and he was not compelled to do as he did. He had no superior officer there to tell him how to go about it or help him; he needed none. He knew his work and did it well. Unfortunately, the girl lived only a few days.

The citizens of Boston should feel proud of him, and a feeling of safety should be theirs when they look at a man wearing the uniform of the Boston Fire Department. They are a credit to Boston. I thank the department for the training they must give the men to fit them to be able to cope with any emergency that may arise. They freely give of their own time to perform humane acts, and expect nothing in return. They should be rewarded, not censured; boosted, not knocked or criticized. To him who acted when others held back and refused, I salute you." Signed, P. A. West, Cambridge.

My interest started at that point, and the next two years were spent in the training to meet any emergency and today I have thirty men holding the advance certificate from the American Red Cross. After going this far, we found that we needed equipment to work with to do a satisfactory job, so we set out to get $2,000 and inside of three weeks we had nearly $3,000, with which we bought and equipped the truck shown in this pamphlet that I have for distribution.

What I have to say will be based on my own experience. First, we will take the need of Fire Aid Training. It does not seem to make any difference whether you live in the United States or in Maine, we seem to have those same drivers of the fifteen dollar cars that do not care who or what they run into, or have any respect for humanity, so I think it is up to us thinking people to equip ourselves with the knowledge of caring for the less fortunate. Carelessness leads in the needs of this training, not only in our line of duty but in the home and on the highway. I do not know a more likely group to train than the firemen. They are the ones that are called in any emergency and are expected to take the lead, so why not train them for this duty. In this line of duty we have the need of more Red Cross Highway Stations. To qualify for one of these stations it is necessary to have trained people in the station twenty-four hours a day. The equipment in the station

should be furnished by your local Red Cross Chapter and be under the direct supervision of the American Red Cross and all calls for accidents to be reported to them. There were on November 3, 1936, 1449 stations in the United States, 130 of this number being in New England. The necessity of these stations may be more clearly seen by these figures: In the year of 1934 we had 36,000 killed on our highways, 1,255,000 disabled and 105,000 permanently crippled. We know that the automobile has come to stay, so why not meet the need for trained men.The American Red Cross issued almost 200,000 First-Aid certificates last year to combat this enemy accident, and we still need more in 1937.

The purpose of this training may be best understood by the definition given in the text book. "First-Aid is the immediate temporary treatment given at the scene of the accident or in case of sudden illness before the services of a physician can be secured." Under the efficient guidance of any American Red Cross instructor who has been before a doctor and passed his examination and has his instructor's certificate, we are able to teach groups like our own department to handle such accidents as might happen in our midst and turn them over to a doctor or hospital in a way that will do your department a credit. In my own experience our emergency outfit was called to get a man who had been run over by an automobile; the man had been drinking, which made the task more difficult to handle. Upon arriving, I heard someone say to move him over to the side of the road. Our training does not teach us to do that sort of thing, so I stepped in to take command and said that we would leave him where he was until we found out how bad he was hurt. Then I felt a hand on my shoulder and a voice said, "You are right, but I think it is only a compound fracture of the leg. You fix it up and I will go to the hospital and make ready." The voice was that of one of our leading doctors. When the thing was over, that doctor came to me with this statement, "You and your men have the perfect confidence of all the doctors, knowing that you are First-Aid trained and have the proper equipment to handle such duties as you may be called upon to perform." I think no group of men are more able to do this work like our firemen. They have the knack of taking command and with the First-Aid training it makes them one hundred percent perfect for this work.

I was called to one of the larger cities of my own state where there had been a misunderstanding between the Fire Department and the Red Cross. Being chairman of First-Aid in Knox County and a friend to the department, I was called upon to meet the members of the department, city council, other city officials and members of the Red Cross, and after about three hours with them they saw the thing in my light and every member of the fire and police departments were ordered to take the training, and I think today they are very well satisfied with the results.

I feel that it is the duty of every Chief to have one or more of his men trained as instructors and for them to teach the other members of the department. This training costs but sixty cents per man for text books and about forty hours of his time. I am sure that there is no place so busy that they cannot find that amount of time and money.

I have one man in the department that by taking the training had his pay advanced by the National Park System fifty dollars a month and has the care of some two hundred men; another man that was highly commended for the ability to handle an accident that happened on top of the mountain in the park area, a man was cut badly and bleeding freely when this young fellow went to work on him, fixing him up and telling the others how to make a stretcher to carry the victim two miles to the main road so we could pick him up and get him to the hospital, undoubtedly this saved this man from bleeding to death; a ten year old girl was hurt

while skiing, and because she had been reading her father's First-Aid book would not let her companions pick her up, for the book said to lie down and keep still. The men in my department are very well satisfied with their training and think it well worthwhile for any department.

In closing, I would like to leave this thought with you. If you have the protection and safety of the people of your towns and cities at heart, why don't you see that they have this training?

CHIEF ALLEN: I move a vote of thanks be given to Chief Payson, who has just addressed us and that a copy of his address be spread on the records.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: The next talk will be from Chief Harold Conron, North Reading, Mass.

FIREMAN PROTECTION

By Harold Conron

Chief of Fire Department, North Reading, Mass.

This program is somewhat misleading. It looks as though it is Red Cross but I am not talking on Red Cross. I was asked to choose a subject of my own and it is somewhat different from the subjects you have been hearing here tonight and what you generally hear here. It is the subject of "Fireman Protection."

One of the most serious responsibilities for a chief of department, in this matter of protection, is the protection of his men. A fireman has not the normal work-a-day life of the average citizen. Having a specially hazardous job, it is all the more necessary that the head of a department see that his men are protected in every way possible against accident, and especially against after-the-accident financial embarrassments.

Some states have laws governing some phases of protection and many departments, I feel, have failed to take full advantage of these. Other phases of protection not covered by state laws are up to the head of the department to put into effect. Due to the nature of his job, I feel that when a fireman starts out to perform his errand of mercy he and his family should be protected. Upon injury a man's compensation should start immediately and in the event of accident should not be held legally or financially responsible for acts or settlements against him.

First, of course, we should protect against accident. On an emergency run, state laws give a fire truck the right of way and courts, generally, will uphold in this provided the truck was sounding proper warning signals at the time of accident.

The proper warning signal, to my mind, is a very important item. Years ago, in the open era, fire trucks were equipped with a light-sounding siren that was then sufficient to warn traffic. But those sirens are not loud enough to penetrate closed cars, and if they do not, then a fire truck can no more expect the right of way than any other vehicle on the road. About a decade ago manufacturers were coming out with loud, penetrating sirens to where today, in this convention hall, you will find several makes of sirens that will conform to that specification, "a proper warning signal."

Any vehicle on the road has a certain liability of accident, but due to the nature of its errand a fire truck's chances of accident are increased even with the

driver using extreme caution. Ordinary vehicles, in order to be on the road in Massachusetts, must have a liability insurance. A municipally owned vehicle does not have to. It may seem like good feed for the insurance company but I believe it is good after-the-accident protection for the driver to have this insurance on the truck.

I know that some of these chiefs with a score or more of trucks will say what a cost that would be, but that is up to them. The law is quite specific, I believe, in upholding a fireman in reasonable acts done in line of duty but that does not prevent some person from suing for some real or imaginary injury to person or property done by a fireman in line of duty. There is a law in Massachusetts, and if there isn't there should be in every state, a law whereby the town may supply counsel and pay the man for loss of time due to such defense and indemnify him for expenses or damages sustained by him or incurred by him in the defense or settlement of an action brought against him while acting as a fireman. This law is on the statute books of Massachusetts but must be accepted by a city subject to the provisions of its charter and can only be accepted by a town at an annual town meeting. A city, or course, can adopt that probably rather quickly, but a town, to wait for its annual meeting, would probably involve some financial embarrassments for the man himself.

There is another protection that is very vital to firemen and that is the financial protection that he might get in the event of a serious personal injury. To the department that has a large relief fund this sort of protection is of no great worry, but there are plenty of departments that have no substantial relief fund and, therefore, no protection whatsoever, perhaps, for the man and his family in the event of a costly and serious accident. I venture to say that there are departments, or at least members of departments in Massachusetts that don't even belong to the State Fireman's Relief Association. With the small annual dues for such membership there is no excuse for any fireman there, permanent or call, not to belong.

For the small department where there is no large local relief fund there is a special fireman's insurance that gives a very good coverage. I don't want to appear like an insurance salesman, but having had men seriously injured with only a Workman's Compensation Policy for coverage and its resultant small benefits, I can assure you that it was a big relief to me on the next accident that the man would and did get a substantial weekly check ($25.00 a week to be exact) for forty-eight weeks, the entire time of his disability, with four weeks of benefits left.

That particular item, about nine or ten years ago we had two men seriously injured, and due to the fact that they were able to take care of themselves up to the time the town was able to vote them some money, they didn't suffer, but had they been in a position where they hadn't been able to take care of themselves and had to depend on the town, I guess they would have had to depend on a charity ball or some such thing up until the time the town could have appropriated something. The first thing I did as chief was to find if the men were insured. I was assured by the selectmen that they were insured. I was lax somewhat in not seeing how they were insured. That was compensation insurance.

I know I am and I feel that every fireman must be deeply grateful to those men who have put into law the widow's and children's annuity. I believe this has had a great moral effect on every man that it affects.

I have mentioned Massachusetts quite freely but only because my own problems, with which I am familiar, have come under the Massachusetts law. When I mention these forms of protection here, it is because I feel that a fireman, as a fire-

man, anywhere he is located, should be assured financial protection in accident, disability and death.

CHIEF MAHONEY: Chief Conron has just brought something to my mind in that paper he read. I have had considerable experience in the legislation of fire laws and I find that a great many chiefs have very little knowledge as to those laws and their rights pertaining to accident and death, and oftentimes during the year I am called to various places to explain the various laws. Several years ago the Massachusetts Fire Chiefs' Club asked for a recodification of the fire laws. As President of the Fire Chiefs' Club this year when I approach the legislative committee, that is one of the first propositions I am going to put up to them, to go to the legislature and ask for a recodification of the law that pertains to the fireman and his family in every form and shape, and I think it is a valuable thing for every chief to have in his office. He can look it over and study it and know the rights of his men. Chief Conron brought out facts on insurance today. There are several types of pension laws. There are several forms of fire department organization. Whether men from other states have had those laws codified I don't know, but I offer that as a suggestion to the men in the other states to try to get all the laws pertaining to fire matters codified in one form for distribution to the chiefs in the various communities, and I think it will be as valuable a book as any a man could have put on his desk.

CHIEF KELLEY: I move that this paper be spread on the records and a vote of thanks be extended to Chief Conron.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: Chief Michael J. Shea, Fitchburg, Mass.

INSPECTIONS

By Michael J. Shea

Chief of Fire Department, Fitchburg, Mass.

Mr. President, Ladies and Members of the New England Fire Chiefs' Association: My good friend, Your Secretary, wanted me to read a paper. I didn't know what to read so I asked him for a subject. He didn't give me any, so I picked out fire inspections of school houses. It might be interesting to small towns but might not be to large towns. I will read it, anyway.

A primary objective of the fire department is the protection of human life, we believe that our school buildings, seating from 200 to 1,300 children, should be among the first to receive attention in our fire prevention work.

Having in mind the large number of school fires that occur every year, we organized a system of regular inspections that uncovered and eliminated many hazardous conditions in the public and private schools in Fitchburg, which, if allowed to continue, might have caused serious fires. Each school is thoroughly inspected every month, the inspections being conducted by the Captains in their various districts under the supervision of a Deputy Chief.

When the officer arrives at the school, he immediately seeks out the principal and requests that a fire exit drill be staged, noting the time required to evacuate the building and the conduct of the teachers and pupils during the drill. He then suggests that a member of the faculty or the custodian accompany him while he inspects the building. A Self-Inspection Blank, which we obtain from the National Board of Fire Underwriters, is filled in by the inspector as he tours the building, and every

Chief OLIVER T. SANBORN, Board of Directors, Portland, Me.

question on this Blank must be answered. When completed, all blanks are turned in to the Deputy Chief, who makes a record of any unsatisfactory conditions found by the inspector and reports the same to the Chief. He, in turn, forwards the blanks to the School Committee, and also notifies the building inspector, the city electrician, or whoever is responsible for such hazardous conditions.

The most common hazard found, when we first started these inspections was the overfusing of the electrical systems. As high as 30 ampere fuses were found in ordinary lighting circuits. Other common hazards were: panic and other bolts in need of adjustment; improper storage of floor oil and oil mops; improper use of extension cords, and the use of pressing irons not equipped with automatic heat control or a signal light; space under stairs used for storing all sorts of material; storage of old furniture in attics, and generally poor housekeeping.

Through the excellent co-operation of the various departments responsible for such conditions, all of these hazards have been eliminated. Excepting the High School fire, which was listed as "cause unknown" at an inquest conducted by the Fire Marshal's office, we have had but three fires in our schools in over fifteen years. Two of these were caused by lightning and the third was set by young boys.

During Fire Prevention Week, a uniformed fireman is sent to each school to give a short talk, explaining the dangers of fire to the pupils and telling them how they can assist in preventing fires. These talks are worded according to the ages of the children and their ability to understand the meaning of fire prevention. When the speaker finishes his talk, he offers to answer any question regarding fire prevention which the teachers or pupils do not thoroughly understand. Each pupil is then given a Home-Inspection Blank, with the suggestion that, with their parents, they look for dangerous conditions in their homes. These Blanks list practically all of the common hazards usually found in dwellings, and we find that the parents are co-operating in their use. Before leaving the speaker extends an invitation to teachers and pupils to visit the fire stations.

With school inspections completed, the inspectors then turn their attention to the business district, which has been divided into five sections, each being looked after by the officers stationed in that part of the city. Each station has a record of every store and business block in its district, and the card contains the names of the owner and occupants, the business conducted therein, its construction, the number and location of entrances, stairways, elevators, roof openings and fire escapes, and the location of sprinkler shut-offs, number of available hydrants and other necessary information. A duplicate of all record cards is kept on file at headquarters.

Each store and business block is inspected from cellar to roof at least once a month, and the results of such inspection, the date, and the name of the inspector are entered in the record. If hazardous conditions are found, the inspector notifies the responsible party, in writing, that such conditions should be corrected within five days, and such complaint is entered in the record card. All complaints are followed up, but due to the wonderful co-operation of owners and occupants we find the hazard eliminated when we re-inspect. Any change of ownership, occupancy or construction is noted by the inspector, and the card for that building is altered accordingly. In this way we keep our records complete and up-to-date.

Residential districts are inspected twice a year, just previous to the Fourth of July holiday and during Fire Prevention Week, and while our laws state that we shall not enter one or two family dwellings without permission of the occupant, we have yet to be refused such permission. We believe that we receive the co-

operation of the citizens in this work, because of the fact that our inspectors have been instructed to be especially tactful and courteous in conducting these inspections, and also because of the publicity given this work by the newspapers, for about a week prior to our starting out, explaining the object of the inspections, and how the city as a whole benefits because of them.

SECRETARY O'HEARN: I move you that Chief Shea's paper be accepted and made a part of the records.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: Any other questions at this session? If not, we will adjourn until tomorrow morning at 10 o'clock.

WEDNESDAY, JUNE 23

10:00 A. M.

PRESIDENT STOCKWELL: Gentlemen, we will now start the morning program. The first on the program is an address, "Co-operation Between the Fire Department and the fire Insurance Underwriters," by A. C. Hudson, Secretary, New Hampshire Board of Fire Underwriters.

ADDRESS

By A. C. Hudson

Secretary, New Hampshire Board of Fire Underwriters

Mr. President and Members of the New England Association of Fire Chiefs: I have been in a quandary this morning as to the proper address to have for this occasion in trying to compete with the fishing and golfing, and it being such a fine day I may cut down my prepared speech.

I am doing this in view of the fact that I have had quite a few inquiries as to the connection between the New Hampshire Board of Underwriters and the National Board, so if I may I would like to give you a short history of the organization of the New Hampshire Board and show the reason it isn't connected with the New England Insurance Exchange which covers the remaining portions of New England.

By the way, I want to take exception in a way to the remarks last night about the New England Insurance Exchange not being represented. I spent a number of years with them, so you might say you have twenty-five percent New England Exchange representation and seventy-five percent New Hampshire Underwriters, I also claim residence in Arlington, Mass., with Dan Tierney and Norcross Stratton. so I felt quite at home last night.

The New Hampshire Board of Underwriters as at present organized was established on March 3, 1886.

Previous to that time fire insurance rates in this state were under the jurisdiction of the National Board of Fire Underwriters until 1883.

In 1883 the New England Insurance Exchange was organized and assumed jurisdiction over rate making in New England, including the State of New Hampshire.

In 1885 the New Hampshire Legislature enacted the Valued Policy Law and other legislation which prevented the Exchange from operating in New Hampshire as a rate making body.

As a result of the enactment of this law, all out of state companies from the activities in the fire insurance field and left the New Hampshire Fire Insurance Company and the Cheshire Mutual Fire Insurance Company to care for the business.

This action resulted in the formation of numerous state companies who were responsible for the organization of the present Board of Underwriters. Since that time the out of state companies have resumed their operations in New Hampshire so that at the present time we service 147 companies and have a mailing list, including local agents, of 944 names.

The activities of the Board are manifold and diversified, namely:

1. The promulgation of all fire insurance rates for the State of New Hampshire.
2. Preparation of recommendations for improved fire protection in municipalities and supervision of this installation which normally results in reduction in insurance rates.
3. Testing and supervision of fire apparatus, including fire alarm systems.
4. Preparation of recommendations for improvements to properties, including installation of automatic sprinklers.
5. All the electrical inspections throughout the State are supervised by our inspectors.
6. Promulgation of forms and warranties for use in writing insurance policies in this state.
7. Reviewing all policies written in this state before the same are forwarded to the companies.

We also co-operate with state and local authorities in supervision of public buildings to safeguard life and property.

Many of you are aware of the very fine work carried on by our electrical inspector, Mr. Gunn, not only in connection with his fire prevention demonstration before schools, social clubs, and fire associations, but also his activity in protecting electrical hazards which are universal throughout the state.

You might also be interested to know that in addition to the normal activities of the so-called rating board during the year 1936, 8,824 inspections were made of the various properties in the state, and that during the same period 216,832 forms and insurance policy changes have been reviewed by our Stamping Office.

I mention these other activities to give you an idea of the great responsibility of Underwriting organizations.

We all realize that eight out of ten fires could be prevented by properly correcting hazardous conditions such as accumulation of rubbish and litter, faulty electric wiring, defective heating plants, faulty building construction, as well as incipient hazards which are common to many types of manufacturing.

Our regular daily work in inspecting these hazards, primarily for the purpose of establishing insurance rates, keeps our inspectors acquainted not only with conditions as reported, but also as to probability of fire occurring as a result of these conditions.

Chief THOMAS F. CAVANAUGH, Director, Waterbury, Conn.

We normally indicate to the property owner the criticised conditions and endeavor to impress upon him the importance of either making structural improvements or providing suitable safeguards to protect him against serious loss.

I am certain that all you gentlemen present realize that even though a loss may be adjusted dollar for dollar that the property owner or manufacturer is still the loser, either by the loss of their home with cherished memories or, in the case of a business man, a loss of good will which results from business interruption.

You gentlemen are all familiar with the terms Budgets and Taxes and realize how closely these terms are interwoven into the operation of your departments. Do you realize that fires in the United States place an annual head tax of $2.08 on every man, woman and child?

The record in the United States is noteworthy when we realize that on the same basis the average citizen in Great Britain pays $.82, France $.61, Germany $.11, while in Austria the head tax is $.08.

I imagine that many of you, like myself, were members of the A.E.F. in France. Do you recall your impression when you witnessed the small town fire department responding to an alarm? Personally I wondered how this type of apparatus and the equipment could safely combat fires of the degree that I have many times witnessed in the United States.

At that time I was not familiar with fire insurance rates or experiences, and my assumption was that every loss in France must be a total loss, unless the fire was checked in its early stages.

Like many ideas of the average layman my guess was evidently wrong, as I realize that the loss in France was only approximately 25% per capita of that reported in the United States.

On the other hand, the construction in European countries is more favorable to the fire fighter than the average in America.

I recall billeting with a group in a small French village and resting peacefully even though the adjoining building was blazing merrily as a result of a direct hit from a German shell.

We were naturally tired and ready for rest, but after investigating the building and realizing that we were separated from the conflagration by a blank four foot stone wall we felt secure from the exposure by this type of construction.

We have many so-called fireproof buildings in America that could not withstand this severe test.

Evidently, either construction or understanding of hazards in Austria must be still better to report a per capita loss of $.08.

I understand, however, that in certain European countries it is unlawful to have a fire and that property owners are often prosecuted for a fire due to negligence even though for no other ulterior motive.

The primary activity of the Board of Underwriters is to make insurance rates and thus apportion the per capita loss to the various properties that carry fire insurance. Or, I should correct this statement, as we Underwriters more truly measure the insurance rate. Rates are largely in the hands of the property owners themselves. The rating schedule is simply a standard to secure a uniform distribution of the tax at the ratio set by the various property owners.

We have already mentioned the budget which is the basis of the insurance cost, but to continue our comparison with departments with which you are familiar, we can also compare our activities with that of the Board of Assessors in arriving at the tax rate of your community.

The tax rate is made by the citizens themselves, when through their elected officials, they arrive at the expense budget. If it were the duty of the assessors to apportion the tax rate to each citizen in accordance with the service rendered, then the assessors' work would be closely akin to the rate making organization. Rate makers are only engaged in apportioning among the different properties as nearly as possible in accordance with the experience in fire losses, the average rate which is made necessary by the burning ratio.

The application of the rate theory takes into consideration the probability of loss by fire due to construction, occupancy, location, protection, care and attendance, but it is the average rate made, not by the Underwriter, but by the burning ratio, that governs the rate of the individual risk. A careless public is responsible for 50% of our fire loss total. If these unnecessary losses could be averted, there would, without question, be a very definite reduction in rates charged.

A large part of the rating bureau's expenses is due to service rendered without charge to the property owners in giving expert advice as how to improve the property to lessen the probability of damage by fire and thereby obtain a lower rate. The same engineering advice is freely given to municipalities to improve public fire protection.

New pumping apparatus purchased by your departments is tested by our engineers before acceptance. We also engineer new water supply and hydrant systems throughout the territory, even to the smallest community.

This service in addition to our other regular activities of course is reflected in the underwiriting expense in addition to the burning ratio, but without fear of contradiction, I can say that the Underwriters do not make the fire insurance rate charged. This activity is entirely under control of the public who make the rate by their willingness to co-operate and experience. It is the desire of the Underwriter to co-operate in order that justifiable rates may be issued, and it is the general basis of our activity that a highly desirable property at a lower rate constitutes a superior risk to a less desirable unit even though a considerable higher amount of premium may be obtained.

In order to work toward the ultimate perfect risk, we not only give considerable engineering service, but also bespeak your co-operation in supervising the various properties which are under the control of your department in order to reduce the burning ratio.

Much can be done to improve structural weaknesses, remove incipient fires in the accumulation of rubbish, also condemn structures which constitute fire breeders in the congested areas. It might be well to mention one or two classes of property which respond very favorably to intelligent inspection service.

Can we afford to lose five schools daily? The financial loss is of course secondary to the scores of lives which are lost in school disasters as well as those which are exposed by the great dangers which exist in many schools in our country.

We in New England naturally recall the fire at the Fitchburg High School which was a reasonably modern structure under good protection. The Brookline High School, Bridgewater Normal, and the Lynn School are other examples of New England losses.

The schools of the period of the above-mentioned properties are of such construction that they present a very severe problem to the fire department.

Later on in the program you will be fortunate to hear the report of David J. Price of the United States Department of Agriculture who is to speak on the Consolidated School disaster at New London, Texas. He will no doubt emphasize the importance of inspection in order to overcome future disasters of this kind, but this experience should give us all an increased determination to concentrate on our schools to make certain that latent hazards are properly safeguarded.

Our experience on churches is similar to that reported on schools, and I am certain that I am not in a position to tell you gentlemen of the problem you meet when you are called to fight a fire on property of this class.

Speaking of public buildings and especially on the benefits arrived at by co-operative activities of the Underwriters and fire departments, I might recall a few specific cases that have come to my attention in actual contact with various departments.

You will recall the fire at the Deering High School in Portland, which was permitted to spread due to a very small structural defect, but this fire was beneficial in that the officials of Portland became fire minded.

The various municipal properties in Portland were inspected and among other things it was noted that the vents from the various rooms in the Old Ladies' Home in Portland terminated in a dry dusty attic, thus making the perfect setup for a serious fire. This condition was corrected immediately by the local authorities before a fire occurred.

In one city the majority of the schools are equipped with automatic sprinklers in the basement and stairways to the first floor.

During a check-up of the various city buildings with a member of the fire department, it was found that the sprinklers in one property had been out of service for about three years.

It developed that an electrician who had been making various minor changes in the wiring in the school had come in contact with the outstanding stem of the O. S. & Y. valve with such violence that after properly stating his case, the valve had been closed to overcome the hazard of personal injury. This employee proceeded to another job with a clear conscience, not realizing that due to his action the sprinklers in this school had gone on a long "sit down strike" and the lives of many children were jeopardized.

I could safely say that a condition of this kind will not re-occur in this particular community in view of the very efficient inspection service maintained by this department and the supervision of the chief over the janitors of the various schools.

Chief Carl Stockwell of Burlington realizes how near the pumping station in his city came to being seriously exposed by a large fuel oil tank project. With the co-operation of the Underwriters, Carl was able, through public opinion, to safeguard the heart of his water supply by re-locating the respective oil tanks at a safer location.

I noted in a recent paper that the old town hall in Watertown had been condemned by Chief O'Hearn, and this old structure, in its dilapidated condition presenting a hazard to considerable property, has been removed.

Similar intelligent understanding of conditions at other larger communities has brought noteworthy benefits.

Chief ALBERT C. MELENDY, Chairman Exhibit Committee, Nashua, N. H.

As I travel through New Hampshire, I notice a large number of smaller communities which could follow the same practice in locating undesirable properties and exerting every effort to have these fire breeders eliminated.

The fire chiefs in Massachusetts under the leadership of Chief Dahill of New Bedford obtained a very beneficial law in the requirement that sprinklers in idle, vacant manufacturing plants be shut off only with the approval of the fire department chief.

A large tannery in a small town in Massachusetts was assigned for burning by a ring of arsonists who were afterward apprehended. In the testimony at the trial resulting from a fire in another locality, they stated that the original tannery had not been burned due to their inability to make necessary arrangements for the "torch" as a result of inspection of the property by various members of the fire department.

The program indicates that we have many very interesting speakers to follow, so I will close my portion of the program. In closing, however, I do wish to speak officially for the State of New Hampshire, and express to the Chiefs of the Fire Departments in this State, that I pledge the fullest co-operation of myself, as well as the members of our organization, to stand with you in meeting the various problems which may develop in your various localities.

We truly have a problem to face and I assure you that it is my personal desire to be as helpful as possible and also ask your assistance when conditions develop that should be considered by both of our departments.

Thank you.

CHIEF RANDLETTE: I move you a vote of thanks be extended to Mr. Hudson for his paper and that his full paper be printed in the proceedings of the convention.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: The next address is "Fire," by A. C. Hutson, Engineer, National Board of Fire Underwriters.

A THIRTY-YEAR REVIEW OF FIRE SERVICE

By A. C. Hutson

Assistant Chief Engineer, National Board of Fire Underwriters

Mr. President, Gentlemen of the Convention: When I was asked to come down here and talk, my boss asked me what I was going to talk on. I didn't know what I was going to talk on then, so I just told him, "Put down there that I will talk on 'Fire.' That ought to interest the Fire Chiefs." And it was a broad enough subject so that I could change to almost anything I wanted to. So later on I got to thinking over this subject of fire and I realized that I had spent thirty-two years thinking about fire, talking about fire, writing about fire, and that instead of trying to preach a lesson on fire it might be a good idea to sort of review the situation of today as compared to the situation that existed when I first started with the National Board of Fire Underwriters.

Thirty years ago my knowledge of fires and fire fighting was limited to that of unorganized efforts on the part of the inhabitants of a small college community in Texas. The recollection of these efforts is rather amusing at the present time. The

lack of organization, the unfamiliarity of the men in the use of the few appliances available and the general absence of any knowledge of what to do and where to do it were outstanding factors, as viewed from present-day knowledge, which resulted in every case in a total loss of the building.

I need not say to you that these were common conditions in many parts of the country even so late as thirty years ago. It is true that a large number of communities had gone so far as to form an organization, with officers and some form of equipment, ranging from buckets to hose wagons and steamers.

These organizations in the larger cities had changed from volunteer to paid forces, and in many others, particularly in New England, had adopted a scheme of partial pay, commonly known as a "call" fire department. With the concentration of industry into big units, it was found that the calling of men for fire service interfered with production. Also, the value of the increased speed of automobile fire apparatus could not be obtained where men had to be called from their business or home. For these reasons call departments have been largely replaced with paid departments.

From an economic standpoint all small communities must depend upon volunteer organizations, and for that reason this dissertation will cover first the outstanding changes in those organizations—*Volunteer Fire Departments.*

Probably the greatest change that has taken place is in the recognition that fire fighting is something that is of value to the community at large, that it requires more than a mere willingness on the part of the members and instead there is great need of knowing "how and why" as to means of putting out fires. Although state and regional schools of drills and instruction are only ten to fifteen years old, they have had an incalculable effect upon volunteer fire service. Motor equipment has also stimulated volunteer fire service. Although of relative high first cost, the ease of operation of the automobile and absence of a continuous maintenance cost, which existed with horse-drawn equipment, has resulted in many places getting fire protection or improving that which was formerly available only from hand-drawn equipment. Another factor has been that many communities which could not buy new apparatus were able to provide hose bodies and pumps on second-hand chassis, thus at small cost obtaining fire apparatus.

There has been a marked increase in legislation applying to the organization of fire departments. Many states permit the formation of fire districts with power to levy taxes for fire apparatus. These districts in many instances include rural territory, thus the day is approaching when farming property will receive protection.

The natural extension of the fire district scheme is to develop county fire protection. This has been carried out to a considerable extent in California. In other areas, somewhat the same general protection has been brought about through the organization of mutual aid plans where all the departments in a certain area have definite plans of procedure for serious fires.

It is believed that in the more closely populated sections, especially in suburban territories where many of the men are commuters, this formation of mutual aid groups and of county fire departments will ultimately result in the discontinuance of volunteer organizations and in the use of a few full paid companies.

One feature which exists to too large an extent in volunteer organizations is the yearly shifting of officers. Too often a man has hardly learned the duties of the office before his term ends. Any chief officer who has served a number of years can look back to his first fires and wonder how he got by with the little knowledge and

experience which he had as to the proper handling of a serious fire. If I were to prophesy, it would be that at no great time from now most volunteer organizations will have paid or part paid chiefs.

The above observation is based in part on the need of proper knowledge of fires to extinguish them, but also to a large extent on the recognition of the great value of fire prevention. This prevention work is receiving attention to a very worthwhile degree from many volunteer departments, but real effectiveness requires a greater frequency of inspection and more time than can usually be offered as volunteer service.

Paid Fire Departments.

Service in paid departments has had some very marked improvements. Were a poll to be taken of these, it is doubtful if any one improvement would be considered as outstanding in importance, therefore they are being listed below solely in the order in which they come to mind. Others may appear as worthy of being included.

Recognition by city officials and others as to the need of fire service. Fire service is protection against the catastrophe of a conflagration. The normal fire is of little moment. Statistics show that 70 percent of all fires involving loss amount to less than $100 and that less than 2 percent cause $10,000 loss. Were these all that had to be cared for, there would be little need of more than a handful of men in even our larger cities. There is though the larger problems of the million dollar individual plant or the possible sweeping conflagration. The conflagrations of New York, Chicago, Boston and other places in the early and middle parts of the nineteenth century were looked upon somehat as a visitation, for which there was no help. In the early part of this century the Baltimore conflagration, followed by those in San Francisco, Chelsea, Salem, Augusta, Atlanta, Paris, Nashville and others brought to the forefront the fact that proper planning and foresight, together with the maintenance of adequate fire fighting facilities, would materially lessen these dangers. The work of the National Board of Fire Underwriters in inspecting and reporting upon water supplies, fire departments and fire alarm systems has had a marked influence on the present attitude of the public as to the needs of fire protection.

It is believed that today it is well recognized that the fire department is an emergency force. That it must be kept equipped and manned to meet this greatest emergency, a sweeping conflagration. Even through the depression years just passed, great effort was made in all our cities to maintain a fire force as little depleted as possible.

This idea that the fire department is an emergency organization, which seldom is needed to its full power, has in recent years resulted in introducing other emergency duties, such as rescue work and in rendering service in floods, wrecks, and other emergencies which do not involve fire.

The fire departments of today have the whole-hearted support of the citizens and if one may prophesy it would be to the effect that this regard for the fire service will increase.

Influence the automobile has had on fire service.—Although not so picturesque as the prancing horses of yesteryear, the automobile has proven its worth in fire service. There is little need of enumerating its many advantages, probably the most important of which has been the possible lessening of manpower. Another factor sometimes lost sight of is the possible mobilization of a large force of outside aid at

Chief WM. T. HAPPNY, Sergeant-at-Arms, Concord, N. H.

time of emergency. Today companies twenty-five miles away are as available as was horsedrawn equipment five miles distant. Several factors in connection with automobile apparatus are still somewhat new in fire service and will have to receive attention in the near future. These are: A greater use of the power available in the motor in performing mechanically things now done manually, such as the raising of ladders, hoisting equipment to roofs, more powerful lights, use of air compressors and more commodious and better arranged bodies.

Platoon operation. It is interesting to note, in considering this phase of fire service, a comment made by a fire chief in South Africa at a recent convention, to the effect that "Today the platoon system has encouraged younger men to take up the work of fire prevention and extinction, and given every facility for greater study."

There can be no denying that platoon operation has made fire service more attractive, and because of this and the good standard of pay and other benefits there is no reason why fire departments cannot make their entrance requirements so rigid as to obtain the cream of the younger generation, both as to physical and mental requirements.

Of outstanding value in emergencies is the fact that platoon operation gives a reserve force of trained men. To take advantage of this, more definite plans should be made than now exist generally, as to means of obtaining them, and of equipment and facilities for using them. If there is any one criticism of most department heads it is that, because of the infrequency in the use of the off-shift, little arrangement or planning has been made to use them.

Drills and Training. Your brother firemen across the ocean have been talking of the need of training to deal with enemy air raids. We in this country may feel that we are too distant to need to make this a part of fire service work. However, there is enough other educational work to enable the fire departments to vie with each other for many years.

It has been only in the past two decades that there has been much advance in training from that which a rookie received when he entered the department. Today there are few departments which do not have extensive drills in the handling of equipment, and some have regular lessons and lectures on matters of interest to firemen both as to fire methods and fire prevention. Recently, New York City established a special school for those privates who are assigned on building inspections. This in general is one of the most needed forms of education, as few men who enter fire service can be expected to have any previous knowledge of building construction, elimination of hazards and proper private fire equipment.

Salvage Work. The dollars saved in the past few years from salvage work cannot be estimated, but the thanks received by the fire departments, from those unfortunates who have had fires, are ample justification for saying that the carrying out of salvage work and its great increase in recent years is an outstanding accomplishment.

Furthering this work of salvage, as exemplified by the use of covers to lessen water damage, has been a greater use of small streams on small fires, more attention to the lessening of smoke damage and greater care not to unnecessarily injure property. The next step should be an educational campaign to encourage building construction and location of stock to lessen the danger of water and smoke damage.

Mechanical aids. There have been great strides made in connection with the mechanical side of fire fighting, but too little advantage has been taken of these improvements, largely because of financial consideration.

Every fireman appreciates that certain conditions make it impossible to enter or stay in a building without gas masks or oxygen breathing equipment. Many departments have some of this equipment, but none is as completely equipped as it should be.

Lighting outfits, ventilating fans, dewatering pumps for flooded cellars, compressors and pneumatic tools, rescue equipment, fire boats, equipment for oil fires and special nozzles, both fixed and portable, for powerful streams and for places which cannot be readily reached, all are coming into use. How extensively used these will be in the future will depend upon the community, the foresight of the officers and the willingness of the taxpayers to spend the money. Each year a more scientific study of fires is being made, and it is believed that this will result in a greater appreciation of the value of these mechanical aids in fire fighting.

Fire Prevention. From an intermittent inspection of cellars and other parts of buildings to prevent the accumulation of rubbish, this work of the fire departments of the country has grown to a point where separate bureaus are being maintained, with technically trained men as members of the staff.

Another large factor in fire prevention, well recognized in some of the fire departments, is that this inspection work is of the greatest value in the planning of operations when fires occur. The knowledge of stairs, elevators, windows, dividing walls and other structural features, together with the information as to the location of hazards and values, permits planning of attack and a well thought out method of operation.

Ignorance of the hazards existing and lack of knowledge of protective features desirable are the leading factors as to why present conditions exist in many of the stores and places of business of the country, as well as in the home. The fire department of tomorrow will have to overcome this through an educational campaign carried out by the members of the department.

Arson. No discussion of fire department operations of thirty years ago as compared with those of today would be complete without mentioning the fight which has been carried on against the arsonist. The enactment of more stringent laws, a greater appreciation by the people that this is a crime committed against them, and a more skilled collection of evidence have tended to reduce this unnecessary fire waste and danger to life.

Continued action in arson detection will be one of the outstanding duties of the fire department of the future.

Civil Service. I do not know why, in my mental arrangement of subjects, this should have come last. Probably because the influence which civil service and suitable tenure-of-office provisions has created is apparent in all of the other changes which have taken place in fire service. Thus, the final consideration of all of the changes and improvements in fire departments sums up into an appreciation that a fire department is just as modern as its chief. There is an old saying that you "cannot make a silk purse out of a sow's ear." Equally true you cannot make firemen of all types of men, nor can chief officers be chosen for political reasons or because he is a "good fellow."

Civil service is not perfect in its operation, nor has it in many cases been carried out by impartial or efficient boards. There has, though, been a marked improvement in its application in the past few years. Its influence has been great. The knowledge that promotion is dependent upon the standing made in an examination has resulted in men and officers making an intensive study of modern fire

methods, of learning about prevention work, and of taking more interest in his physical condition. With assurance of tenure of office chief officers do not have to consider the political aspect of their actions. They can use their full time to further develop their fire department. It may therefore be wise to list civil service last among the items of improvement in fire service. It then becomes first in considering the future, and this, based upon experience, is believed to be true. You may take home to your city fathers and your citizens this thought: Adopt civil service for your choice of firemen and officers, give them tenure of office, be not niggardly in providing funds and you will receive a degree of fire service superior to that of previous years, and supplemented with preventative work which may eventually permit maintaining a less expensive fire department, but one more capable of meeting all classes of emergencies.

PRESIDENT STOCKWELL: Any questions?

CHIEF GISBORNE, Sound Beach, Conn.: I would like to give an idea to the National Board along the lines of fire prevention. One place to start is with their insurance companies and their brokers. They encourage fires by the way they accept insurance policies. They encourage it all the while. They will overinsure over one hundred percent and take your money, and if they burn it all down, they will get away with it. That is one thing. Another thing is your adjusters. They are playing Santa Claus all the time. I had a fire recently which was held to one room. There was no water damage on the second floor whatsoever. In making a survey of that place, there wasn't $2500 worth of furniture, clothes and all in the whole house. They started to adjust the furniture loss for $3600. There were only about five pieces of furniture that were actually burned in the fire. I asked the adjuster where he got the idea there was that much loss in the furniture. Shortly after he dropped it to $2600, decided that was all he would give them. That is what he settled for and there wasn't that much stuff in the whole house and the fire was confined to one room and no water on the second floor. That thing is happening constantly down my way. That is the place for the National Board to start; look up their brokers and adjusters and get after them.

EX-CHIEF WALSH: I am going to tell you in starting that you have had an address by a very grand fellow, Hutson. Now I am not going to tell you what this man told me what was the cause of fires in Boston; it would be too ridiculous for me to tell you in his presence. He is an engineer. He has a fellow over him. You know how they adjust fire losses, and yet they will come up and tell you they want co-operation and one thing and another. Some of your statements may be true, but when you refer to Boston, sixty-eight years ago I was born there. Forty-six years ago I joined the fire department, not because I loved the fire department, I didn't love it, it was a good job, but when I joined the fire department, when the old tapper hit I was like the rest of them. In earning a living, I went out and loved the fire work as I worked but I never joined it because I loved it. I didn't know what it was all about. It was a good job at $13.80 a week for the first six months and so on gradually until I got $5,000 a year, because I loved the work after I got in it, not before. Now about Boston. Boston has been cracked and belted and bitten especially by one of these—I am not looking at anybody now—They say Boston has more men, more apparatus than any other, but look over your insurance book, get the population, the values, get the number of pieces of apparatus and number of men, and Boston has less than any metropolitan district. But, however, I just want to say to this gentleman—I can get up and talk, he has talked all day, I thought you would never stop—but when you take a crack at Boston, I am there and can give you the data on Boston. Fifty years ago they started a drill school there, copying New York. Now when you say they don't drill, they drill plenty,

and when they don't go to the drill schools to drill they drill in the company quarters, and let an officer neglect to drill his men once a week and he will hear from it. I have heard this, just what you say. It is hearsay evidence which is no evidence at all. They do drill and they are very expert in drilling. You mention Dan Tierney, a great fellow, who started less than thirty years ago with a drill school and they are still doing a good job.

CHIEF POPE, Boston, Mass.: I am very sorry that I was not present to hear the entire drift of Mr. Hutson's remarks, but one of my predecessors, Ex-Chief Walsh of Boston, has sort of given me the idea there was some criticism, if it may be termed criticism, of the methods that are used in Boston. With just that small knowledge of what transpired before I came into the room I want to say this. Mr. Hutson is an insurance man, I understand, and connected with the insurance interests. It was my privilege to go through the Boston departments with three of the engineers connected with the National Board of Fire Underwriters and I personally saw ever company in the entire city drill. I heard no major criticism by one of those engineers. On the contrary I heard from their own lips many words of praise. In their report that has just been issued they did state the fact that they thought there was not enough of drilling. That statement is debatable because, as a matter of fact, in Boston there are two daily drills take place in each company and it is supervised by the district chief. In addition to that the deputy chief every three months goes through his entire division and supervises the drilling of every company in his division. If Mr. Hutson has the opportunity at this time to go to the drill yard at Bristol Street, he will find both morning and afternoon company drills taking place. Boston has provided four drill towers. I do feel our department has a very able and capable drill master in the person of Captain John J. Crehan, and his ability can be attested to by the fact that he has been sought by the Massachusetts State Extension Service where they have been drilling these men throughout the entire state, particularly in the rural districts, and his ability has been such that he has been selected to head that drill masters association.

Now as to the fire prevention end, I think that Boston has probably emphasized fire prevention as much as any city in this country. They have some sixty men attached to fire prevention work and they are always making inspections. If they run into a condition where they think sprinklers can be installed under the existing laws of the state, they don't hesitate to report it and that recommendation is forwarded. All sorts of efforts are made to install sprinkler systems in those particular buildings, and I will say that I think Boston has made wonderful progress in methods of fire prevention progress, not only with fire prevention inspectors but the entire department. We have had for some years established in Boston a fire college, and we don't only seek the knowledge of older officers in the department

If there has been a criticism, I don't feel it was justified. I hope I haven't gotten up here in any wrong attitude because it has come to me as a conversation between Mr. Hutson and Ex-Chief Walsh, who was one of my predecessors. As a matter of fact, I don't feel that my department needs me or anybody else to defend them.

CHIEF ALLEN, Brookline, Mass.: Mr. Chairman, Distinguished Speaker, Ladies and Gentlemen, I am exceedingly sorry that I was called out of the room and was deprived of the opportunity of hearing Mr. Hutson. I have been taking issue with him for a great many years. I am sorry I did miss this criticism of Boston because Boston needs no defense. If it did, many men would rush to their aid, because Boston I recognize as a neighbor and a friend of mine. In its finest sense, I might say to you that there are many men here perhaps who haven't had the opportunity of traveling that I have had at the expense of a wealthy town. You might not know where Boston is. Let me inform you it is one of my leading suburbs

Our Roll

BODGE, ARTHUR, Asst. Chief, Peabody, Mass., May 5, 1923.
SAMSON, WILFRED J., Chief, Lewiston, Me., February 17, 1924.
RANDLETT, WALTER B., Chief, Newton, Mass., March 3, 1924.
McCORMICK, W. S., Chief, Singer Manufacturing Co., Bridgeport, Conn., November ,1924.
TABER, JOHN OTIS, Chief, Boston, Mass., December 16, 1924.
SMITH, JAMES, Chief, Dover, N. H., February 8, 1925.
TIGHE, JAMES J., Chief, Willimantic, Conn., April 22, 1925.
FIFIELD, LESTER G., Chief, Ashland, N. H., July 31, 1925.
CHASE, FREDERICK E., Ex-Chief, Northampton, Mass., November 3, 1925
BROWNING, ROBERT, Chief, Central Falls, R. I., November 20, 1926.
ROBINSON, C. E., Concord, N. H., April 16, 1927.
WHITMARSH, FRANK O., Chief, Braintree, Mass., July 30, 1927.
FOWLER, ALBERT A., Ex-Chief, Gardner, Mass., September 11, 1927.
SEAVERNS, ERNEST R., Chief, Scituate, Mass., October 1, 1927.
BAKER, ELLSWORTH, Chief, Seekonk, Mass., January 16, 1928.
PACKARD, HIRAM R., Ex-Chief, Attleboro, Mass., March 27, 1928.
DALEY, WILLIAM F., Chief, Brockton, Mass., May 13, 1928.
BRYNES, PETER S., Chief, North Kingsford, R. I., November 9, 1928.
GRANT, ERNEST F., Deputy Chief, Amesbury, Mass., January 22, 1929.
GRANT, LOWELL C., Ex-Chief, Burlington, Vt., May 13, 1929.
GUNTHER, FRANK H., Ex-Chief, Dracut, Mass., June 24, 1929.
BARRETT, JESSE, Ex-Chief, Peabody, Mass., July 13, 1929.
HUNT, JOHN Q., Chief, Weymouth, Mass., October 8, 1929.
WEBSTER, WADE U., Chief, Willimantic, Conn., October 27, 1929.
TUFTS, HARRY W., Chief, North Attleboro, Mass., October 30, 1929.
NEAL, GEORGE C., State Fire Marshal, Mass., December 14, 1929.
DANAHY, TIMOTHY J., Chief, Hopkinton, Mass., December 21, 1929.
PITT, GEORGE S., Chief, Middletown, Conn., January 2, 1930.
KING, WARREN D., Peabody, Mass., January 5, 1930.
GUERTIN, WM. H., Supt. Protective Dept., Worcester, Mass., March 19, 1930.
THOMPSON, HENRY E., Supt. Protective Dept., Boston, Mass., April 2, 1930.
PRATT, EARL H., Deputy Chief, Auburn, Maine, May 1, 1930.
HARDY, JOHN M., Brookline, Mass., May 2, 1930.
MEAD, ALFRED L., Chief, Quincy, Mass., May 27, 1930.
DONOVAN, JOHN F., Chief, Meriden, Conn., May 28, 1930.
EGGER, GEORGE, Chief, Westerly, R. I., July 29, 1930.
PATTEE, P. W., Chief, Goffstown, N. H., September 1, 1930.
THURSTON, RALPH E., Chief, Putnam, Conn., October 16, 1930.
ERICKSON, JOHN O., Ex-Chief, Newburyport, Mass., December 17, 1930
ROSE, CHARLES H., Ex-Chief, New London, Conn., January 8, 1931.
NICHOLS, GEORGE W., Supt. Fire Alarm, Woburn, Mass., February 10, 1931.
CARBERRY, WILLIAM F., Ex-Chief, East Walpole, April 6, 1931
SMITH, JAMES E., Chief, Nashua, N. H., April 9, 1931.
MALLORY, HOMER J., Stamford, Conn., April 21, 1931.
MARTIN, H. M., Ex-Chief, Enosburg, Vt., July 2, 1931.
CLARK, W. F., Ex-Chief, Naugatuck, Conn., July 25, 1931.
HOOBEN, JAMES A., Taunton, Mass., September 5, 1931.
JOHNSON, DANIEL E., Ex-Chief, Bridgeport, Conn., September 17, 1931.
TOONE, GILBERT G., Gamewell Co., Needham Heights, Mass., October 12, 1931.
CONEENY, JOHN T., Chief, Dupont Co., Wilmington, Del., October 14, 1931.
FLEMING, JOHN R., Chief, Saylesville, R. I., December 22, 1931.
LABENSKY, IRVING F., Supt. Fire Alarm, New London, Conn., December 25, 1931.
BROWN, HENRY A., Ex-Chief, Marlboro, Mass., January 6, 1932.
GALE, C. DAVID, District Chief, Orange, Mass., January 21, 1932.
DORAN, ANDREW T., Chief, Greenfield, Mass., February 18, 1932.
LEWIS, WM. H., Fabric Hose Co., Worcester, Mass., April 1, 1932.
BLETHEN, CHESTER H., Ex-Chief, Auburn, Me., April 11, 1932.
HYATT, HENRY J., Chief, Fitchburg, Mass., May 2, 1932.
FURGANG, LEONARD, West Roxbury, Mass., May 5, 1932.
FULLER, CHARLES H., Chief, Pawtucket, R. I., May 15, 1932.
GARDINER, WARREN B., Chief, Saylesville, R. I., July 11, 1932.

# of Honor

FOX, JOHN C., Fire Commissioner, Rutland, Vt., July 23, 1932.
DOLAN, JOSEPH A., Deputy Chief, Boston, Mass., August 25, 1932.
GREEN, WILLIAM C., Chief, Concord, N. H., October 27, 1932.
O'CONNOR, THOMAS, Battallion Chief, Washington, D. C., November 20, 1932.
ESTERBROOK, WILLARD W., Fire Commissioner, Brookline, Mass., December 3, 1932.
RICH, SEWELL M., Ex-Chief, Somerville, Mass., December 9, 1932.
SPALDING, HOWARD C., Augusta, Me., January 27, 1933.
CRIBBY, JOSEPH A., Ex-Chief, Somerville, Mass., February 17, 1933.
WARD, THOMAS G., Chief, Shelton, Conn., March 9, 1933.
LaCROIX, CHARLES, Ex-Chief, Millis, Mass., March 17, 1933.
McPHEE, MICHAEL, Ex-Chief, Lawrence, Mass., April 25, 1933.
KING, HERBERT E., Ex-Chief, Mansfield, Mass., May 15, 1933.
HOAGLAND IRA G., Nat. Auto. Sprink. Assoc., New York City, August 5, 1933.
WHEELER, A. D., Gamewell Co., Newton Upper Falls, Mass., August 17, 1933.
KIMBALL, HOWARD C., Ex-Chief, Salem, Mass., August 27, 1933.
SULLIVAN, JOHN E., Ex-Chief, Plymouth, Mass., December 16, 1933.
KOEN, JAMES S., Chief, Salem, Mass., December 21, 1933.
PERSONS, VANEY P., Chief, Montpelier, Vt., February 6, 1934.
COMBER, EDWARD, Ex-Chief, Narragansett Pier, R. I., March 7, 1934.
AHERN, WILLIAM A., Fire Marshal, Branford, Conn., April 28, 1934.
FISKE, HOWARD, Ex-Chief, Framingham, Mass., May 30, 1934.
PARTENHEMER, PHILIP, Ex-Chief, Greenfield, Mass., July 9, 1934.
AMBROSE, GEORGE C., Boston, Mass., July 18, 1934.
BARRY, W. A., Eureka Fire Hose Co., Boston, August 13, 1934.
HEITMAN, HENRY H., Chief, Waterbury, Conn., September 19, 1934.
MONTMENY, ARTHUR, Ex-Chief, Chicopee, Mass., October 1, 1934.
MANY, ROBERT, Fabric Fire Hose Co., Boston, Mass., October 13, 1934.
KEANE, JOHN W., Ex-Deputy Chief, Marlboro, Mass., December 11, 1934.
MOORE, EDWIN D., Bennington, Vt., March 25, 1935.
TORREY, ARCHIE W., Chief, North Scituate, Mass., April 2, 1935.
HAYES, JOHN H., Ex-Chief, Bristol, Conn., June 13, 1935.
McLAUGHLIN, DANIEL F., Ex-Chief, East Providence, R. I., June 22, 1935.
JOY, MELLEN R., Chief, Saugus, Mass., July 31, 1935.
MAXIM, CARLTON W., Ex-Chief, Middleboro, Mass., August 27, 1935.
STANTON, HOWARD L., Ex-Chief, Norwich, Conn., August 30, 1935.
MASON, W. S., Chief, Bangor, Me., November 12, 1935.
TITUS, WILLIAM E., Ex-Chief, Pawtucket, R. I., February 26, 1936.
MILLER, DEAN H., Chief, Ashland, Mass., April 25, 1936
WEDGER, WALTER L., Belmont, Mass., June 2, 1936
PATT, IRVING F., Ex-Chief, Central Falls, R. I., June 17, 1936
WOODWARD, A. P., Ex-Chief, Danielson, Conn., June 27, 1936
LUBY, JOHN J., Chief, Wallingford, Conn., July 12, 1936.
FERNBERGER, HERMAN W., Philadelphia, Pa., July 18, 1936.
HARRISON, FRANK R., Chief, Onset, Mass., August 4, 1936.
MAINZER, ROBERT H., Hon. Dept. Chief, New York, August 6, 1936.
PALMER, JOHN A., Chief, Torrington, Conn., December 7, 1936.
HILL, CHAS. E., Chief, Cape Elizabeth, Maine, December 28, 1936.
McGRATH, PATRICK J., Ex-chief, Meridan, Conn., Died January 8, 1937.
SCANNELL, DR. JOSEPH W., Fire Comm., Lewiston, Me., January 16, 1937.
NEARY, JOHN H., Chief, Natick, Mass., January 18, 1937.
CASEY, JAMES M., Ex-Chief, Cambridge, Mass., January 25, 1937.
SEARS, C. E., Chief Engineer, Claremont, N. H., May 5, 1937.
WHITING, HOMER B., Ex-Chief, Hampton Beach, N. H., May 26, 1937.
HOADLEY, G. W., Ex-Chief, Naugatuck, Conn., June 9, 1937.
DUGAN, ARTHUR W., Chief, Vergennes, Vt., July 5, 1937.
HUBBARD, ISAAC M., Chief, Greenwich, Conn., August 15, 1937.
HAINES, FRANKLIN W., 57 Gardner St., Peabody, Mass., August 28, 1937.
LYNCH, THOMAS J., Chief, Waterbury, Conn., October 1, 1937.
MIGUEL, MANUEL S., Chief, Manchester, Mass., October 3, 1937.
PICKETT, E. W. S., Ex-Chief, Fairfield, Conn., November 1, 1937.
DALLAGHER, JAMES M., District Chief, Fall River, Mass., December 11, 1937.
SCULLY, JOHN J., American Fire Equipment Co., Boston, Mass., December 29, 1937.

For years I have locked horns with your distinguished speaker. It started many years ago in Birmingham, and if there are any defects in the Boston Fire Department, that man is to blame for the most serious one I know of. These fellows will come here and tell men of experience how to run a fire department. Where did they learn it? In addition to that I listened to this man tell how he should carry all this stuff we need on a piece of apparatus. I have even gone this far, and I base this not on book learning but on forty-two years on the firing line, I have even put side boards on some of these engines to carry some equipment, and if there is anything on God's earth comes up that is of use in extinguishing fire I am going to extend those side boards.

I would like to call attention to this fact that it would be better for the fire insurance interests to clean out their own nests before coming to the fire departments. They are the greatest incentive in the world for these big losses, and it can be charged almost directly to the fact that they will insure anything anywhere for any price providing it is big enough. Let me cite a concrete example, occurring not over two years ago to show the fallacy of coming before facetious men and preaching "holier than thou." In comes a single alarm. Even a deaf and dumb man could detect incendiarism, so it was turned over for investigation. An indictment was found. We found on that building that it was assessed, and Brookline is assessed quite high, $6500. We find $17,500 insurance. Let's travel on to two months later. Another one comes in in the same building. They have done a wonderful job. Even a ten year old kid could discover that. What do I find there? Not $17,500 but $37,500 insurance. We again secure an indictment, but where did it lead us to? I am going to tell you if you never take back from any convention you attend anything else, take back to the National Board the word that they clean up their nests before they send a man here. For years I have been preaching this from one end of the country to another. If you make it as hard to secure fire insurance as you do life insurance, you will go a long way toward stopping these losses.

CHIEF WALSH: I have something to say about civil service. Fifteen years ago that boy "Chief Pope" came to me when I was marking papers. He thanked me. He landed number one. I said, "For what?" He said, "I landed number one." I said, "If you keep on"—I didn't know the man—"you will be a district chief or deputy chief." He is chief of the Boston Fire Department today. That is civil service. That is a man that is an engineer. I pride myself on being an engineer. I have been called on the stand for gasoline explosions and other things to testify as an expert in Massachusetts. I don't know how I will make out in New Hampshire, and in addition to that twenty-nine years ago I passed the Bar of Massachusetts as a lawyer. That is one thing I compliment you on in saying you believe in civil service. Massachusetts is the only state in New England that has civil service. Any man in any city that becomes a lieutenant is an engineer. When a man gets to the position of chief of fire department in any city or town in Massachusetts, when the white hat is put on him, he has something underneath the white hat. I just wanted to compliment Mr. Hutson on his recommendation.

MR. HUTSON: I only have a few remarks to make. I heard the other day that Amos and Andy were going off the air and the Pepsodent people were going to get some other humorist to take their place. I couldn't figure out who they were going to get but now I understand they are going to get the Ex-chief—

CHIEF ALLEN: I hope I am not an Ex-chief.

MR. HUTSON: That you are going to retire from the fire department and take over the Amos and Andy program. I want to say for Chief Pope's benefit that

Ex-Chief JOHN P. DOYLE, First President, Wellesley, Mass.

I did not try to pan the Boston Fire Department. I would not do that. The remark that was made was that the Boston Fire Department, I believe, was the oldest fire department to institute fire drills and drilling and I was corrected on that, and then I said they had never changed it since that early date, which of course I know is not true. But that is one trouble of many programs of drills and drilling, that they do not change from time to time.

CHIEF GISBORNE: I neglected to say something about that fire. I discovered immediately after that fire that there was $5,000 placed on the furniture of that house three days before the fire. It is being investigated. It was done in this way. The man went to New York City and saw a broker there and he telephoned a broker in North Greenwich to place the insurance. I asked that broker if he didn't know that the man went up there and he said, "That is nothing to me. The man in New York wanted it put on." That is what they are doing all the time. They don't investigate anything.

SECRETARY O'HEARN: We have a telegram from the nationally known lecturer Alton Hall Blackington:

"Chief Daniel B. Tierney,
New England Fire Chiefs' Convention.

Tell the chiefs I am sorry I can't be with them.

Blackie."

Now men, we have been crowded for space and you know we must go to dinner at one o'clock and we can't get out of there in time for a two o'clock session, so when we adjourn let's adjourn until three o'clock.

We have with us President Bogan. I know his remarks are going to be very brief and I am going to ask him to let it go until that session. I will guarantee the next session is going to be just as good as this. At this session we have a man here who has gone to considerable expense to show us the hobby of one of our leading members, Chief Burns of Connecticut. It is going to take him ten minutes now to get his machine into operation. I will ask that man to get going now while I am talking so he can show us Chief Burns' hobby.

This afternoon we have gone to the expense of bringing a man from Lowell for what will be probably the best picture we have had an opportunity to take. We have a special stand up in front of the Balsams Inn and we want every man and woman there, if possible, at five o'clock. There is a wonderful setting and we want to take that picture home.

Immediately following there will be demonstrations. They have a very fine high pressure system here and demonstrations of nozzles and so forth are going to be shown. The exhibit men asked me to announce that, and try to get an attendance. That has got to be crowded into a small amount of time because we sit down at 6:30 at the banquet, and the banquet is just a get-together. There is no expense for that. We have gone to no expense for the banquet setup. Chief Allen is going to be toastmaster, and "Sandy" Chapman is going to try to lead us in community singing. We have enough talent in our Association if we can bring it out. Chief Allen wants you to let him know anybody here or at the banquet that he can hit in a humorous way.

We have a man who has volunteered to come to show, what I have never seen, a casting expert on this lake out here.

The head table setup at the banquet is just an informal affair. It will include twenty persons and they will be the officers and their wives who may be present. Don't think there are any favorites or anybody at the head table who should not be there. It is only a setup to get our officers up there for exhibit and their wives or ladies with them.

I think I saw Miss Allen come into the room a few moments ago. I have seen this woman in action, and anybody who misses the convention session this afternoon and misses seeing the only female Fire Chief we know of, Anne Crawford Allen, who is head of a fire department in the State of Rhode Island, is going to miss something. She is a fine type of woman, a real girl. I have seen this girl in action and I have never seen a fire chief do a better job. She knows all the lingo. She is just like all the other Allens that I know of. She is a real girl. She is a flier. She was going to fly up but the nearest stop she could make was way down to North Conway and she said she might as well auto all the way as flie part of the way. She started this morning and averaged forty-three miles an hour on the way up. That shows the speed she travels, and she is here and ready to go. Don't miss this, and bring everybody you can. Crowd this room to hear this girl and have the audience she is entitled to.

We have also our own Fire Marshal in Massachusetts. Personally I think a lot of our Fire Marshal. He is one of the fellows whom I believe is co-operating the best he can with the fire chiefs, and those of you who have not heard Steve Garrity, I hope will get in and hear him. The rest of the program is also very interesting. This afternoon is the last of the speaking programs. I realize you have all been tied in by the weather and today it was hard for you to stay in. Tomorrow we have nothing left over but the election of officers and the place of the next convention and reports of your officers, which of course are of some importance.

How is the Talkalarm man getting along?

CHIEF JOHNSON, Waltham, Mass.: If he has got through, I would just like to say a word. We have listened here to a great debate. I suppose Mr. Hutson butted in here according to the arguments, but I also suppose he was invited here to address this convention. Don't you think it would be a nice thing to vote that we thank him for this address and that it be spread on the records?

CHIEF ALLEN, Brookline, Mass.: I would like the privilege of seconding that motion.

CHIEF WALSH: I would like the privilege of thirding that motion.

(Motion carried. Applause.)

PRESIDENT STOCKWELL: Address by Robert A. Bogan, Chief, Baton Rouge, La., President of The International Fire Chiefs' Association. (Applause and members rose.)

ADDRESS

By Robert A. Bogan

Chief, Baton Rouge, La., President International Association

Mr. President, Distinguished Guests and Members of the New England Association of Fire Chiefs: I really can't express to you how sincerely I appreciate the invitation of being your guest. I learned to know a great many of your members when you made your first trip to New Orleans about 1927, and since then I have

learned to know more of them and I have appreciated the friendship very, very much. I assure you I deeply and sincerely appreciate being asked here to your convention at this time. I have enjoyed it very much.

I thought I would take this opportunity of passing on to you some of the things that your officers have in mind in the International. Yesterday I was listening very carefully to the many suggestions as to what could be done by the fire chiefs of this country. There were a great many splendid ideas brought out as to the standardization of equipment and other things. You heard Chief Allen of the educational committee tell you what Chief Scott and his committee are doing, of which Chief Allen is a member, and I do know they are doing a splendid job which will be presented at the International at Oklahoma City.

It is the thought of your officers that with all these splendid ideas being brought out annually for the last sixty-five years and never being put in force or being assembled in any particular place, it was about time for us to look around for a centrally located office in which material that is needed and wanted and of great benefit to fire chiefs of this country should be assembled, and we are working along those lines. We have a very encouraging contact with an agency in Washington by which we hope to work out a three year plan to find out if it will be worthwhile for the chiefs to go into. I want to tell you that Chief Tierney, who is First Vice President, has gone over the whole program with me and he is in one hundred percent accord with it. I know if we attempt to do anything we should all understand what is started so we will all be able to work it out in a very satisfactory manner.

I don't know any chief in this audience or in this country who can tell me where to get any material that has been brought out on the convention floor in the last sixty-five years. You might refer to somebody having a copy of the minutes but you can't tell me anybody who has got this material, and that is what we need. An organization in this office can assemble and get material together and have it in a language the firemen will understand. There are a lot of splendid ideas that have been gotten out by chemists and so forth, but most of it is over the head of the average fireman. The chemist can tell us what the different gases will do but he can't tell us an antidote for all the gases. There ought to be an organization where they can tell what would be the antidote.

We are going to try to assemble the idea and have it presented to the International so that the International can either accept it or reject it.

I believe there are a number of agencies in the country we should work with. It has been shown by Mr. Hutson's activities around the convention and the feeling toward Mr. Hutson that the National Board and the Fire Chiefs' organizations are going along together.

Those are the ideas just briefly of what we are working on, and I am passing them on to you chiefs for your serious thought now so you will be familiar with it when you come down to Oklahoma and hear the plan if we can get it. We don't know if we can work it out but we do have encouraging reports of the three year plan working out. We have worked in some parts of the country with this great friend of the fire chief, Dr. Price. I am very proud of the interest Dr. Price has given to the fire chiefs of this country. You will make no mistake in being here and listening to his description of the Texas school fire. It is the first topic this afternoon and certainly is something every fire chief should be interested in.

I just want to again say to you how deeply grateful I am to be up here with you, how much I appreciate it. If there are any questions you would like to ask me about this tentative plan, I would be glad to answer you.

Chief DANIEL B. TIERNEY, Pres. Int. Asso. of Fire Chiefs, Arlington, Mass.

CHIEF MEGNAN, New Jersey: I am not a member of the New England Association but I am of the Eastern. Our community happens to be a volunteer community, and I have been chief in that town eighteen years and in the department about twenty-two. Since I have been chief there, I have been trying to get knowledge to further the local organization. I have been trying to get some good subject matter for drilling. I have been in touch with the chiefs of the big cities of the country and about usually what I get, they give you an order of procedure for their drills but don't go into any detail and it seems impossible to get any details of carrying out the drills. The idea is mine in bringing it up at this time, I think it is something for the International to bring up and try to put in concrete form. The average small town has a volunteer department, if it can obtain this material, can use it to good advantage. In regard to that in New Jersey, we have a fire prevention bureau of chiefs throughout the county. We are handicapped by funds. I do feel down there the National Board of Fire Underwriters should recognize an activity of that kind and help them out in their work. We were informed on the last request we had to go to New York and pick up what we wanted for fire prevention work. I believe that defeats the work. The problem that the usual volunteer organization has, as I see it, throughout the United States is in getting properly trained officers, through that an officer kept in force for a number of years accumulates a certain amount of knowledge. I think he should be benefited by something in black and white. He is unable, unfortunately, financially to attend drill schools that are open for them. I think it would be something for some discussion and thought.

CHIEF BOGAN: Our plans are to deal with vocational training schools in Washington. In every state there is a vocational directory. We have found in some places there hasn't been any co-operation of the vocational training department tying in with the fire chiefs. In our state we work very nicely with the vocational training department, and I had thought over in New Jersey they were having contact with the vocational training department. If you get in touch with the vocational training department in New Jersey, I don't think you will have much difficulty in getting help. That is going to be one of the big things of the International to try to bring the fire chiefs in the state and the vocational director in each state together. The International will have suggested ideas as to how to carry out the training program and how to get financial help from extension agencies. By working with these various agencies, I think we can get results. We are not going to try to inflict Bob Bogan's idea or Dan Tierney's idea or Selden Allen's idea on any city, but there will be suggested ideas. I would like you gentlemen to think seriously about that so those of you who come down there can give it your best argument on the floor of the convention.

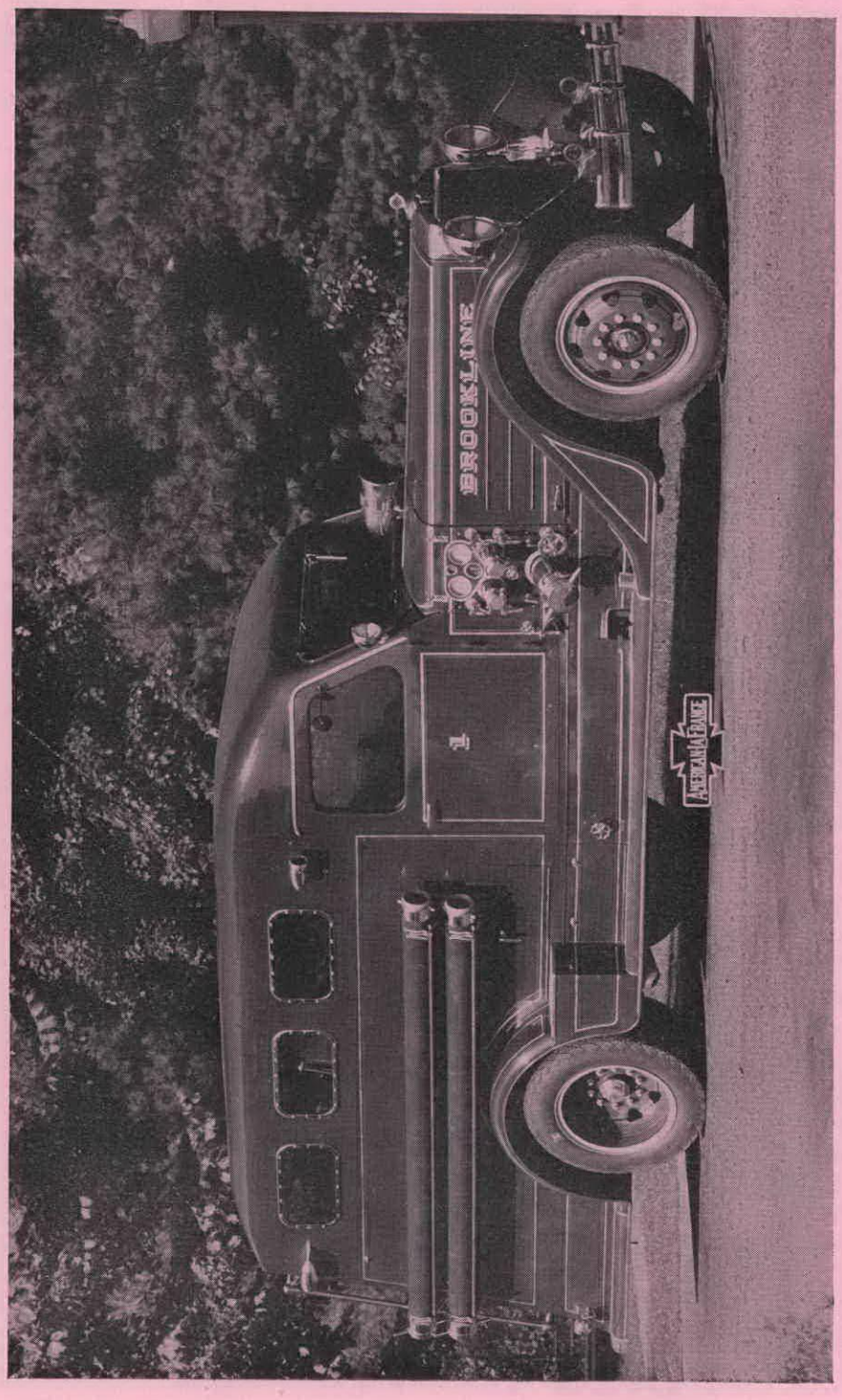
PRESIDENT STOCKWELL: I would like to hear from Chief Burns.

TALK

By Thomas F. Burns

Chief of Fire Department, Bridgeport, Conn.

Mr. Chairman and Delegates: I asked Mr. Robinson, one of the gentlemen who installed the Talkalarm in our department in Bridgeport to demonstrate it to you. When the alarm comes in and is received in the battery room, it is transmitted to every engine house and they receive it and it even announces the box number and location; and when they receive that, there is a button on the sounding board in every engine house which they push and a light comes up on every one of those boards notifying the operator he received the message. We verify it on a tape but no bells are hit. We find it increases the efficiency of our department because under



AMERICAN-LAFRANCE METROPOLITAN
V-12 motor, 1250-gallon pumping engine, Sedan type body.
Delivered to Brookline, Mass., Chief Selden R. Allen, October, 1937

the old system if a bell was ringing it seemed to have a tendency to affect the system and give the men a big start, and by this transmitting to the amplifier it seems to relieve that strain. When they get it, every man and officer knows just where it is going, and we think that is a step in the right direction to bring up the efficiency of the department. I hope Mr. Robinson will be ready in about ten minutes. Anything in the fire department when you find you get a one hundred percent vote of the fire department and they say it is the best thing you have, I think it is the best thing we put in the department.

CHIEF BOGAN: What is the cost of the outfit?

CHIEF BURNS: It cost $1900. We have two separate wires. We were fortunate in putting it underground.

MR. HUTSON: If you put in a system of this kind, would you recommend doing away with the PBX and telephone service of the telephone company to connect with the fire department?

CHIEF BURNS: No.

MR. HUSTON: You wouldn't recognize that at all?

CHIEF BURNS: Right.

MR. HUTSON: You would recommend continuing that service?

CHIEF BURNS: Right.

MR. HUTSON: The question of the use of amplifiers in the fire service has come up before the National Board of Fire Underwriters and we are issuing as of July 1st a little bulletin to the fire chiefs on that question, so that you men that are on our mailing list or members of the International will get a bulletin about July 1st covering the use of amplifying service. Briefly it says this, that we can see no objection to transmitting by loud speaking service or voice amplification providing you recognize you are transmitting alarms and that you make that equipment just as dependable, just as reliable, just as sure in operation as you expect your ordinary fire alarm system to be. That means that it has got to be supervised so that if a circuit goes out, if a battery goes dead, if something goes wrong, you will get a trouble signal. We also have no particular objection to your using voice notification if you recognize that voice notification is probably the poorest form of communication, that many men are not suitable operators, that the telephone company has to train girls for a long period before they can make good operators, that certain sounds can't well be understood, that you do a certain amount of lip reading when you are talking with a person and when you don't watch a person you don't get all they say. So if you are going to depend on voice service for transmission of apparatus from the fire station to the fire ground, you must do it by not only giving the street number and the definite location but you have got to check that and check it again, which means that you should do as Chief Burns tells me he does in his town. I think I am right when Chief Burns receives an alarm he will notify every company there is a fire at 322 Washington Street, Washington Street corner of Seventh Street, Box 792. Now he has given that notification in three different ways and certainly they should have gotten it in one of the three ways. I don't believe that that is quite sufficient. I think also they should wait until they get the alarm over the tape because then they have something they can carry with them. A great deal of my work is answering telephone calls and it is one of the hardest things in the world to understand the names of streets. People call up probably a dozen times a day and want the building code or something sent to them at such and such a street address and it is the

hardest thing in the world to get it. I think in an ordinary fire department when it comes in you are going to find one or two men understand it as Cherry Street and some of the others understand it as some other street than Cherry Street. So I believe if you are going to depend on loud speakers you have got to speed up your register and get it through the register at the same time as the voice comes through so you can have a check.

DEMONSTRATION OF THE TALKALARM

By Alfred A. Robinson

Engineer, Bridgeport, Conn.

(It was voted that a vote of thanks be extended to Mr. Robinson.)

(Adjourned to 3 P. M.)

WEDNESDAY, JUNE 23

3 P. M.

FIRST VICE-PRESIDENT RANDLETTE: Gentlemen, we have an important program this afternoon and we desire to get started. We will change our program just a little this afternoon from what it is on the program but we will not omit any of it, and first the Chair recognizes Chief Allen of Brookline.

CHIEF ALLEN: Mr. Chairman, Ladies and Gentlemen of the Convention,—No greater honor, no greater prilvilege will ever come to me greater than the one that has been conferred on me of presenting one of your guest speakers. She is womanhood at its finest. So it is with pardonable pleasure that I present this outstanding woman, just this ideal honest-to-goodness American girl who by her own efforts has become a real recognized Chief of a Department, and so it is with pardonable pleasure, I repeat, that I present Anne Crawford Allen, Chief of Cowesett, Rhode Island, and I know you are going to hear a message worth while.

(Applause and members rose.)

THE AIRPLANE ANGLE OF FIRE FIGHTING

By Anne Crawford Allen

Chief of the Cedar Hill Fire Department and State Fire Warden for Kent County, Rhode Island

Fellow Members, Guests, Ladies and Gentlemen: I really think that Chief Allen certainly is very flowery, to say the least. I don't know why it is but certainly all you Fire Chiefs have been awfully, awfully nice and I appreciate it tremendously. I have a very, very short paper here. I know your program this afternoon has been cut down in time and I am going to try to cut it short, as it is something new and I think it will be of interest to you.

That airplanes will be a recognized piece of fire department equipment in the future is a statement that anybody can make safely at the present time. However, their use at the present time, as a piece of fire department equipment, is purely experimental. So far as I know, only one volunteer fire department, and no permanent department, in the United States can boast of the ownership of an airplane.

Chief SELDEN R. ALLEN, Past President Int. Asso., Brookline, Mass.

There are many fire chiefs and departments that utilize the services of airplanes upon occasion. But only the Cedar Hill Volunteer Fire Department of Cowesett, Rhode Island (of which I am the Chief) can actually state that an airplane is listed as a piece of department-owned apparatus.

As I said before, the use of an airplane in conjunction with fire department work, has been entirely in the nature of an experimental venture. We have learned of a great many services that the airplane cannot perform, and we have learned of those that it can. Though it may be gathered from this that its service to a fire department is decidedly limited, the service that it can render is of such an outstanding value that the limitation can readily be put up with. So, though I do not want to be quoted as saying that a fire department should immediately purchase an airplane, I do say that if there is a flying field located in the vicinity of your town or district, it would certainly pay you to look up the manager of your field and come to an understanding with him, so that he may be able to furnish you with flying service if and when you need it.

The first and foremost, in fact the only service I know of at the present time, that an airplane can render in actual fire fighting work at the time of a fire is in furnishing observation service to the fire chief or forest warden in charge of a large forest fire. Unless you are a chief of a district that includes large areas of wooded land, or a forest warden, this will not be of interest to you. However, for those of you that will be interested let me say a few words on the subject. When you stop to consider that from an airplane flying at as low an altitude as five hundred feet, an area of fifty square miles can be surveyed with ease, providing the visibility is of a corresponding distance, it readily becomes clear to you that the fire is sort of in the warden's or chief's lap—if he can get up to that height. I think a great many of our past mistakes in forest fire fighting have been through our ignorance of what was going on around the other parts of the fire area. Communications around a forest fire have been one of our greatest problems in Rhode Island and one that has never been worked out satisfactorily. For like any other general in battle, the Warden in charge of a forest fire must have a complete picture of the ever changing front of the fire, whether that fire is burning along a four mile front or a four hundred foot front.

Assuming that the chief or warden has an airplane at his disposal, let us run over some of the advantages this aerial survey gives. Presuming that the warden or chief has already dispatched a crew to the scene of the fire, he flies over the fire locale. At a low altitude he is readily able to mark upon his topographical maps all woodroads whereon he may place his fire apparatus to advantage—or to backfire from; all heavier stands of wooded growth that will burn hotter than the rest; all sparse growths that will burn less readily—and in which one could make a direct attack on the fire; and all sources of water supply that could be utilized in the fight; and last but no least what buildings, if any, are in danger or are going to be during the course of the battle.

Now the warden or chief has a clear, accurate picture of the entire fire scene. He sees where his first crew is working, and how many more crews will be necessary for the extinguishment of the fire. If he has radio facilities in the plane and with his ground forces, no time will be lost in issuing the necessary orders. However, if he is not so equipped, immediately upon his landing at the airport he can telephone for any necessary help, and then get out to the scene of the fire as quickly as possible to take personal charge. It would seem to me a good idea, if it could be arranged, that the plane after landing the warden or chief, go back over the fire and continue to circle, keeping the warden or chief posted upon the progress of the fire as the fellow in the plane views it. This can be accomplished by the radio-hook-up or by

dropping small message containers by parachute from the plane. This aerial supervision of a fire might prevent such a tragedy as occurred in the disastrous fire in the woodland of New Jersey last year when four C.C.C. youths were trapped by the fire and lost their lives, or the fire on Cape Cod this spring that cost two firemen their lives. A message dropped from the plane to the warden telling him of their plight might have meant the saving of their lives.

I do not say that the most efficient way to fight a forest fire is for the warden or chief in charge to stay "upstairs" and direct the fire from the air, for nothing can ever replace the actual, personal touch of the man in charge being directly on the spot. But I do say, that for a long, bad forest fire, that first aerial survey of the fire locale is as necessary to the modern chief or warden as learning his ABCs is to the first grader! And I think the day is coming when we will see it as common practice.

And now for instances of the use of airplanes for fire department service, other than in actual fire fighting. An outstanding example of such service is the use Chief Endicott of the Canton, Massachusetts, Fire Department has made of the airplane to prepare a large, extremely detailed photographic map of his district. The pictures made from a low flying plane in careful sequence, and fitted together in one large whole, show clearly the location of all roads, woodroads and trails, and all sources of water. A map such as this, hung in the fire station where it may be studied at leisure by every man in the department, will make for more intelligent fire fighting by the whole department. Even a town or city photographed from the air will reveal rather startling, and probably hither-to-unknown, fire exposures of dangerous proportions. It is a good stunt for any fire chief to have his entire fire district made into a photographic aerial map.

With the procedure nowadays of the police departments and citizens calling upon the fire department for any, in fact all, types of rescue and emergency service, it behooves the modern fire department to devote time and money to the equipping, training and maintaining of efficient Rescue Squads. The type of calls the Cedar Hill Fire Department receives from the various police departments throughout the state, in the course of the year, runs from locating drowned bodies to assisting in the capture of escaped convicts! Rescue squad wagons, inhalators, diving helmets and suits, grappling irons, acetylene cutting torches, and first aid equipment are considered in the accepted list of emergency and rescue equipment. But how about airplanes? Can they not render as vital a service as any? The answer is yes! They have a real service to render to the Fire Department Rescue Squad.

First let us take up the type of rescue or emergency call that I believe I am right in saying occurs more frequently than any in New England. The call for a drowning. Sometimes it happens that the victim has been located, and has been brought out upon the shore awaiting the fire department inhalator. But more often than not, the body has not been recovered and a long and tedious task of grappling for the body awaits the fire department members. The use of the diving helmet is a step ahead of the grappling irons—but it cannot be used under all circumstances. More modern than either is the use of the airplane in sighting the body from the air. Here again, though, let me remind you that there are limits to the service an airplane can perform. Like the diving helmet, the airplane method of sighting a drowned body, cannot be used under all conditions. In muddy waters, or over muddy bottoms it is useless to attempt to pick up an object from the air. Also bright sunlight is better than a dark, cloudy day for sighting an object, though not an absolute detriment to the method. But if the bottom is reasonably light, not necessarily completely of sand, the quickest way to locate the body of the drowning victim is from an airplane. Not from a low-flying airplane, for the higher

you fly the greater the depth of water the vision will penetrate. An excellent height to remember for this use is the range between 1000 and 2000 feet. Once the body has been located it can be quickly pointed out to the ground crew by zooming the spot repeatedly until the crew has gotten the location. (A zoom for your information is a sharp dive and a steep pull-out directly over the spot you are "zooming.")

I said that the emergency calls received by the Rescue Squad of the Cedar Hill Fire Department included a call from the police to assist them in re-capturing some escaped convict. The State Constabulary recognize the advantages of aerial observation. From a low flying airplane the ground can be scanned very thoroughly. As a short aside let me tell you of the conversation I had with a member of the State Constabulary the morning after the recent great hunt that was staged to re-capture four criminally insane convicts from the State Prison in Rhode Island. This particular trooper's assignment had been to cover the area by air, in short in a hedge-hopping airplane.

"And," said the trooper, making a very wry face, "there were over 150 police engaged in that man-hunt, combing every square inch of the ground. And out of those 150 sons-of-guns, who was the one guy who risked his life—who was in danger every minute of the time? Yours truly!"

But without doubt aerial observation from an airplane can be considered one of the most useful rescue squads adjuncts. And while I am about it let me just say one word about the choice of an airplane for this type of work. A fast high-powered ship is a marvelous conveyor for long distance flights. But the slow-flying, low-powered plane is the ship for fire department work. The Taylor Cub, or the Aeronca-type of planes is the ideal ship. These ships have a top speed of only around eighty miles per hour or so, and can be throttled back to about fifty. If you are flying low above the ground at about 150 miles per hour, it is not only dangerous, but also impossible to accurately scan the ground area. With a high-powered ship you would have to fly at around this speed. The Cedar Hill Fire Department's ship is a Fairchild monoplane which has a top speed of about 120 miles per hour. This ship will cover fairly long distances quickly, but due to its inherent stability, by lowering the flaps it can be cruised along at about sixty miles per hour for observation work. However, we never fly under six hundred feet or so at this greatly reduced speed.

Another use a rescue squad airplane might be called upon to perform would be in assisting the police to control a mob during a riot. Looking through a police-equipment firm's catalogue the other day, I came across the advertisement of large aerial tear-gas bombs to be dropped from aeroplanes. The advertisement reads "Mob Control from the Air. A large mob scattered over a wide front can be gassed better from a plane than from the ground. Simple and safe for any aviator to use!"

Well, I know of at least one fire department that has been called upon by the police to assist them in dispersing a mob of strikers with their fire hose. That was in little Rhode Island, so I guess that a great many other fire departments have been called upon for similar services. From my observations controlling a mob with a fire hose is not so very highly successful. I should think this aerial tear-gas bomb method would be highly successful.

Airplanes are also useful in various types of observation work that might come under the heading of rescue work with the volunteer fire departments. Especially do I mean those services that an airplane can render during a flood. Transporting of doctors and nurses to the flooded area, and flying serum into the area, might both be considered a fine type of service for a fire department rescue squad to render. Observation tours to locate stranded inhabitants could also be performed

Chief MICHAEL J. SHEA, Fitchburg, Mass.

by the fire department airplane. To anyone who flew over the flooded area that was the Connecticut River Valley, last spring, some idea of the magnitude of this type of service could be gained. I saw a good many land planes hastily equipped with pontoons, as I flew over Hartford. And—this type of service could be classed as very good publicity for a fire department.

There are many other uses a departmental airplane could be put to. But I think I have named the outstanding ones. There is of course the fact that the airplane can furnish the Chief of the Department with a most excellent means of transportation in line of business and attending meetings and conventions at some distances. However, I think I had better not dwell too feelingly upon this subject, as I had intended to fly up to this convention. But great was my disgust when I learned from the New Hampshire Department of Aviation in the State House at Concord that the nearest landing field available to Dixville Notch was at Conway, as the one at Berlin was closed. "If," said I, "I have to drive a matter of fifty miles by automobile upon landing, I won't fly at all." I drove up here in my car.

In closing I will not attempt to predict what the fire department airplanes of the future will look like. That they will be real fire fighting machines I feel sure. But whether they utilize machine-gun like guns to project fire fighting gases into the heart of the roaring fire, or whether they will be equipped like great sound trucks with loud-speakers capable of emitting tone signals on the wave length that the fire is burning, and snuffing out that blaze, as we used to do with the Bunsen burner and an old fiddle in the Physics Lab at school, well, that is too much to say!

But I do say that in the not too distant future I feel confident we will see small, low-powered airplanes being used as regular pieces of fire department apparatus in the more rural fire districts, where observation of large areas is an absolute necessity.

VICE PRESIDENT RANDLETTE: Miss Allen's paper is open for discussion. Are there any questions?

CHIEF ALLEN: Mr. President, for years I have dreamed of an Allen making good. Lo and behold, my dream has come true!

VICE PRESIDENT RANDLETTE: What disposition will you make of Miss Allen's paper?

CHIEF JOHNSON: Mr. Speaker, I move it be received and made a part of the records, with a rising vote of thanks.

(Motion seconded and carried. With applause.)

VICE PRESIDENT RANDLETTE: The next on the program. The New England Association of Fire Chiefs is indeed very fortunate to have the speaker who will next address you, and without further ado it gives me pleasure to introduce to this Association Dr. David J. Price, Principal Engineer in Charge, Chemical Engineering Research Division, United States Department of Agriculture.

ADDRESS

THE NEW LONDON, TEXAS, SCHOOLHOUSE EXPLOSION

By David J. Price

Principal Engineer in Charge, Chemical Engineering Research Division,
Bureau of Chemistry and Soils, United States Department of Agriculture

Mr. President, Members of the New England Fire Chiefs' Association, Ladies and Gentlemen: To follow such an attractive Lady Fire Chief is rather a new experience to me, and I am afraid Chief Allen may have put me on the "spot."

I want to assure you it is a pleasure to come back to New England, and of course I want to say at the outset of my talk that I am not a fire chief. I also want to make it very clear that I didn't come to Dixville Notch to tell any fire chief what to do. I happen to have had twenty-six years in the government service trying to study the causes of peculiar explosions and fires, some of the "crazy" type that are hard to understand. Our work shows that scientific research can be applied in a practical way to prevent explosion and fire losses and thereby save lives and property.

So I want to come to you today as a so-called high-powered government technical expert, and therefore don't believe everything I say to be absolutely true simply because I make the statement. If it isn't true, you can tell me so when I get through. So don't just believe it because I say so. I want to get the words in the right place. If I say anything that isn't practical, just tell me so; I am not thin-skinned. I want to say this to the firemen here, and I say it with all due respect —I think I am sympathetic with the problems of the practical man. I came out of the mines of Pennsylvania and didn't have a chance until I was forty-one years of age to get a college degree.

Death of Chief Will Burnett, Des Moines, Iowa

Before discussing the subject assigned to me this afternoon, namely, the New London, Texas, Schoolhouse Explosion, I would like to call your attention to an important occurrence which recently resulted in the death of Chief Will Burnett of the Des Moines, Iowa, Fire Department. A fire occurred in a woolen mill and Chief Burnett entered the building with members of the fire department to make sure that the fire had been completely extinguished. Upon reaching the second floor, they discovered a small spot containing some live embers and immediately called for a line. About this time a flash fire took place, igniting the clothing of Chief Burnett. He died from burns the following morning.

I have brought with me the cap and sweater worn by Chief Burnett, showing the results of the burning, which I would like to show you. The lesson to learn from this occurrence is that to a fire chief on duty the fire is never out and that he must protect himself with proper clothing and equipment at all times.

Chief Burnett was a personal friend of mine and no doubt many of the chiefs present at this meeting were acquainted with this fine character. I have referred to his death at this time on account of the great significance and importance to fire chiefs throughout the country, that they may become acquainted with the circumstances under which Chief Burnett so unfortunately lost his life.

Peculiar Explosions and Fires

We have learned a great deal about these explosions in recent years. We did not know for a great many years that we could have these peculiar explosions in mills and then we found out about grain dust. Now we find flour, paper, wood, and almost any kind of dust when mixed with air will cause an explosion. For years we have looked upon water as a most effective extinguishing agent. Now we are finding that it is playing a very prominent part in causing explosions and fires. We find that if a heavy stream of water hits dust settled on beams, girders and ledges in an industrial plant and forces the dust cloud over onto the fire that a dust explosion will follow. Then there is that kind of explosion where the use of water generates explosive gas. Water striking burning aluminum powder liberates "hydrogen" gas which is highly explosive.

I have never made that statement but what some fire chief says, "You say we can't use water. Tell me what we can use." It simply means that science must find an agent beside water to deal with these peculiar types of explosions and fires where water is dangerous.

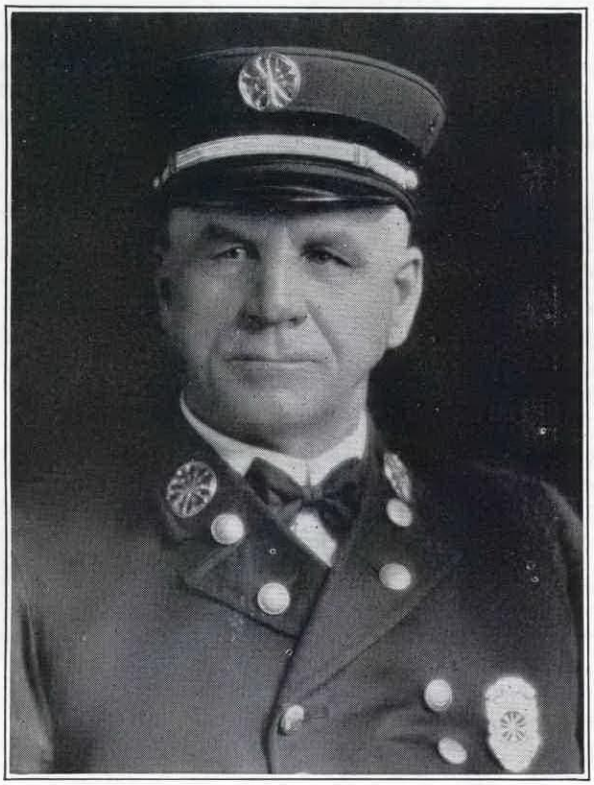
I recall about ten years ago coming through this country and going into northern Vermont in 1927 after the flood, when the hay in a number of dairy barns began to heat as the flood waters receded. A barn at Middlesex burned while standing in six feet of water. We of course call this "spontaneous combustion." Now if a farmer puts green hay in the barn, the moisture in the hay causes the fire. I want to refer to a peculiar case in Omaha where the ice burned up in an icehouse during a "spontaneous ignition" fire of this kind. The sawdust became wet from a heavy rain and during a period of excessively hot weather following, fire followed presumably due to the conditions developing in the "wet" sawdust.

Now the job is to find out why it does it. I am not standing up here today telling you something new because we found that a few years after the birth of Christ two Roman writers, Columnella and the elder Pliny, warned against storing "green" or wet hay, stating that fire would follow. That was two thousand years ago. So we have known about "spontaneous combustion" for a long time but unless someone can tell me before I leave this afternoon, we do not seem to know clearly "why" it does it. Of course we know that there is fermentation there and that in the bacterial action heat is produced. But the problem has been to determine what chemical action may accompany or follow this bacterial action.

So we built a farm after our experiences in Vermont during the floods. To popularize our scientific research on hay we say the "bugs" weren't there when the fire occurred but we couldn't get fire without the "bugs." The chemists job was to find out what happened after the "bugs" packed up and left. We are finding that oxidizable materials which ignite quite readily are produced and that seems to be the answer to the problems as far as hay is concerned.

The New London, Texas, Schoolhouse Explosion

Now Mr. President, that isn't my subject. I was just touching on these matters to indicate why those cases should be investigated. As you all know, there was an explosion in a schoolhouse at New London, Texas, last March. I would like to tell you some of the things about the investigation and some of the things I am having a hard time to forget. I never saw three hundred boys and girls killed before, the youngest perhaps about thirteen and the oldest eighteen. It has been very hard to forget, and I have here another exhibit which I would like to refer to. In searching around in the wreckage the morning after I arrived at New London, I found a



Chief FRANK F. DICKENSON, Brockton, Mass.

chemistry book. This book, which I am holding in my hand, is entitled, "Chemistry for Today," and was apparently owned by one of the high school pupils killed by the explosion. I picked it up from the floor of the manual training shop and found it open at page 367, section 476, entitled "Explosions and Explosive Mixtures." This section ironically read as follows:

> "We often read of some disastrous explosion caused by the escape of fuel gas in a house. It is of interest to inquire into the cause of explosions and to learn the reason for their terrific power. An explosion is due to a sudden chemical reaction in which the volume of gases formed in the reaction is much larger than that of the reacting substances; hence if the reacting substances are confined, as in a room or house, something must give way."

The section then continued with an explanation of the conditions under which a gas explosion could occur. The page was stained with the boy's blood. Whether or not the boy was reading this section or whether it came from the chemistry room is not known.

Now, ladies and gentlemen, I tried after we got back from New London to determine just what part this disaster played insofar as its importance is concerned with other disasters of this kind, and I think I can say without contradiction it is the worst explosion we have ever had in any schoolhouse.

I have with me here a list of fires in public buildings and meeting places involving a loss of life in this country of 5,678 lives in public buildings since 1900. The largest life loss was on the excursion steamer, General Slocum, in New York City on June 15, 1904, when 1030 people died. In the Iroquois Theater fire in Chicago on December 30, 1903, 603 lives were lost.

I have with me here some pamphlets—I haven't enough for everyone—but I am going to put these copies on the table. It gives the report of our investigation which has been recently published by the United States Senate as Senate Document No. 56. Copies can be secured by writing me at Washington.

On Thursday, March 18, 1937, about 3:10 P. M., an explosion of violent proportions occurred in the Consolidated School Building at New London, Texas. At the time of the preparation of my report estimates available indicated that 456 boys and girls, ranging from the fifth grade to high school age, were either instantly killed or died from the effects of injuries received in the explosion. Reports available from school officials, however, seem to indicate that owing to possible duplication in reports, the death loss may not be as high as originally reported.

Description of School Building

The Consolidated School of the district was located at New London, and many of the school pupils were brought in busses from the various points in the district. It has been estimated that more than 700 pupils were in the building at the time of the explosion.

The school building was of brick and steel construction with the auditorium in the center and the high-school rooms on the north end of the building, while the grade-school rooms occupied the south end. The main building extended from north to south for a total distance of 254 feet with two wings at each end about 136 feet in length. Although most of the class recitation rooms and offices, as well as the auditorium, were on the upper or what was commonly known as the fire

floor, there were also classrooms on the lower or basement floor on the east side of the building at the end of both wings.

The space on the lower floor on the west side of the building and directly underneath the rooms on the floor above was practically unoccupied "dead" space, used principally for storage. The volume of this space as nearly as can be determined was approximately 65,000 cubic feet and apparently the space was not needed for actual occupancy when the building was erected.

Description of Heating System

The school building was heated by individual gas steam radiators and the gas for heating was obtained from a nearby residue gas-pipe line owned by one of the oil companies. By using this residue gas the New London District School Board was utilizing for heating purposes a product which otherwise would have been burned in the "flares" as waste gas. It has been estimated that approximately $300 per month was saved by the use of this residue gas for heating.

The manufacturer of the "Gasteam" radiators in describing the operating principle of the equipment states:

"The radiators are constructed of cast iron. The sections are fitted together with slip nipples and held firmly in place with tie rods. The upper part of the sections forms the radiating surface. Directly beneath the radiating surface is the water chamber which holds a body of water one inch deep. The combustion chamber located below the water chamber is an integral part of the radiator sections and encloses a gas burner. The sections at the combustion chamber are lap jointed, entirely enclosing the gas flame."

In discussing the advantages of unit operation of "Gasteam" radiators the manufacturer further states:

"Each 'Gasteam' radiator can be turned on and off as needed. Nor is it necessary with 'Gasteam' to heat every room in a building as with one central boiler. The size of each radiator in a system is determined by maximum weather requirements. When these maximum conditions do not exist the 'Gasteam' radiators are simply turned off when enough heat is obtained. In many buildings some rooms must be heated day and night from fall to spring, while other rooms are used only periodically. Sometimes some of the rooms need 70°F. throughout the season, while others need only 50° or 60° F. Whatever the case may be, the great economy and convenience of having heat, always ready, when and where needed, is obvious."

In the operation of a "Gasteam" radiator the upper portion forms the steam-heating surface; the lower portion forms a water compartment and combustion chamber which encloses the gas burner. A steam-pressure regulator so operates that when the gas is first lighted a maximum volume of gas is burned to generate steam quickly. When 5 to 8 pounds pressure is reached the regulator automatically cuts down the supply of gas to maintain just that pressure. The water chamber need be replenished with water only a few times each season. Each radiator is operated independently by merely turning on and lighting the gas at the radiator.

Application of Vented and Unvented "Gasteam" Radiators

In discussing the application of vented and unvented "Gasteam" radiators, the manufacturing company states:

"When gas is burned in any appliance, water vapor is produced.

"It is possible for too much humidity to accumulate in the air of a heated room, and for the moisture to condense on windows and exposed walls. This is due to the fact that heated air can hold more moisture than cold air. Heated air coming in contact with cold windows and walls is cooled. If it contains a high percentage of humidity, when cooled, condensation generally results. When heating with unvented radiators, humidity is added to the air in direct proportion to the heat loss of the rooms heated. The air change that occurs in various amounts in any heated building, carries out with it both heat and mositure. The heat loss from conduction through windows, cold walls, floors, ceilings, etc., takes no moisture along with it as it escapes from the building. Thus the moisture liberated with heat that offsets conduction losses remains in the building. If the air that is leaving the room cannot absorb this additional moisture, the amount of humidity steadily increases until condensation takes place on cold surfaces, such as windows and cold walls.

"With vented 'Gasteam' radiators the moisture produced by the burning of fuel gas is carried to the outside of the building through vent stacks. When all vented 'Gasteam' radiators are used on an installation, there is no humidity from the radiators added to the heated room air, and a very dry condition results."

In addition to the vented radiators carrying off the products of combustion, many engineers feel that they are also desirable and essential to provide a means of escape to outside air of any unconsumed gas that may escape from the burner at the base of the radiator. This precaution is considered essential by the advocates of vented radiator installations to protect against the possible accumulation of gas in the atmosphere of the room.

There were approximately 72 individual gas-heated radiators in the New London school buildings. The radiators in the recitation rooms and other meeting rooms and offices were of the vented types. The radiators in the halls and stairway landings were generally of the unvented type.

Chemical Composition of Gas Used for Heating

The chemical composition of the gas used for heating the school building as determined by a consulting chemist on February 15, 1937, was as follows:

	Percent
Methane	56.43
Ethane	13.61
Propane	21.72
Butane	7.86
Pentanes and heavier	.38
Total	100.00

The calculated explosive limits of the gas when mixed with air are: Lower limit 3.4 percent and upper limit about 9 percent. The mixture of greatest explosive violence is approximately 6.5 percent gas and 93.5 percent air. The specific gravity of the gas compared with air as unity is 0.8687.

Story of the Explosion

The explosion occurred about 3:10 P. M., shortly after the classes had begun work in the last period for the day, which commenced about 3 P. M. It has been

Chief GEORGE L. JOHNSON, Waltham, Mass.

estimated that of the approximately 398 pupils in the grade or grammar school on the south side of the auditorium about 300 were killed, and that of the approximately 308 pupils in the high school on the north end of the building about 156 lost their lives. These figures are based on the total of 456 estimated dead, and before the final accurate statement of losses was available.

The explosion appeared to be on the lower floor underneath the classrooms on the first floor. The floor was blown upward and many of the pupils were hurled up into the air. The walls collapsed and the roof fell, burying large numbers in the mass of brick, concrete, and steel debris.

There was not much evidence of fire except in the manual training shop on the lower floor on the north end of the building and small fires in the chemical laboratory and chemical storage room on the upper floor caused apparently by the burning of chemicals after the explosion.

The extent of property damage has been estimated to be several hundred thousand dollars. There was approximately $100,000 explosion insurance carried on the building.

The barometer for Thursday, March 18, was high at 10 A. M. with a reading of 29.45 and at 3 P. M., about the time of the explosion, the barometer had dropped to 29.34 and continued to fall for some time later.

The fact that the explosion occurred during a period of falling barometer is important for at least two reasons. In the first place, it may explain how it happened that one of the school employees, entering the open area underneath the floor at the southeast corner about 10 A. M. to remove some stored material, was able to strike several matches at this point without causing an explosion. It is very evident that the gas had not accumulated sufficiently for an explosion at this point up to 10 o'clock in the morning of the day the explosion occurred. It is important to note that this workman entered this area at the time the barometer was high for the day.

In the second place, the gas would probably escape more readily and therefore accumulate in larger quantities as the barometer was falling. It is quite likely therefore that during the five hours of falling barometer from 10 A. M. to 3 P. M., the approximate time of the explosion, a large amount of gas had collected in the open area under the first floor.

Summary of Testimony before Military Inquiry Board

The military inquiry board, appointed under orders of Gov. James V. Allred held hearings at New London from March 20 to 22. I assisted the board during the hearing.

The developments in the testimony before this board as related to the cause of the explosion can be briefly summarized as follows:

(1) The school board of the New London school district, about the middle of January, discontinued the purchase of gas for heating the building from one of the commercial gas companies and arranged to secure residue gas from one of the oil companies with a line adjacent to the school property. The plumbing and connections involved were made by plumbers employed by the school board.

(2) The explosion originated in the open and unoccupied area underneath the first floor, blowing the floor upward and causing the walls to blow out and the roof to collapse.

(3) The striking of matches by an employee in the open and unoccupied area under the first floor in the southeast section of the building about 10 A. M. the day of the explosion indicated that the gas had not accumulated in dangerous quantities at this point in the building at that time.

(4) Eyewitnesses of the explosion did not generally observe any fire either before, during, or after the explosion which apparently was of violent proportions.

(5) The only occupants of the building who showed evidence of burns were either in the manual training shop located in the basement of the wing on the north end of the building or in the immediate vicinity thereof.

(6) The gas could not be detected by odor and there was no evidence to indicate that any effective methods were in use throughout the East Texas oil field section to detect the presence of leaking gas.

(7) There was no class in session in the chemistry laboratory on the first floor nor any operations in progress in this room at the time of the explosion.

(8) The gas steam radiators in the class recitation and other occupied rooms were vented, while the radiators in the halls, stairways, and unoccupied spaces were generally of the unvented type.

(9) Several boys in the manual training room witnessed a "flash" when the instructor made the electrical connection to operate a portable sanding machine located at the east end of the room. One boy saw the fire flash through the trap door and into the open area under the first floor where the explosion occurred.

(10) The record report book for the manual training shop work was found with the pages burned.

Probable Cause of Explosion

The probable cause of the explosion, based on the statements of eyewitnesses and survivors, was the ignition of combustible gas accumulated in the open unoccupied area on the west side of the building under the first floor by a flash from electrical equipment in the operation of a portable sanding machine located at the west side of the manual training shop at the north end of the building. This ignition of the gas at this point in the shop propagated or "spread" through the accumulated gas mixture, causing an explosion of very violent proportions. This explosion, which occurred at a time when practically all of the classrooms on the floor above were occupied, lifted the floor, blew out the walls, causing the roof to collapse, and resulted in heavy loss of life.

It has not been possible to establish definitely the source of the gas accumulation. It may have resulted from improper pipe connections causing leaks in the lines. It may have come from nearby wells or it may have been due to seepage through the surrounding strata.

In any event the evidence is very definite and conclusive that the explosion originated in the manual training shop and spread through the unoccupied space under the first floor.

Quantity of Natural Gas Liberated by Wells

When oil wells are producing it is claimed that a great deal of natural gas must be wasted under present methods. For instance, in the production of one barrel of oil it has been estimated that from 1,000 to 6,000 cubic feet of natural gas

is wasted. If this estimate is correct, it can be readily seen that when a well produces a thousand barrels of oil per hour the gas wasted into the air will be from one to six million cubic feet per hour. Many wells producing at the same time multiply the wastage to enormous amounts.

As previously stated, the estimated area of the unoccupied space underneath the first floor on the west side of the building was approximately 65,000 cubic feet. Assuming that the most violent explosive gas mixture was approximately 6.5 percent gas and 93.5 percent air, about 4,225 cubic feet of gas would be necessary to accumulate in this area. With the abundance of gas present from sources in the vicinity of the school building this condition could quite easily develop.

Recommendations for Prevention of Similar Occurrences

The following precautionary measures are recommended for prevention of explosions in schoolhouses, public buildings, and institutions:

(1) The use of effective malodorants for detection of escaping combustible gas due to leaking equipment or other causes should be required.

(2) Practical methods for the installation of gas indicators centrally located in school buildings and public institutions to detect the presence of escaping combustible gases in concentrations below their lower explosive limits should be developed. This disaster has clearly shown the need for further research on the development of alarm systems and warning devices in connection with the operation of combustible gas indicators as adapted to school buildings and other institutions where large numbers of people are exposed to explosion hazards.

(3) Supervision and inspection, by competent authorities, of public buildings and installations of heating and lighting devices and equipment should be required.

(4) Approved pressure regulating devices should be properly installed in all gas lines where natural gas is used for heating school buildings and public institutions.

(5) All electrical equipment and appliances should be installed in accordance with requirements of the National Electrical Code.

(6) Provision should be made for such proper construction of school buildings that will eliminate dead spaces underneath class recitation rooms and similar meeting rooms where dangerous gases can accumulate.

(7) Main pipe lines carrying gas to be used for heating purposes should not pass directly under public buildings, but should be located outside the building proper with only the necessary connections entering the main building.

(8) Adequate ventilation of all necessary and essential spaces under all occupied sections of public buildings should be required.

(9) Adequate ventilation at all times for schoolrooms using gas-heating appliances should be provided.

Mr. President, I am going to be real personal in closing in telling about another impressive experience. I can't just forget this experience in Texas where bodies of boys and girls were so horribly mangled due to the violence of the explosion. I hope what I have said today will send you back into your respective districts with a determination to make your schoolhouses safe.

Chief HERMAN E. GUTHEIM, Cambridge, Mass.

There was a case out in a Western State where a young man wanted to help the farmers in his section in extracting oil from soy beans. We have made marked progress in the industrial utilization of soy beans in recent years. This new unit was in operation only a short period of time when an explosion occurred and the boy and his helper were instantly killed. A leak in the extraction unit allowed the "hexane" gas, which was used as the solvent to extract the oil, to escape. Now this gas is odorless and also has no toxic or physical effect. Shortly after the explosion it was necessary for me to interview the parents of the boy in their home. His dead body was in the casket when I entered and I found his mother engaged in prayer. The time came when it was necessary for me to say some words of consolation to this bereaved mother, with her prayer beads and crucifix in her hand. The boy to her was careful and reliable and it was hard for her to understand why he was taken. With a heavy spirit I said, "I think your boy has sacrificed his life for the advancement of science because we are going to find out from this explosion many things we didn't know before that we can apply to the saving of other lives," and I looked down and saw the crucifix and said, "There is the greatest sacrifice we know of where the noblest man of all laid down his life for others."

I say in closing to you fire chiefs and you folks in New England that if you go back to your districts and take steps to have all school buildings properly inspected and make certain that all combustible and explosive materials are removed from unoccupied storage spaces underneath or adjoining classrooms where pupils are required to assemble, then these boys and girls who lost their lives in the New London, Texas, schoolhouse explosion have not died in vain. Thank you.
(Applause.)

CHIEF WALSH: Mr. President, since this organization was established I have heard many addresses. I have never heard anything more perfect than this. What mystifies me is the absence of the smell of gas. In all my experience of forty-six years in the fire department I have always detected the smell of gas except carbon monoxide gas which has no odor, no smell, but overcomes, and today coming in here I was very much interested in what you would have to say about this terrible Texas disaster. It is clear of course that no one could detect the gas as you say as an expert, and you certainly are an expert from your address given here, and what interests me more than anything else is no odor from this natural gas. Might I ask if that is true? We don't have natural gas here, you know. You get no odor from natural gas?

DR. PRICE: That is true. This gas cannot be detected in any way by odor or by any physical effects. We should put something in it so that it can be detected. As you know, hydrogen sulphide is very offensive. It smells like rotten eggs. We have got to use some offensive odor in the gas lines. If we can get in these gas lines a chemical that gives warning before an explosive mixture forms, it will prevent occurrences of this kind. It has been claimed that in Texas they produce as much as 6,000 cubic feet of natural gas with one barrel of oil. That is to say that these boys and girls were killed with less gas than would be produced with one barrel of oil. I understand that legislation in Texas since the explosion requires the placing of these odorants in the lines.

CHIEF WALSH: Thanks very much. I don't know whether anyone would have the audacity or the temerity to ask the questions if I didn't and I am long past the stage of an engineer. I am still a fire engineer, a member of the Massachusetts bar for thirty years, and this speech, I am going to repeat again, was the best I have heard. But what puzzles me is the fact that there is no odor from the explosive gas, and how could they according to your statement, which no doubt is true, how could those innocent persons whom everybody here is interested in, how

could they do anything to prevent that except through the engineer of the fire department if he was an engineer and might detect the possibility of such a happening. So I just want to say thanks very much for my own mind for the information you gave us here.

DR. PRICE: I appreciate that, and of course the point you have raised is the important one, whether this schoolhouse could have had in this gas line these chemicals, these odorants. It has been felt for a long time that it should have been done. There is another factor in this Texas explosion. The newspapers in the East featured this, I think, rather strongly, the so-called bootlegging of gas or stealing of gas. Many of the schoolhouses and churches are doing the same thing in Texas. It is quite a common practice because it is merely using the residue left after the gasoline is taken out. The residue goes back to the owner of the well. It comes down this line right in front of your building and it may cost you four or five hundred dollars a month to heat the building if you purchase commercial gas. Here is fuel going down by your place and it is going to be burned at the end of the line. I own that line and you come to me and say, "May I tap in on your line and take gas from there?" I can't tell you to take it because I have not a franchise, but I smile and you go ahead and take it. As to whether or not the school board had proper protection by not purchasing from a regularly franchised gas company is a very important question. It is well to remember that the connection was made at New London despite the fact that an official of the company went on the stand and didn't know they were taking gas. He didn't of course know officially that they were taking gas. The connection was made January 15th. The explosion did not occur until March 18th. and the question was if there was a poor connection and poor plumbing why was there a wait of two months for the schoolhouse to blow up?

CHIEF WALSH: Just one more question. That gas was lighter than air?

DR. PRICE: That gas was lighter than air so it was up near the ceiling where the switch was located. The specific gravity of the gas compared with air as unity is .8687. It is composed of about 56 percent of methane, about 14 percent of ethane, about 22 percent of propane and about 7 percent of butane, which is Chief Bogan's bugaboo, and about less than half a percent of pentane. You are wondering why you can't smell it. If you put these gases together, you have a mixture which apparently has no odor. It is also difficult to detect the presence of "methane" gas in coal mines simply by the odor. Special gas detection instruments must be used.

CHIEF BOGAN: I would like to have permission to say to the group here, doesn't Dr. Price's talk impress us very, very thoroughly with the necessity of our having this type of information at a headquarters unit as I said this morning and antidotes for these things? These pamphlets have been printed now for several months and only a few of us have known it. This type of material should be sent into every fire department in the country and written in a language that every fire chief could understand. That would be a very noble work for us to do, and I am sure Dr. Price will be glad to help us.

CHIEF MAGEE: I would like to ask if there is gas in corn ensilage.

DR. PRICE: In corn ensilage there is a very large proportion of carbon dioxide gas due to the fermentation process. We had a case on a Maryland farm last fall where a mother and a six year old child and a nineteen year old girl were all suffocated. It was a warm day in August and they had been using the pit silo for storing ice. During the silage season the pit silo was used for the overflow from

the main silo. The little six year old girl apparently went down into the silo to play. When she reached the corn, she became effected and called "Tell mother—tell mother." A little boy nearby ran in and called the mother. When she got there she jumped in to help the child, and the mother and six year old child were lying on the ground just six feet from the corn, when the nineteen year old girl went down and something also happened to her. When help was summoned, a nearby garage mechanic went down into the silo to recover the bodies and he felt he was being overcome. We went to the silo and sampled the gas. We found that the carbon dioxide, the CO^2 content, was very very high and practically no oxygen, around 3 percent. They all died from suffocation. Please remember that the three of them died within eight feet from the ground. I saw those three bodies in the undertaking establishment and was deeply affected. I have referred to that because the matter is close to our hearts now. It is important to firemen to know that in using gas masks in these silo gas accidents you must provide the oxygen supply. We have had many cases where firemen have worn a mask and lost their life. Remember the mask is of no value in cases of this kind unless the oxygen content is high enough.

CHIEF BLAIR, Nantucket, Mass.: I would just like to state to the doctor a little incident that I have been through recently and the reason I would like to bring it up at this time is because I don't think there would be a better time to have just criticism and perhaps it would be a benefit to some of you fire chiefs who have never met with the same trouble I have had, and it is just because of our ignorance of what might happen that gets us into trouble. In my teachings I had been told to treat oil fires or fires of that nature with either foam, carbon tetrachloride, CO^2 and so forth, and recently I had an occasion where our contractor was preparing a lot of building material and in this great vat he had a capacity of five hundred gallons of tar which took fire. There was only one piece of apparatus sent and it was where there was no water available. My deputy applied one tank of Foamite before I arrived. The fire became greater. We put a cover over that tank and a tarpaulin over that and buried it in sand to try to smother it. There was too much ventilation; it was getting oxygen all the time. I had used what foam I had and knew of no other way of handling the fire with the ingredients at my hand. I sent in for some carbon tetrachloride. I had the workmen raise the cover perhaps twenty inches so it tapered down to nothing on the back side of the vat, and when I applied the carbon tetrachloride there was a terrific explosion and myself and four of my men were covered with burning tar from head to foot. I have a theory of my own which is perhaps wrong, and that is that the amount of foam I did apply had floated to one area of that tank and I had sealed it and I broke the seal, but I had never before known where carbon tetrachloride had caused an explosion of that kind. We were blown from here to where you sit. I am trying to find a solution for it so it will not happen to anybody else.

DR. PRICE: I am not going to try to answer Chief Blair now. It is an interesting case and I would like to get more information from the Chief as to just what happened. I would like to discuss it further with him in private and get more detailed information.

I have here a circular published by the Department of Agriculture—a special circular for firemen—Circular No. 385, "Dust Explosions During Fire Fighting," in which we depict by illustrations how these explosions occur, and I will be glad to send a copy to you if you will give me your address. I am going to leave Chief Burnett's picture here, which you may look at; and don't forget to take one of these Texas schoolhouse explosion reports with you. It is a very complete detailed report, and if there are not sufficient for all present, I shall be very glad to send additional copies to anyone on request.

Chief NANCY ALLEN, Cowesett, R. I.

VICE PRESIDENT RANDLETTE: The Chair awaits any motion on the disposition of Dr. Price's paper.

CHIEF MAHONEY: I move that Dr. Price's address be received with a rising vote of thanks and that his paper be recorded in the proceedings of this convention.

(Motion seconded and carried.)

VICE PRESIDENT RANDLETTE: Chief O'Hearn has a telegram to read.

SECRETARY O'HEARN: "Greetings to the boys and girls, not forgetting the Toastmaster. George W. Goode."

VICE PRESIDENT RANDLETTE: I regret to announce to the members that Commissioner Kirk was unable to be here today. It now gives me pleasure to introduce to the meeting a man who is very prominent in Massachusetts and who has worked successfully with the fire departments and with the fire marshals, and it gives me pleasure to introduce Stephen C. Garrity, State Fire Marshal, Massachusetts.

TALK

By Stephen C. Garrity

State Fire Marshal, Massachusetts

Mr. Chairman, I will say now for your information that I will just take up about a minute of your time. The talk of Dr. Price was instructive; it really was worth the six or seven hours ride to arrive here to hear the Doctor. It indicates that the fire chiefs of your departments are continuing efforts on your part for protection.

Commissioner Kirk was unable to attend. The college of which he was a graduate was holding Commencement exercises, and as much as he hesitated about going, when I go back and tell him what a nice time we had, I know he will say that he was more than sorry that he could not be with you.

I would like to express to the Chiefs of Massachusetts our appreciation for their co-operation. The reason we have success is due to the chiefs and the chiefs' personnel. Each and every department has contributed to us in such a way that our record for the last year has been one you Fire Chiefs are familiar with. I know you have heard Chief Allen and you think he is boastful of Massachusetts, so I will not say anything more about what great departments we have in Massachusetts. However, I haven't had any occasion to meet any of the Chiefs from New England since a year ago.

I want to say that the Chiefs of Massachusetts have made it possible for us to make an inventory of all equipment for fighting fires. I think we are the first state who has made a complete inventory of equipment and men. We expect to have it completed in about a month. In other words, any fire chief in Massachusetts, whatever type of equipment he may need for any conflagration or disaster that might occur, we in two minutes can turn to our various indexes and tell you or any other fire chief where he might secure the equipment.

I want to congratulate Massachusetts in electing Bill Mahoney President of the Massachusetts Fire Chiefs' Club.

I want to express my thanks to you for your invitation to attend this meeting. I hope to be at your next annual meeting, and I am going to take great heed of

what Dr. Price has said here. He certainly has given us something to think about, and we can go back and in our hospitals or schools or public buildings find some inflammable materials which should not be there. However, we have had a splendid record of inspection. The day of constant inspection and investigation is here and instead of Fire Prevention Week once a year we are beginning to have Fire Prevention Week every week in the year.

I want to say to President Stockwell that we are glad to see you, and if there is anything we can do in Massachusetts to help you in the department of Public Safety, all you have to do is call on us.

VICE PRESIDENT RANDLETTE: Fire Marshal Garrity, allow me in behalf of the New England Association of Fire Chiefs to extend to you our appreciation in coming up today; we appreciate it very much.

I don't think it is necessary to take any action on Fire Marshal Garrity's remarks as the stenographer already has them.

Remember following this meeting, and it is now twenty minutes of five, we want the group to assemble for a group picture, and following that, do not forget the demonstration and banquet at 6:30. The Chair will entertain a motion to adjourn.

CHIEF ALLEN: I move we adjourn.

(Motion seconded and carried.)

WEDNESDAY, JUNE 23

6:30 P. M.

Annual Banquet held in the Dining Room of The Balsams

PRESIDENT CARL D. STOCKWELL, *Chairman*

CHIEF SELDEN R. ALLEN, *Toastmaster*

Community singing during banquet led by CHARLES "SANDY" CHAPMAN

THURSDAY, JUNE 24

9:00 A. M.

VICE PRESIDENT RANDLETTE: The meeting will come to order. Under the order of business this morning first we take up the report of the Secretary.

REPORT OF SECRETARY

CHIEF JOHN W. O'HEARN

Mr. President and Members of the Association: This report covers the business transacted for the association by your directors or committees since our last convention.

Nashua, N. H., Oct. 15, 1936.

The first meeting of the directors for 1936–37 was held on above date at the Elm Tree Inn at Nashua upon invitation of Chief Alfred C. Melendy.

After lunch the meeting was called to order at 1:30 by President Stockwell with the following in attendance: Chief Randlette, Richmond, Me.; Chiefs French,

Happny and Sargent—with our host Chief Melendy, of New Hampshire; Chief Lawton of Middletown, Conn.; Chief Koltonski of Rutland, Vt.; Chief Cote, Woonsocket, R. I.; Harry Belknap, Press representative, Mr. Frank Doudera and Mr. G. J. Cullum of the Balsams, Dixville Notch, N. H.

The Secretary reported the following deaths since our last convention and that floral tributes had been sent: A. P. Woodward, Danielson, Conn., June 27; John J. Luby, Wallingford, Conn., July 12; Herman W. Fernberger, July 18; Frank R. Harrison, August 4; Robert H. Mainzer, August 6, 1936.

Chief Melendy introduced the subject of the 1937 convention, and that while no particular city would be the sponsors, the entire membership of the New Hampshire Chiefs as well as those present would no doubt do all possible to assist in making a convention in New Hampshire a success. He outlined what he believed would be an ideal place for the convention, a well known summer resort near the Canadian border known as the Balsams. Its advantages were explained, facilities for meetings, exhibits and entertainments, all at one location.

Mr. Frank Doudera, owner-manager, who was present, said he would open his entire place for us with free use of garage for exhibits. The hotel rates on the American plan were given as $6.00, $6.50 and $7.00—a range of prices that appeared to please with corresponding charge for parts of day used.

After explanations and lengthy question period as to appointments and privileges, it was voted on motion of Chief French, seconded by Chief Cote, that we would hold our 1937 convention at the Balsams, Dixville Notch, N. H., June 22, 23 and 24.

Discussion followed regarding our method of registration, as it appeared some dissatisfaction existed as to our present methods. On motion of Chief Sanborn, it was voted that the president appoint a committee of three, all of whom are to be Chiefs, to handle our 1937 registrations. The President appointed Chiefs Sanborn, Koltonski and Happny.

On motion of Chief Sanborn, the following were voted as a committee of three New Hampshire Chiefs, with full power to arrange for exhibits: Chiefs Melendy, Sargent and Spring.

Price for space was discussed and agreed that a price of 10 cents per foot should prevail and as far as possible no other additional charges be made.

Meeting adjourned, subject to call of the President at 3:30 P. M.

Secretary reported that the corporation publishing "Fire Fighting" had been dissolved and publishing of the paper discontinued as of July 31, 1936.

(Signed) JOHN W. O'HEARN, *Secretary.*

April 13, 1937.

The second meeting of the directors for 1936–1937 was held on the above date at Fire Headquarters, Lewiston, Me.

The meeting was called to order by President Stockwell at 2:00 P. M. with the following in attendance: Chiefs Randlette and Sanborn, Maine; French, Melendy and Happny, New Hampshire, in addition to the President and Chief Koltonski of Vermont, Burns and Lawton of Connecticut, Harry Belknap, Press Representatice and the Secretary. Chief Cote was absent because of illness, Chief Mahoney of Massachusetts on account of business.

HARRY BELKNAP, Our Press Representative

Records of previous meeting were read and accepted with a correction that Chief Sanborn be credited with attending the Nashua meeting.

The following deaths were reported since the October meeting: John A. Palmer, Torrington, Conn., December 7, 1936; Charles E. Hill, Cape Elizabeth, Me., December 28, 1936; Patrick J. McGrath, Meriden, Conn., January 8, 1937; Dr. Joseph W. Scannell, Lewiston, Me., January 16, 1937; John N. Neary, Natick Mass., January 18, 1937; James M. Casey, Cambridge, Mass., January 25, 1937.

The secretary reported floral tributes and letters of sympathy were sent in each case.

Secretary reported on outstanding accounts of the magazine; amount received since the October meeting $360.50, balance still due at this time, $1375.93.

Reported that the Red-Book had again been successfully published by the Association and would return a fair profit.

Committees on registration and exhibits reported progress.

Chief French reported that all badges needed for members and friends would be furnished by courtesy of New Hampshire Fire Insurance Company. The request of the secretary that topics to be discussed and speakers to address the convention be suggested by members of the association did not meet with much success, but one member sent in a list which was quite complete and this enabled us to complete a program which we trust you will find pleasing and instructive. It is only fair to state here that this list was sent in by Past President Tierney.

After lengthy discussions of many topics, it was voted on motion of Chief Burns to invite a speaker on "Talkalarm" as it operates in the Bridgeport, Conn., department.

On motion of Chief Randlette, it was voted to invite Chief Nancy Allen to address the convention.

Voted that Percy Charnock of the New England Insurance Exchange be invited to address the convention on any subject that he believed would be for the advancement of the fire service in New England with special reference to standardization of Suction Hose Threads, if this is not already done.

Voted that the secretary be instructed to engage our friend, Russell, the Lowell, Mass., photographer, that we might have a good group picture at this ideal spot, The Balsams.

On motion of Chief Burns, the secretary was instructed to extend to International President Robert A. Bogan, Baton Rouge, La., an invitation to attend our convention as our guest.

Voted to engage Mr. Griffin of Lewiston to provide decorations for the exhibit hall or such other decorations as would be needed.

This meeting was held in conjunction with the regular quarterly meeting of the Fire Chiefs of Maine. It was reported as the largest meeting they ever held, was very instructive with morning and afternoon sessions and banquet in the evening. In fact the lunch at noon was a meeting, at which time your directors were given opportunity to promote our convention.

Good missionary work can be accomplished by these sectional meetings, as all are benefited by our exchange of ideas.

The following day, the 14th, those of our directors who found it possible, journeyed to Concord, N. H., and attended a meeting of the New Hampshire Fire Chiefs, where again that usual friendly spirit existed which is so important in the work we are engaged in.

(Signed) JOHN W. O'HEARN, *Secretary.*

In addition to these meetings, a great amount of work has been done by your officers attending sectional or Chiefs' Club meetings in the interest of the Fire Service.

Most noticeable was a meeting held at Rutland, Vermont, May 27, attended by four members of the association at the request of President Stockwell and Past President Koltonski. The meeting was attended by a committee of Vermont chiefs, together with their Fire Marshal, and was for the purpose of establishing better Fire Laws for the State of Vermont. Your association was represented by Percy Charnock, Engineer of the New England Insurance Exchange; Chiefs Allen, Tierney and the Secretary.

On June 9th your secretary attended a meeting of the Fire Chiefs of New Hampshire in the interests of our convention.

Since the directors meeting of April 13, the following members have answered the last Roll Call: Chief C. E. Sears, Claremont, N. H., died May 5; Ex-Chief Hoadley, Naugatuck, Conn., died June 9th.

This concludes all the meetings of the directors or officers since our last convention. You have before you a copy of our last Annual Report, and I move you, sir, that the report and these records as read be approved as the business done by the association since our last convention.

JOHN W. O'HEARN, *Secretary.*

VICE PRESIDENT RANDLETTE: It has been moved that the Secretary's report be accepted and placed in the records of the convention.

(Motion seconded and carried.)

TREASURER'S REPORT

Following the custom of past years, your Secretary-Treasurer has prepared a brief summary report covering membership and financial status since our last convention to the closing of the books June 15, 1937.

The Treasurer's books will show in detail all receipts and expenditures as testified to by the Auditing Committee, but are not published as part of our Annual Report and are available to any member who may want further information than what is reported here.

On June 15, 1936, the total membership was 740. Since that time we have admitted to membership 112 new members. We have lost by death 13 members and 45 have been dropped for non-payment of dues or resigned.

The total membership on June 15, 1937, was 794, of which 452 are active and 342 are associate members, classified by states as follows:—

Maine	47	New York	20
New Hampshire	37	Ohio	4
Vermont	38	Illinois	2
Massachusetts	440	Pennsylvania	1
Rhode Island	51	Washington, D. C.	3
Connecticut	148	Wisconsin	1
Louisiana	1	California	1

NEW ENGLAND CHIEFS AND FRIENDS AT THE BALSAMS.

On June 15, 1936, the cash balance was $6,822.96. On June 15, 1937, the cash balance was $6,921.38. $1,275.78 of this amount is deposited in the Union Market National Bank checking account, Watertown, Mass., and $388.51 in the Savings account of the same bank, $692.77 deposited in the Watertown Savings Bank and the balance $4,564.32 is deposited in the Watertown Co-operative Bank.

With reference to funds invested in the Watertown Co-operative Bank I wish to present the following statement:

Chief John W. O'Hearn,
New England Association of Fire Chiefs,
Watertown, Massachusetts.

Dear Sir:—

At your request we are pleased to submit the following statement regarding the holdings of the New England Association of Fire Chiefs' accounts in this bank as they will be on June 24, 1937.

The Association holds two matured share certificates for ten shares each, No. 9272, value $2,000, and No. 13854, value $2,000. The dividends on certificate No. 13854 of $70.00 for the year were mailed to you. The dividends on certificate No. 9272 of $70.00 for the past year were disposed of as follows: $64.00 was credited to monthly share account No. 29198, the balance of $6.00 was mailed to you. The bank received from your Association $32.00 for this past year to be credited to account No. 29198. On this account, the Association holds eight shares, which, including the $16.00 of the dividend on certificate No. 9272 that will be credited on the 24th of this month will be $598.72.

The foregoing figures show that the value of the Association's accounts will be $4598.72 on June 24, 1937. Our last report to you in June, 1936 showed the Association's total deposit to be $4484.32.

Very truly yours,

(Signed) C. H. PARKER,
Assistant-Treasurer.

Co-operative report shows total of $4,598.72. This will not be due or entered until June 24.

$4,564.32 as above
16.00 dividend on Cert. No. 9272 as of 6/24/37
18.40 earned dividend 1936–1937 as of 6/24/37

$4,598.72 (as per bank statement)

In accordance with the action taken at the Hartford Convention, our magazine "Fire Fighting" was discontinued with the July issue of 1936 and the corporation was dissolved.

During the past year, every reasonable effort has been made to collect outstanding accounts receivable for advertising. At this time these accounts amount to $1375.93, covering 11 advertisers.

Subscribers were contacted as to their wishes for refunds due on subscriptions, or continue to the termination of the subscription with "Fire Engineering." This arrangement appeared to be a happy solution of our difficulties. Many members

requested refunds, others cancelled the account and we were not required to make refunds. Others took advantage of continuing with "Fire Engineering"—an arrangement made by the secretary with the publishers that was carried through without cost to the association.

I feel certain all appreciate the generosity of "Fire Engineering"—as the entire arrangement relieved us of refunding amounts due on some subscriptions that are still in force.

THE RED BOOK

Carrying out the vote of the convention, our annual report or Red Book was published by the association. Our efforts were rewarded by a profit again this year.

The usual lack of interest in this work was manifested by the members at large; only 9 members assisted in the work by sending in one or more ads.

Due to increased membership a greater number of copies were printed; also many more pages were necessary because of convention proceedings. The cost of publication was $1656.29—advertising receipts were $2745.22—leaving a net balance of $1088.93. All advertising for three years has been paid for with one exception of $10.00—a reasonably good showing for a writing campaign.

This is the first year the association has shown a gain since 1933. Further financial gains should continue, but will be only as great as each individual member through his efforts desires to make it.

I plan this year, if I am again unfortunate enough to be your secretary, to publish the report with the assistance of a paid assistant-secretary. This is in accordance with our by-laws and has the approval of the directors. Experience has shown that personal contact is necessary for our advertising campaign. Our name as well as other associations is being used by imposters to our disadvantage. I had the pleasure of prosecuting one of these fellows within a month, who foolishly entered a bank in Watertown soliciting illegally. In this I was assisted by our good member Ex-Chief John Cutter of Newburyport.

I recommend that the annual report be printed in the same way as the past three years, all work to be done by the association, but with greater co-operation from the members.

With increased membership follows an increase in cost of doing business. Mailing costs and courtesies extended to members because of illness or other reasons show considerable increase—so much so that your secretary has been forced to employ a part time clerk, but activities have been made to carry the expense.

Our only source of revenue is the Red Book and what small returns we receive from exhibits. No longer will our annual dues suffice to carry the ordinary load.

From the $3.00 you pay, we pay $1.00 to International Association for dues. The Red Book costs about $1.55 delivered to you and the balance of 45 cents will not cover our mailing bills for the year.

Our greatest losses now are from members whom we carry at considerable expense, running up due bills $6.00 to $9.00 and then dropping without any thought of payment. It is surprising to know who some of these fellows are—also to know what the association has done for them from time to time.

It may be of interest to you to know that during the past 15 years we have

had more than 3,000 persons pass through our membership rolls, so that it can readily be seen that the amount of money above referred to must be considerable.

The last set-up of directors appears to be working out to good advantage. All are doing their best to conduct the business of the association to the best advantage of all.

The secretary-treasurer's books are here at the convention and are available to members who desire further knowledge of source of receipts and each item of expenditure, as all receipts and expenses are included in separate items in our method of bookkeeping, but for the best interests of the Association are not published in our Annual Report.

Your secretary as usual urges continued co-operation with your officers during the time intervening between conventions, as in this way we can keep in closer touch with the members, for after all you are the organization—your officers are your servants.

Notify us at once of sickness, injury or death, of promotions, retirements and change of address, as all of these things are very essential to our success.

At all times little acts of kindness, a word of cheer to the afflicted and recognition of special events are appreciated among our members, so let's show them we are on the job by attending to these things.

Your secretary again expresses his appreciation for your assistance and co-operation and trust that we may continue to carry on with renewed efforts to the end that our Association will hold the confidence and respect of the communities we serve.

JOHN W. O'HEARN,
Secretary-Treasurer.

VICE PRESIDENT RANDLETTE: If there are no objections, I will refer the financial report of the Treasurer to the Auditing Committee. Is the Auditing Committee ready to report?

CHIEF MAHONEY: Yes. We went over the books of the Secretary-Treasurer the other afternoon and find everything correct and in detail, very much in detail. There is every item there from a nickle to a thousand dollars. The Auditing Committee has signed the check books, bank books and Treasurer's Report.

CHIEF KOLTONSKI: I move that the report of the Auditing Committee be accepted.

(Motion seconded and carried.)

CHIEF KELLEY: I move that the Treasurer's Report and recommendations be adopted.

(Motion seconded and carried.)

VICE PRESIDENT RANDLETTE: Is the Exhibit Committee ready to report?

CHIEF MELENDY: Mr. President, I will state that I haven't got a full accounting. The receipts will be right around six hundred dollars. I can't tell you just exactly.

CHIEF ALLEN: That is the net receipts?

CHIEF MELENDY: Oh no.

SECRETARY O'HEARN: I move you, sir, that the report be accepted as progressive and that the Chairman send the full report to me and it be printed in the Red Book.

(Motion seconded and carried.)

VICE PRESIDENT RANDLETTE: The Registration Committee?

SECRETARY O'HEARN: Mr. President, I have the report of the Registration Committee. On June 21st we had 94 active members and 56 associate members, 30 male and 65 guests. On June 22nd, 51 active and 24 associate members, 54 male and 41 female guests. On June 23rd, 33 active and 25 associate members, 26 male and 24 female guests. There was a total attendance of 178 active members, 105 associate members, 110 male guests and 130 female guests, making a total registration of 523. Of this number 41 are new members.

The report of receipts of the registrars for the three days is as follows:

206 @ $3.00	$618.00
9 @ 6.00	54.00
1 @ 9.00	9.00
41 new members	123.00
Total receipts	$804.00

VICE PRESIDENT RANDLETTE: You have heard the report of the Registration Committee; what is your pleasure?

CHIEF MAHONEY: I move it be accepted.

(Motion seconded and carried.)

VICE PRESIDENT RANDLETTE: Now the Committee on Courtesies.

CHIEF ALLEN: Mr. Chairman, your Committee on Courtesies ask for further time in order that they may include all those who have contributed to the success of this convention.

SECRETARY O'HEARN: I move that the report be accepted and when it is received that I will notify those mentioned and forward it to them.

(Motion seconded and carried.)

REPORT OF COMMITTEE ON COURTESIES

Your committee extend our heartfelt appreciation to all who in anyway have contributed to the success of this convention. To the New Hampshire Fire Insurance Companies for their generous donation of our convention badges; to Captain Doudera and his genial manager, Mr. C. J. Cullum for the fine hospitality shown throughout our visit; to Mrs. Mildred Allen and her able corp of assistants, not forgetting Mrs. Cullum—for their co-operation and assistance in making our convention so pleasant for our ladies while we were occupied with the more important duties of our many sessions.

And last, but not least, to our member, Chief Albert C. Melendy of Nashua, N. H. for a most successful exhibition and demonstration of fire apparatus and equipment.

To all we are grateful and extend our "Thank You" in behalf of the Association.

Committee on Courtesies.
SELDEN R. ALLEN,
CHARLES H. FRENCH,
ALLEN F. PAYSON.

VICE PRESIDENT RANDLETTE: Any unfinished business?

SECRETARY O'HEARN: No.

VICE PRESIDENT RANDLETTE: Designation of place of holding the next meeting.

SECRETARY O'HEARN: I have some papers here. They are quite lengthy. I have a three page letter from the Poland Spring House inviting us to hold our 1938 Convention at Poland Springs. They go into it quite extensively, tell us what they have for rooms, 277 rooms with bath, 244 rooms that have access to private baths. The rooms appear to be ample. The rates will run on the same plan as here; $6.00 a day, double room with bath $7.00 per person; suites with bath to accommodate three or four people at $7.00 per day per person, and single rooms with bath at $8.00 per day per person. These rates are on the American Plan, which includes all meals. The garage charge is $1.00 a day but they will provide free outdoor parking space for your use. They will reduce the green fees on the golf course to $1.00 per day for those attending the convention. Unless there is a demand for more information, I am going to omit reading all that three pages to you.

I have one from the Mayor of Burlington, Vermont:

June 20, 1937.

To the Secretary,
New England Fire Chiefs' Association.
Dear Sir:

I would appreciate it very much if you would present to your association an invitation from the City of Burlington, Vermont, to hold your next annual convention here.

It is with a great deal of pleasure that I, as Mayor, tender this invitation for I have in mind the gratification with which the citizens of Burlington greeted your convention when last you were here.

We have many conventions which come to our city but I think I can say, in all sincerity and honesty, that there is none which gives us greater pleasure than that of your association. If you see fit to come here, I can assure you that Burlington will welcome you, officially and unofficially, with warmth, and further, that we will do our utmost to make your stay pleasant and will extend you every courtesy that is within the power of those of us who wish to show you, in some tangible manner, how much we really enjoy your presence here.

Cordially yours,

(Signed) Louis Fenner Dow,
Mayor.

We have one from the Chamber of Commerce at Providence, Rhode Island:

June 21, 1937.

New England Fire Chiefs' Association,
In Convention,
Dixville Notch, New Hampshire.

Attention: Chief Cote, Woonsocket, R. I.

Dear Sir:

The Providence Chamber of Commerce is very glad to join in extending the New England Fire Chiefs' Association a most cordial invitation to hold its next convention in Providence.

We think this city is an ideal place for meetings. Not only is Providence equipped with excellent hotel facilities, but in the event that your association should hold its convention in the Spring or Summer months, you would find here splendid recreational advantages. Newport, Narragansett Pier, and the Cape are all within easy reach of this city as are mountain resorts in the neighboring states.

Providence, too, is rich in historical interests and educational institutions. The city boasts of many interesting old landmarks, buildings, mansions, etc., dating back to its founding by Roger Williams in 1636. One of our most beautiful and largest parks is the Roger Williams Park, covering 432 acres of level forests, rolling fields, and lakes. Some of the outstanding educational institutions are Brown University, Pembroke College, Moses Brown, Providence College, LaSalle Academy, the R. I. College of Education and the R. I. School of Design.

We are sure that your associates would enjoy the facilities and advantages of the city when not engaged in the business sessions of the convention. Providence has demonstrated her graciousness as a host to scores of conventions, and should your association decide to meet here, you could count on a hearty welcome and enthusiastic co-operation.

Yours very sincerely,

(Signed) A. R. PLANT,
President.

(Signed) PAUL R. LADD,
Director, Convention Bureau,

Here is one from the Biltmore Hotel that would like to have us there, the Biltmore at Providence:

June 7, 1937.

New England Association of Fire Chiefs,
In Convention Assembled,
Dixville Notch, New Hampshire.

Gentlemen:

The Biltmore Hotel in Providence welcomes this opportunity to extend to the membership of the New England Association of Fire Chiefs a most cordial invitation to meet in Providence in 1938.

Annually this enterprising city is the scene of a large number of successful conventions and each year since its inception, the Biltmore has

enjoyed the privilege of entertaining the majority of groups convening here. We point with pride to this record for we feel it a fair indication of our ability to provide for the needs of a group such as yours.

Excellent meeting accommodations, entirely adequate for your total requirements, will be placed at your disposal with our compliments. The following brochure shows these accommodations in some detail.

A convention staff, thoroughly skilled in planning for an handling conventions, will devote itself to the success of your meeting.

We sincerely hope to welcome the New England Association of Fire Chiefs to Providence in 1938.

Cordially,

(Signed) DUANE WALLICK,
Vice President and Manager.

Now we have one from the Mayor of the City of Providence:

June 5, 1937.

New England Association of Fire Chiefs,
Dixville Notch, New Hampshire.
Gentlemen:

As Mayor of the City of Providence, I desire to extend to the New England Association of Fire Chiefs a most cordial invitation to hold their 1938 gathering here in our City.

Providence would feel honored to have your organization hold its next convention within its limits. We feel we could offer you attractions which few, if any other city in the country could offer. I am sure I can say, without fear of successful contradiction, that there is no city in the country where climatic conditions are finer.

Situated as we are at the head of Narragansett Bay, the breezes from that beautiful body of water give us advantages which no other city can enjoy. In addition we feel that we are asking you to visit a city which has no superior in points of historic interest.

Our hotels will be amply able to take care of your convention and will be capable of giving first-class service to all.

I can assure you that the hospitality accorded your delegates, if you come here, will satisfy even the most exacting among your membership.

Trusting that those present will decide upon our city for their 1938 convention, I am

Very sincerely yours,

(Signed) JAMES E. DUNNE,
Mayor.

CHIEF ALLEN, Brookline, Mass.: Mr. President, I doubt if with this meager information we could arrive at an advantageous or intelligent decision, so I move that the entire matter be referred to the incoming board of officers and directors with full power to designate the time and location of the next convention.

(Motion seconded and carried.)

PRESIDENT STOCKWELL: Unless there is something else to come before the meeting, we will now pass to the election of officers. The first is to elect a President for the ensuing year.

CHIEF MAHONEY, Peabody, Mass.: Mr. President, I would move you that Joseph Randlette of Richmond, Maine, be placed in nomination for the office of President for the coming year.

CHIEF KOLTONSKI, Rutland, Vt.: I move the nominations be closed and the Secretary cast one ballot for Chief Randlette of Richmond.

PRESIDENT STOCKWELL: The Secretary has cast one ballot and Chief Randlette is the new President.

(Applause.)

NEWLY-ELECTED PRESIDENT RANDLETTE: Carl, the first time that I went to a New England Association meeting it was up in a place called Burlington, Vermont, and when I got up there I saw a fellow running around with a fire cap on and his hands waving in the air, and I wondered who he was. Since then I have come to know you and our associations together have been very pleasant and I have appreciated working with you as an officer of the association. Now in behalf of the Association let me present you with this badge.

PAST PRESIDENT STOCKWELL: I thank you.

PRESIDENT RANDLETTE: Gentlemen, I want to assure you I appreciate very much the important office that has been conferred upon me and I shall endeavor during the coming year to administer the affairs of the Association, I hope, as well as my predecessors and also to the best of my ability. I appreciate also the fact that this is not a one man job and that in order to be successful and for the Association to be successful I shall be dependent upon all of you to give me your assistance. I thank you. (Applause.)

The next officer to be elected is First Vice President.

CHIEF LAWTON, Newport, R. I.: I nominate Tom Burns.

CHIEF MELENDY, Nashua, N. H.: I move the nominations be closed and the Secretary cast one ballot for Chief Burns.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that part of his duty and you have elected Tom Burns of Bridgeport, Conn., as your First Vice President.

FIRST VICE PRESIDENT BURNS: I wish to thank you for the honor bestowed on me and I will do everything I can to help my friend here and the Association.

PRESIDENT RANDLETTE: Second Vice-President.

CHIEF MAHONEY, Peabody, Mass.: I rise at this time to place in nomination the name of a man of whom I might say much but at the present time I will refrain from any words of praise, I think his actions during the term he holds office will show his ability. It gives me great pleasure at this time to place in nomination the name of Chief Samuel Pope of the Boston Fire Department.

CHIEF ALLEN, Brookline, Mass.: I move the nominations be closed and as a regular Republican of a neighboring town of a Democratic city I move the Secretary cast one ballot.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed his duty and you have elected Chief Samuel J. Pope of Boston, Mass., as your Second Vice President.

CHIEF ALLEN: Mr. President, I think we are due for a speech.

SECOND VICE PRESIDENT POPE: Mr. President and associates assembled in convention, it is indeed a great honor, I deem it a great honor that you have bestowed on me in my first year as a Chief of Department to be elected to the position of Second Vice President. If I am informed correctly, I believe that I have the honor and distinction of being the first chief of my native city to have been elected to an office in this Association. I can assure you when I return to my superior and my associates in the department I firmly know that they will greatly appreciate the honor that has not been bestowed upon me but has been bestowed upon my native city. I sincerely promise to assist in every way that I can the other officers of our Association that have been elected today in order to keep the Association in the present healthy and rugged condition which it now enjoys. Thank you.

PRESIDENT RANDLETTE: You will now make your nominations for Secretary-Treasurer.

CHIEF ALLEN: Mr. President, it is with a great deal of pleasure that I nominate the anchor of the organization for re-election. Presidents come and go but really the heart of the organization is in the Secretary and Treasurer. There is no need of my telling you gentlemen the real work and heart that this man has put into this office. He is an outstanding figure. He is always reaching out a helping hand to the other fellow, no matter where that fellow may be, so it is with a great deal of pleasure that I nominate not only a neighbor but a friend to me and to everyone of you, Chief O'Hearn of Watertown, as Secretary-Treasurer.

CHIEF PACHL, New Haven, Conn.: I move that the nominations be closed and the First Vice President cast one ballot for Chief O'Hearn for Secretary-Treasurer.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The First Vice President has performed that duty and I declare Chief John W. O'Hearn of Watertown, Mass., elected Secretary-Treasurer of this Association.

SECRETARY-TREASURER O'HEARN: Mr. President and members, first I want to say thank you, but there are many things that I might talk about but I know that you are anxious to get home as I am, we want to get away, but I want to remind you that the work has been increased considerable. It is being added to all the time, and the most important thing of this is that the convention must annually vote the Secretary's salary. Don't forget that before you go home.

CHIEF ALLEN: I move that the salary of the Secretary-Treasurer be the same for the ensuing year as in the year just past.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: Now we come to the election of State Vice Presidents, who are members of the Board of Directors. First is the State of Maine.

CHIEF MELENDY, Nashua, N. H.: Mr. President, I move you Chief Sanborn's name be placed in nomination.

(Nomination seconded.)

CHIEF HAPPNY, Concord, N. H.: I move the nominations be closed and the Secretary be instructed to cast one ballot for Chief Sanborn.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Chief Oliver T. Sanborn of Portland, Maine, elected State Vice President from Maine.

The next is New Hampshire. The present one is Charlie French.

CHIEF KOLTONSKI, Rutland, Vt.: Mr. President, I nominate Chief French of Manchester, New Hampshire, for State Vice President.

(Nomination seconded.)

CHIEF MELENDY, Nashua, N. H.: I move the nominations be closed and the Secretary cast one ballot for Chief French.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Charles H. French elected State Vice President from New Hampshire.

The next is Vermont. The present State Vice President is Koltonski.

CHIEF STOCKWELL, Burlington, Vt.: Mr. President, I move you, sir, that Chief Koltonski be nominated for State Vice President from the State of Vermont.

CHIEF MAHONEY, Peabody, Mass.: I move the nominations be closed and the Secretary cast one ballot for Chief Koltonski.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Alfred H. Koltonski of Rutland, Vt., elected State Vice President from Vermont.

The next is Massachusetts. The present State Vice President is Mahoney of Peabody.

CHIEF ALLEN, Brookline, Mass.: It is a great pleasure for me to place in nomination Chief Mahoney as State Vice President for the ensuing year.

MEMBER: I move the nominations be closed and the Secretary cast one ballot for Chief Mahoney.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare William C. Mahoney of Peabody, Mass., elected State Vice President from Massachusetts.

The next is Rhode Island. The present one is Chief Gus Cote of Woonsocket.

CHIEF LAWTON, Newport, R. I.: Mr. President, I nominate Chief Cote of Woonsocket.

MEMBER: I move the nominations be closed and the Secretary cast one ballot for Chief Cote.

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Chief A. J. Cote of Woonsocket elected State Vice President from Rhode Island.

Connecticut. The present is Chief Lawton.

CHIEF PACHL, New Haven, Conn.: I wish to place in nomination the name of Chief Michael Lawton of Middletown.

MEMBER: I move the nominations be closed and the Secretary cast one ballot for Chief Lawton for State Vice President.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Chief Michael W. Lawton of Middletown, Conn., elected State Vice President from Connecticut.

Sergeant-at-Arms. The Chair will entertain nominations for Sergeant-at-Arms. The present one is Chief Happny.

CHIEF MELENDY, Nashua, N. H.: Mr. President, I move you Chief Happny of Concord be nominated for Sergeant-at-Arms.

CHIEF KOLTONSKI, Rutland, Vt.: I move the nominations be closed and the Secretary cast one ballot for Chief Happny.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary has performed that duty and I declare Chief William T. Happny of Concord, N. H., elected Sergeant-at-Arms.

SECRETARY O'HEARN: I see no reason why we shouldn't elect our present Press Representative. He is here at the table and I nominate Harry Belknap.

CHIEF MAHONEY: I move the nominations be closed and the Secretary cast one ballot.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: The Secretary as performed that duty and I declare Harry Belknap elected Press Representative.

Is there any further business to come before the meeting?

CHIEF PACHL: We have a director to the International, I believe.

CHIEF ALLEN: That is correct, for it will be necessary this year. I wish we had given it more advanced thought. We did have as a measure of economy Chief Tierney representing us both as vice president and director, but he now this year goes up to the office of President of the International. I believe it would be in keeping with good practice to pick a man as director to the International. As perhaps you understand, his expenses are paid one-half by the New England Association; and so it will be necessary for us to elect a director. I haven't anybody in mind. I fought for that policy when I was in the office of President of the International for at that time we were not getting representative government in that organization, and I believe where we contribute as much as we do we should have a representative man there on the board of directors of the International, so I would like to see somebody—Chief O'Hearn, would you be willing to take that?

SECRETARY O'HEARN: Not only willing too, but with the line-up coming up with our Massachusetts man or New England man going to be President next year, I would be only too pleased to go there and work along with him.

CHIEF ALLEN: I move Chief O'Hearn serve us as director from this organization to the International Association of Fire Chiefs.

(Seconded.)

CHIEF MAHONEY: I move nominations close and the First Vice President cast one ballot for Chief O'Hearn for director.

(Motion seconded and carried.)

PRESIDENT RANDLETTE: Chief Burns has performed his duty and I declare Chief O'Hearn elected as director to the International Association of Fire Chiefs.

SECRETARY O'HEARN: I will do the best I can to serve you. Regarding the Registrars, you know what we have had this year. We have had three Chiefs and I want to say now I was doubtful as to what they might do and how they would handle the thing against the experienced men, and they have done a beautiful job, a first class job. They came up here and gave up their time and worked on that desk the same as the "sparks" would. One of the biggest kicks of those fellows was that when they came to the convention they didn't have time to enjoy it. As far as room reservations are concerned, I heard only one man say he didn't like his room and we went down and changed his room. They have handled the thing one hundred percent and I think we have learned something and I think hereafter we can get three Chiefs to handle our reservations for us. I think it has been a successful year as far as that is concerned and the directors will take care of that on the Registrars.

CHIEF ALLEN: I move a rising vote of thanks be given to these officers who have served us so ably this past year.

SECRETARY O'HEARN: I have just one more thing I want to say before you go. I am not going to make a motion. I want to say when I go downstairs I am going to send a telegram of sympathy from the convention assembled to Chief Burke of Pittsfield, Mass., who had reservations made and was coming here and had to have an emergency operation, and Chief Saulnier was to have come with him and he didn't come so we not only lost him but lost Chief Saulnier. I am going to send him a telegram of sympathy.

PRESIDENT RANDLETTE: The Chair now recognizes Chief Allen.

CHIEF ALLEN: Once again I am privileged to represent this organization on a very pleasant task. They say I have given more things away for the International and this organization than anybody else has. So I am privileged today, representing you, to present Carl with a little gift, and without further ado let me present this to you, and rest assured that all the payments have been made. Carl, accept it from me representing this organization with our sincere appreciation.

PAST PRESIDENT STOCKWELL: Chief Allen, I don't know what to say. I want to thank each and every one of you, and the only thing I hope is that I will live long enough to see each and every one of you in the City of Burlington again. I wasn't here when the letter was read this morning and I want to say this, that I do not want you to come next year, I want you to go to Rhode Island if you can. I am going to show you that I am a good sport. I can take it on the chin and take it back. Go to Rhode Island next year and the year after that if I am alive I will

come with an invitation that will knock your hats off your head. I want to thank you very kindly for the wonderful gift for I have done nothing to help "Uncle John" here. I live too far away up here in the neck of the woods. I want to thank you once again for the wonderful gift.

PRESIDENT RANDLETTE: Is there anything further to come before the meeting before we adjourn?

CHIEF MAHONEY, Peabody, Mass.: I would move adjournment, Mr. President, if there is no further business.

(Motion seconded and carried.)

REPORT OF PRESS REPRESENTATIVE

Advance notices of the convention were mailed to every newspaper in the New England States. Photographs were furnished to newspapers in Vermont, New Hampshire and Maine, also to the Boston papers whose local correspondent was given every facility for covering the meetings and obtaining group pictures. A press table was provided at all sessions. On the final day the election of officers was sent out by the Associated Press and the United Press Association. Convention programs and advance stories were sent to the fire magazines and a detailed story of the convention was written for "Fire Engineering." The press representative feels that the association might well consider the advisability and practicability of sending out to newspapers some fire prevention copy each year a few days prior to the opening of the annual "Fire Prevention Week" in October and of also, if desired, providing fire prevention data for use by the individual chiefs in their home town papers.

Respectfully submitted,

HARRY BELKNAP,
Press Representative.

The following detailed description of the exhibits at the 15th annual convention of the New England Association of Fire Chiefs was written by Harry Belknap, press representative, for the magazine "Fire Engineering" and is reprinted in the Red Book through the courtesy of this publication.

DESCRIPTION OF THE EXHIBITS

Six pieces of motor apparatus and a large display of fire equipment and supplies of all kinds featured the exhibits.

Chief Albert C. Melendy, of Nashua, N. H., was chairman of the Exhibit Committee. It had been hoped that several new enclosed pieces of fire apparatus might be on display; but the manufacturers found it impossible to complete this apparatus in time for showing at the convention. The nearest thing to an all enclosed job was the motor pumper and hose wagon built for Watertown, Mass., which was fitted with a closed cab to protect the driver and officer riding on the front seat.

The Ahrens-Fox Fire Engine Company, Cincinnati, O., showed a Series V, 500-gallon centrifugal motor pumping engine and hose car fitted with a 100-gallon booster tank and pump. This machine has been sold to the town of Onset, Mass., where it will be known as Engine No. 2.

A large illuminated poster view of an Ahrens-Fox piston pumper in action throwing powerful streams during a test at Elyria, O., attracted attention. The

company representatives present at the convention were Clarence E. Meek, New York District Manager; Elwood Yoho, Field Engineer, and Earl Moulton and I. A. Ballou, Jr., New England representatives.

A Barton-Ford motor pumper and hose wagon was exhibited by the Farrar Company, Woodville, Mass. This front end U type pump had a capacity of 400 gallons per minute. The machine has been sold to the town of Warner, N. H. The firm also exhibited a Barton pump with Hercules motor for forest fire work. A Barton Type F front and pump completed the display. Clarence Farrar and George Edmunds of Woodville, and Chester Farrar of Westboro, Mass., were the representatives.

The Mack Truck, Inc., New York City, exhibited a Mack motor pumper and hose wagon built for the town of Farmingdale, N. J. The firm was represented by W. A. Maynard, New England Division Manager; H. A. Scharfenberg, of New York; Frank Harrington, asst. New England manager; Charles Stewart, New England representative; and John Dans, engineer.

The American-LaFrance and Foamite Industries, Inc., of Elmira, N. Y., showed two motor pumping engines and a full line of Fire Department supplies. The larger of the two units was a 1,250-gallon triple combination centrifugal pumper. The second pumper, built for North Conway, N. H., was a 500-gallon rotary gear pumper. It was fitted with an Eastman portable gun. Among the items of fire equipment shown by this firm were Foamite generators and Foamite extinguishers, fire guns, Alfite extinguishers, Arrow and Rough Rider extinguishers, LaFrance inhalators and cannister masks, tannic acid spray kits, and the Foamaster foam hip pack. The American-LaFrance men attending the convention were Lester J. Creaser, New England sales manager; Joseph Webber, apparatus sales manager; Ex-Chief Harry J. Monahan, of Berlin, N. H.; Lawrence Carolan, William Starr, William Taylor, George Loomis, Stephen R. Jones, James Coffin, William H. McCorkle, and James Shea.

The Maxim Motor Company, Middleboro, Mass., displayed an enclosed cab type motor pumper and hose wagon built for Watertown, Mass. The equipment included a portable gun.

Fire Department supplies shown by the Maxim Company included the Smith Indian Fire Pump, Pyrene extinguishers. Trippe fog lights, Carpenter lights, Griswold Fog Nozzle, Cooper hose jackets. Maxim relief valves, axes, crow-bars, plaster hooks, Tan-Spray first aid kit, Hewitt hose, A Fold ladder with folding hook, extinguisher holders, the Maxim no-sand strainer, and a Maxim forest fire pump of 100 gallons capacity. These pumps have a 4-cylinder motor and are made in both rotary and centrifugal types. Maxim representatives present were Ernest L. Maxim, Leighton Maxim, Merrill A. Shaw, Robert A. Clarke, Russell Brown, and Joseph Whitcomb.

The Mine Safety Appliance Company, represented by Captain Alfred Kinsella, showed the H and H inhalator, the M. S. A. ammonia mask, the M. S. A. first aid kit, the Burrell all service mask, and Bakelite fire helmets.

The Fabric Fire Hose Company, Sandy Hook, Conn., displayed its brand of fire hose. The representatives were J. H. Ringers, general sales manager; Robert Many Wood, P. A. Wood, L. R. Meany, O. B. Maxwell, and P. R. Lewis.

The Eastern Fire Equipment Company, Portland, Me., exhibited Quaker City Rubber Company, and a hose display panel showing materials used in the manufacture of fire hose. The Ayer clamp for fastening ladders to metal roofs was shown,

also hose clamps invented by Ex-Chief Herbert D. Ayer, of Fairfield, Me. Erlon S. Noyes was in charge of the display.

The Atlas Life Saving Machine and the Atlas Life Saving Belt were shown by the Atlas Fire Equipment Company, of New York City. The firm also makes rope training nets. William Moeller, of New York City, was in charge.

Chief Edward W. Taylor, of Lexington, Mass., displayed the Minute Man Hose Bridge made by the Taylor Manufacturing Company, of Lexington, Mass.

The Gorham Fire Equipment Company, Boston, exhibited a full line of Fire Department supplies, including spanners, nozzles, extinguishers, fire hats, Kant Blaze Blankets, metal car plates, badges, rubber landing pads, Sterling sirens, folding buckets, Pulmosan respirators, safety lamps, Gorham pump cans, and Gorham portable forest fire pumps. Joseph W. Gorham and Harold F. DeCourcy were in charge.

The Gamewell Company, Newton, Mass., exhibited a Gamewell fire alarm box and pedestal, the Sprinklastat, the Vocalarm system of Fire Department communication, and the Rockwood dry pipe, wet pipe, and dualguard systems of automatic sprinkler and thermostatic protection for factories and homes. The Gamewell staff was headed by President Vincent C. Stanley and included Frank R. Bridges, chief engineer; Arthur Donovan, Charles T. Smith, Leonard Dawson, Russell A. Glenn, Everett Angier and Earl Smiddy, also John J. Ryan of the Rockwood Sprinkler Company.

The American Fire Equipment Company, Boston, had a large display, including Smith Indian Fire Pumps, Wheat lights and chargers, Federal sirens, Republic fire hose, King Lites, Clark duplex inhalators, Tarment foot valves, Elkhart and Akron nozzles, Porter bar cutters, Kant Blaze Blankets, M. S. A. Micarte helmets, extinguishers, hose bridges, axes, and various other fire tools, President John J. Scully was assisted by Joseph A. McLaughlin, S. B. Dyer, Hubert W. Tracy, and Lee Gravelle.

Eastman nozzles and deluge guns were shown by the Samuel Eastman Company, of Concord, N. H.

The Midwestern Manufacturing Company, Mackinaw, Ill., showed a full line of firemen's rubber garments, including rubber coats and turnouts. I. A. Luft, of Providence, R. I., New England representative, was in charge.

The American District Telegraph Company had a display of posters and illuminated signs showing the A. D. T. waterflow alarm system, the A. D. T. automatic fire detecting and reporting systems, and the Aero automatic fire alarm system for installation in industrial establishments.

The Eureka Fire Hose Division of the United States Rubber Products, Inc., New York, showed the Eureka brands of Fire Department hose. The representatives in attendance were Joseph H. Green, General Manager; John T. Dwyer, A. Lee Cowles, and Al Schofield.

The Bi-Lateral Fire Hose Company, maker of Bi-Lateral Hose, was represented by E. G. Clewly, New England agent.

The Goodrich brands of fire hose were shown by Harry J. Lovell, Boston, who is the New England representative of the Goodrich firm.

The usual display of badges officers' insignia, and metal car plates was shown by the C. G. Braxmar Company, New York City. George E. Bradbrook and J. O. Veit were in charge.

Oberdorfer portable pumps and other fire-fighting equipment made by the M. L. Oberdorfer Brass Company, Syracuse, N. Y., were shown by the New England representative, the Fabric Fire Hose Company.

Robert W. Haskell and Associates, Fire Protection Engineers, Claremont, N. H., displayed Red Rung fire ladders, Goodrich fire hose, sprinkler heads, automatic burglar and fire alarms, Sterling sirens, fire hose and hose fittings, lightning rods, first aid equipment, and Fyr Fyter extinguishers. Dupont fabric coverd, rubber coats, the Gamewell Vitalarm and municipal supplies of various kinds were also shown. R. W. Haskell, of Claremont, and C. Williard Pike, of Colebrook, were in charge.

Fire Engineering and the fire promotion hand-books, published by the Case-Shepperd-Mann Publishing Corporation, of New York City, had a large display. Fred Shepperd, Editorial Director; I. Herbert Case, Vice-President and General Manager; and Harry Belknap, New England Correspondent, were at the convention.

The D. B. Smith Company, Utica, N. Y., showed the Indian Fire Pumps for forest and brush fires; also water supply cans. Thomas M. Burton was in charge.

Uniforms and caps for Fire Department officers and privates were shown by the Fred W. Batchelder Company, Boston, Mass.

The Automatic Hose Coupling Company, Inc., Milford, Mass., exhibited "Feather-weight Couplings."

Pacific pumps for forest fire duty, Blanchard nozzles, fittings and Fire Department equipment of all kinds, including products of the Boston Woven Hose and Rubber Company, were shown by the Arthur H. Blanchard Company, Cambridge, Mass. Arthur Blanchard, D. Blanchard, Frank M. Grant, and Edward J. "Tip" O'Neil were in charge.

The Justin A. McCarthy Company, Boston, Mass., displayed the Elhart mystery nozzle, Davis inhalators, Couplings, nozzles, chemical and foam extinguishers, lights, pump cans, sirens, helmets, first aid kits, and a complete line of Fire Department supplies, including Manhattan fire hose. Justin A. McCarthy and Arthur E. Lindh were in charge.

The Teuber Lenz Company, Manchester, N. H., showed the Teu-Len hand and hydralulic hose clamps. George Teuber was in charge.

The Voltex Corporation, Natick, Mass., exhibited a system of Fire Department communication, including inter-station and box communication and Fire Department broadcasting equipment. Richard C. Buck was the representative in charge.

Flood lights and electric generating sets for use on Fire Department apparatus were shown by the Homelight Corporation.

Red Chain forestry hose was displayed by Charles Niedner's Sons Company, Malden, Mass.

The Boston Coupling Company and the Akron Brass Manufacturing Company exhibited nozzles, wagon guns, couplings, and portable monitor nozzles.

Among the heavy stream appliances on view in the exhibit hall were Morse guns and Eastman deluge sets.

The Talk Alarm Company, Bridgeport, Conn., showed the Talk Alarm system of Fire Department communication.

The Brown Company, Berlin, N. H., had an interesting and educational exhibit showing the process of making paper and other goods from pulp wood, Solka products, including towels and conduits, Onco inner soles for shoes, and Solkaf leather used in the manufacture of pocketbooks were displayed. Chemicals used in the making of woven cloth from pulp wood were also shown. S. D. Story was in charge.

THE DEMONSTRATIONS

Demonstrations of the Griswold Fog Nozzle, Eastman-Barker deluge guns, and Gorham Forest Fire Pump took place on Wednesday afternoon, June 23, at The Balsams, under general supervision of Chief Albert C. Melendy, of Nashua, N. H., Chairman of the Exhibit Committee of the New England Association of Fire Chiefs.

The tests were held in the field just south of The Balsams Administration Building. The fog nozzle demonstrations were given by Captain Samuel Hogan, of the Los Angeles County, Cal., Fire Department and K. R. Pitcher, of the California Fog Nozzle Company.

Tests included controlling and extinguishing a tub of blazing gasoline. Three tubs of gasoline placed parallel, three tubs one placed above two others, fire in a large open top oil drum, a large open pit fire of gasoline and fuel oil, a trench fire, and a fire in a tin clad shed, fed by an open gasoline pipe from a drum, to simulate conditions in a garage fire. The water pressure at the hydrant eas 150 pounds. The spray and vapor from the fog nozzle effectively controlled and extinguished the fires.

Horace Barker and George Robinson were in charge of the display of Eastman deluge guns with Barker tips. This demonstration was put on by the Samuel Eastman Company, Concord, N. H.

Chief Frank Copeland, Raynham, Mass., and Harold DeCourcy showed the Gorham portable gasoline forest fire pump for the Gorham Fire Equipment Company, Boston, Mass. The engine is an Austin fitted with an Oberdorfer pump. The capacity of the unit is 75 gallons per minute.

Membership of New England Association of Fire Chiefs

MAINE

Alden, Ira C., Chief, Gorham, Me.
Anderson, Edwin A., Chief, Thomaston, Me.
Ayer, Herbert D., Chief, 6 Connor Ave., Fairfield.
Bancroft, George E., Chief, Auburn.
Barnes, George L., 54 Pleasant St., Auburn.
Barter, Miles F., Asst. Chief, Boothbay Harbor.
Black, George W., Chief, Easton.
Blaquier, Arsene G., First Asst. Chief, Norway.
Bradish, F. L., Chief, Eastport.
Brown, Walter H., Chief, 15 Iredale St., Bridgton.
Butler, James H., Chief Engineer, Berwick.
Carll, Willis G., Asst. Chief, Gorham, Me.
Caron, Louis B., Fire Commissioner, Lewiston.
Cassidy, John H., Captain, Bangor.
Clark, Horace B., 21 Woodland St., Hartford, Conn.
Clark, Paul R., Captain, Bangor.
Clifford, Wm. H., 3rd, Chief, Cape Elizabeth.
Doyle, Irving T., Chief, 165 North Main St., Brewer.
Eldridge, John F., Chief, Kennebunkport.
Estes, Reuben E., Chief, Lewiston.
Hamor, Roy, Chief, Bar Harbor.
Hellenbrand, W. N., Chief, Old Town.
Herman, S. A., Chief, S. D. Warren Co., Westbrook.
Herrick, G. A., Chief, Mechanics Falls.
Hinkley, J. A., Asst. Chief, 123 Main St., Richmond.
Hogan, Walter E., Chief, Orono.
Hutchinson, Edward J., Chief Engineer, Boothbay Harbor.
Lewis, W. B., Chief, Wiscassett.
Liscomb, John I., 1 Woodbury St., South Portland.
McCosker, Joseph P., Chief, Bangor.
McCurdy, George R., Chief, Augusta.
McGlauflin, Floyd E., Chief, Presque Isle.
Mercier, Solomon A., Chief, Rumford.
Morse, Scott, Chief, Bath.
Noyes, Erlon S., Eastern Fire Equipment Co., Portland.
Pate, Edmund, 2nd Asst. Chief, 85 Hill St., Biddeford.
Payson, Allen F., Chief, Camden.
Ramsdell, Edgar E., Reserve Deputy Chief, 569 Main St., Lewiston.
Randlette, J. W., Chief, Richmond.
Reny, Edward A., Chief, Westbrook.
Rutledge, Charles B., Fire Apparatus and Equipment, 95 Smith St., So. Portland.
Sanborn, Oliver T., Chief, Portland.
Small, G. K., 74 Green St., Augusta.
Smith, Walter B., Chief, Freeport.
Spear, Charles O., Jr., Chief, South Portland.
Tinker, George L., Chief, New Portland.
Tracy, Harry B., Chief, Calais.
White, Charles A., Supt. Public Bldgs., State Capitol, Augusta.

NEW HAMPSHIRE

Austin, C. H., Fire Commissioner, Nashua.
Beane, Walter H., Samuel Eastman Co., Concord.
Berquist, Oscar B., Chief, Berlin.
Chase, Raymond C., Chief, Rollinsford.
Connell, Harry J., Chief, Hudson.
Conover, Donald S., 66 Manchester St., Manchester.
Cote, Philip T. J., Chief, Gorham.
Crowley, Roger, Chief, International Shoe Co., Manchester.
Dodge, Fred M., District Chief, Concord.
Dolley, Herbert A., Chief, Tilton.
Doudera, Capt. Frank, Fire Commissioner, Dixville Notch.
Ely, Wm. B., Pittsfield.
French, Charles H., Chief, Manchester.
Goodrich, Ralph S., Chief, Epping.
Happny, William T., Chief, Concord.
Haskell, Robert W., 260 Pleasant St., Claremont.
Hathorn, R. C., Chief, West Lebanon.
Hildreth, Albert F., Ex-Chief, Hollis.
Holland, James J., 39 Carpenter St., Manchester.
Hough, Willis F., Chief, Lebanon.
Lamott, G. H., Chief, Hampton Beach.
Lary, Geo. L., Senior Warden, Gorham.
Lewin, Charles H., Ex-Chief, 3 Pleasant St., Hanover.
Lewis, George E., Chief, Box 453, Newport.
Lewis, Percy R., Ex-Fire Commissioner, 7 Holt St., Concord.
Lintott, H. C., Fire Commissioner, Nashua.
Mansfield, L. P., Chief, Wolfboro.
Melendy, Albert C., Chief, Nashua.
Monahan, H. J., Ex-Chief, Berlin.
Newman, William E., Ex-Chief, Hillsboro.
Pike, C. Willard, Fire Equipment, Colebrook, N. H.
Post, A. H., Chief, Spofford.
Powers, Mark E., Fire Commissioner, West Lebanon.
Putney, P. N., 534 Maple St., Manchester.
Riley, E. B., Chief, Keene.
Robinson, Chester, Chief, Suncook.
Robinson, George E., Samuel Eastman Co., Concord.
Rumrill, Eugene C., Chief, Hillsboro.
Sargent, Fred M., Chief, Sunapee.
Smith, H. A., International Shoe Co., Manchester.
Spring, Arthur W., Chief, Laconia.
Taylor, F. Robert, Chief, Whitefield.
Ware, Lewis A., Chief, Hanover.
Wheeler, E. H., Chief, 39 West Bow St., Franklin.

VERMONT

Adams, W. H., Sec.-Treas., Vt. State Firemen Assoc., Vergennes.
Blair, Willard C., First Asst. Chief, Vergennes.
Burt, Earl C., Chief, Enosburg Falls.
Burt, George C., Central Fire Station, Burlington.

Carty, William E., Asst. Chief, Burlington.
Codding, Harold E., Chief, Woodstock.
Dunn, J. C., Ex-Chief, Rutland.
Duso, Carmi J., Enosburg Falls.
Dutton, J. M., Box 63, West Hartford.
Dwyer, Richard H., First Asst. Chief, No. Bennington.
Eaton, F. L., Deputy Fire Marshal, Waterbury.
Ferguson, F. Howard, Supt. Fire Alarm, 234 Grove St., Bennington.
Heney, John C., Chief, Barre.
Humphrey, E. F., Chief, Newport.
Hurlbut, Charles H., Chief, Richford.
Hutchinson, Fred A., Chief, White River Junction.
Keery, Thomas D., Chief, St. Albans.
Kinney, F. J., Chief, Orleans.
Koltonski, Alfred H., Chief, Rutland.
Larow, Kenneth, Deputy Chief, Enosburg Falls.
Lawson, Sidney F., Chief, Montpelier.
LeBouf, Howard J., Vergennes.
MacInnes, Malcolm, Ex-Chief, Montpelier.
McGreggs, Charles, Captain, 68 So. Main St., St. Albans.
Montgomery, C. L., Chief, West Rutland.
O'Neil, Bernard J., 1st Asst. Chief, White River Junction.
Parker, J. J., Chief, Derby Line.
Parmenter, F. C., Chief, Chester.
Percey, M. S., Chief, North Bennington.
Robinson, W. E., Chief, Windsor.
Roby, Horace E., Ex-Fire Comm., Montpelier.
Roscoe, Charles, 2nd, Asst. Chief, Vergennes.
Rose, Earl J., Chief, Ludlow.
Sass, Carl M., 2nd Asst. Chief, White River Junction.
Shepard, Harley, Chief, Bethel.
Stockwell, Carl, Chief, Burlington.
Wilson, Norton, 11 Allerton Ave., Brattleboro.

MASSACHUSETTS

Abel, Henry F., Chief, Westwood.
Abbott, William F., Fabric Fire Hose, Box 262, Shrewsbury.
Adams, Delmont C., Ex-Chief, Millis.
Adams, John T., Ex-Chief, Marblehead.
Aikman, Lewis R., 80 Poplar St., Watertown.
Alger, Fred B., Middleboro.
Allen, E. W., Medfield.
Allen, Selden R., Chief, Brookline.
Ammidown, Raymond L., 36 Mora St., Dorchester.
Angier, Everett L., Gamewell Fire Alarm Co., Newton Upper Falls.
Atkins, W. H. H., Chief, P. O. Box 243, Marblehead.
Austin, George W., Box 52 Assoc., U. S. Gauge Co., 170 Summer St., Boston.
Babson, Roger W., Wellesley, Mass.
Bacon, J. R., Chief, 240 Washington St., Weymouth.
Baer, Louis, Jr., Smith's Point, Manchester.
Baggs, M. C., Chief, Belchertown.
Barker, John J., Boston Coupling Co., 293 Congress St., Boston.

Barker, Horace R., 87 Sherman St., Springfield.
Barnes, Harold A., 42 Ellis St., Brockton.
Bartlett, Ernest N., Chief, Billerica.
Barton, R. W., Ex-Chief, Foxboro.
Batchelder, Fred M., 120 Harrison Ave., Boston.
Bayley, L. Wm., Pyrene Mfg. Co., 334 Main St., Wakefield.
Belcher, Warren H., Chief, Winthrop.
Belknap, Harry, 512 Beacon St., Boston.
Belmore, Arthur, Chief, Webster.
Bengston, N. B., Asst. Mech. Supt. Colonial Beacon Oil Co., Everett.
Berry, W. A., Ex-Chief, School St., Danvers.
Bills, Louis W., Supt. Fire Alarm, Lexington.
Bishop, Clayton W., Chief, Onset, Mass.
Blackadar, Harold, Deputy Chief, Bourne.
Blackington, Alton H., 9 Hamilton Place, Boston.
Blair, William J., Chief, Nantucket.
Blanchard, Arthur H., 25 Hampshire St., Cambridge.
Blois, W. C., Chief, Westboro.
Blossom, Fred C., Ex-Chief, Cohasset.
Boucher, Wm. B., Bright Bumper Sales Co., 192 Brighton Ave., Allston.
Box 52 Association, 80 Federal St., Boston.
Breagy, Richard T., Forest Warden, Dover.
Breck, Robert G., Chief, Longmeadow.
Brennan, Edward P., Jr., Chief, Natick, Mass.
Breslin, James E., Jr., Box 52 Assoc., 45 Shattuck Road, Watertown.
Brigham, Harold L., Supt. Water and Sewage Comm., Marlboro.
Brown, Albert T., Chief, Hingham.
Brown, Russell G., 80 Central St., Foxboro.
Brown, Wm. H., United Pyro. Chem. Corp. ,Lynn.
Brownell, Clarence H., Chief, District No. 1, South Dartmouth.
Bryant, William A., Architects and Engineers, 334 Washington St., Brookline.
Buchanan, L. B., Ex-Chief, 16 Church Ave., Woburn.
Buck, Richard C., 12 Oak Knoll Rd., Natick.
Bugbee, Percy, N.F.P.A., 60 Batterymarch St., Boston.
Burgess, Chester E., District Chief, Tewksbury.
Burgin, Thomas S., Mayor, City of Quincy.
Burke, Thomas F., Chief, Pittsfield.
Burnham, Frederick E., Vio Gen Treatment, Box 154, West Medway.
Byrne, Hugh M., 20 Hayden St., Marlboro.
Byron, George E., Chairman Fire Dept., Hudson.
Campbell, John, Supt., 182 Tremont St., Boston.
Carey, John H., Ex-Fire Commissioner, Bennett Building, Fall River.
Carlow, Harry, 60 Church Green, Taunton, Mass.
Carlson, J. Henry, Chief, Ashland.
Carolan, Lawrence, Jr., American La France Co., 28 Brighton Ave., Boston.
Carroll, William J., President Rockwood Sprinkler Co., 36 Harlow St., Worcester.
Carter, L. W., Captain Fire Department, Manchester.
Casey, John L., Chief, Abington.
Chapman, Charles "Sandy," 249 Huron Ave., Cambridge.
Charnock, P. C., New Eng. Ins. Ex., 40 Broad St., Boston.
Chase, C. Hastings, 365 Union Ave., Framingham.
Chase, Edward E., Ex-Chief, 21 Euclid Ave., Lynn.
Childs, Alexander S., Chief, Cotuit.
Clark, Fred A., Chief, Attleboro.
Clark, L. N., 29 Richardson St., Newton.

Clark, Robert A., Maxim Motor Co., Middleboro.
Clark, Wm. M., Chief, National Fire Works, West Hanover.
Clifford, Albert W., Great Neck Rd., Bedford.
Cobb, George F., Commissioner Firemen's Relief Fund, 99 So. Bay Ave., Boston.
Cole, Howard H., Deputy Chief, Scituate.
Commins, Charles E., Chief, P. O. Box 591, Warren.
Conlon, Thos. J., Fire Commissioner, 24 So. Grove St., Haverhill.
Conron, Harold J., Chief, North Reading.
Copeland, Frank H., Chief, Raynham.
Corbett, George W., Deputy Chief, Arlington.
Corcoran, William B., Box 52 Assoc., 75 Palfrey Road, Belmont.
Cotton, Edwin C., Renton Hell Co., Lynn.
Courtemanche, Bert A., 96 West Main St., Marlboro.
Cowles, A. Lee, Eureka Fire Hose Co., 560 Atlantic Ave., Boston.
Cram, William Bartlett, Box 52 Assoc., 17 Leicester Road, Belmont.
Crandall, Leroy H., Andrew J. Morse Co., 6 Northampton St., Boston.
Creamer, Gordon H., Lieut., Holden.
Creamer, Harry A., Captain, Highland St., Holden.
Creaser, L. J., Amer. LaFrance Co., 28 Brighton Ave., Boston.
Creedon, Timothy F., Civil Eng. Aide, Arlington.
Cressy, John, Chief, Beverly.
Crittenden, Rufus A., Chief, Haverhill.
Crowe, John P., Ex-Chief, Westboro.
Curtaz, Charles J., Box 52 Assoc., 10 Linnet St., West Roxbury.
Cutter, John F., Ex-Chief, Newburyport.
Dahill, E. F., Chief, New Bedford.
Dailey, Cornelius P., Chief, Easton.
Damon, J. F., Ex-Chief, Milford.
Daniels, Albert W., Box 52 Assoc., 147 Brighton Ave., Allston.
Daoust, Samuel, Chief, Marlboro.
Davis, Ernest W., 61 Brantwood Rd., Arlington.
Davis, Harry C., Lieut., 71 Main St., Ashland.
Davison, William E., Chief, Sudbury.
Dawson, L., Gamewell Fire Alarm Co., Newton Upper Falls.
Day, Edwin L., Chief, Wilmington.
Day, John H., Captain F. D., 1 Lynn Shore Drive, Lynn.
Deacon, George W., Deputy Chief, 31 Stowe St., Concord.
DeCourcy, D. H., Chief, Winchester.
DeCourcy, Harold F., 24 Lebanon St., Winchester.
Deibel, Andrew F., Arthur H. Blanchard Co., 25 Hampshire St., Cambridge.
Deslauriers, Theodore, Chief, Ware.
deVeer, Harold W., 941 Park Square Bldg., Boston.
Dickinson, Frank F., Chief, Brockton.
Dickson, John N., Chief, Holden.
Doherty, M. H., Chief, Lincoln, Mass.
Donnell, Chester L., Chief, Walpole.
Donohue, Thomas F., 186 Dudley St., Roxbury.
Donovan, J. A., Ex-Chief, Lynnfield.
Donovan, Lawrence C., Boston Globe Editor "Among the Firemen," 18 Richie Road, South Quincy.
Dooling, William J., Chief, Malden.
Dow, Thomas, Chief, 75 Union St., Methuen.
Dow, Walter W., Sec. Met. Fire Assoc., 170 Hudson St., West Somerville.
Downing, Dewey P., Asst. Chief, 16 Williams St., Ayer.

Doyle, John A., Chief, Newburyport.
Drew, C. R., Chief, 109 Summer St., Kingston.
Driekorn, Otto M., Fire Commissioner, Holyoke.
Drohan, William H., Captain, 732 June St., Fall River.
Duchesneau, Joseph E., Chief, 200 Main St., Southbridge.
Dunn, George T., Gamewell Fire Alarm Co., Newton Upper Falls.
Dyer, S. B., Ex-Chief, Whitman.
Eames, Hugh L., Chief, 7 Village St., Reading.
Earle, Alonzo N., Chief, Norwood.
Earley, Charles G., Chief, Turners Falls.
Eaton, Robert D., 21 Elton Ave., Watertown.
Edmands, J. Wiley, Chief, Central Railway Signal Co., 272 Centre St., Newton.
Egan, John H., Ex-Chief, 88 Spruce St., Milford.
Eldridge, F. Otis, 43 Fort St., Fairhaven.
Ellis, Benjamin M., 79 Cambridge St., Boston.
Endicott, Charles K., Chief, Canton.
Estabrook, Harold M., 10 Inverness Rd., Arlington.
Evans, James J., Chief, 32 Belmont Park, Everett.
Evans, Walter H., Lieut. Fire Dept., 15 Chase St., Lynn.
Fahey, Joseph J., Ex-Chief, Milford.
Fales, Howard A., Ex-Asst. Chief, West Medway.
Fallon, M. J., Fire Marshal, L. C. Chase Co., Watertown.
Fallon, Thos. E., Chief Heywood-Wakefield Co., Gardner.
Farrar, Clarence, Hopkinton.
Farrell, Arthur, Chief, Rehoboth.
Fay, Robert E., Box 52 Assoc., 36 Park Ave., Winchester.
Fears, F. Clifton, Chief, Rockport.
Ferris, Herbert, Chief, Greenfield.
Fisher, E. F., A.D.T. Co., 60 State St., Boston.
Fleming, William B., Chief, Barre, Mass.
Flynn, Daniel W., Chief, 54 Russell St., Great Barrington.
Foster, Frank W., Ex Chief, 10 Elm St., North Brookfield.
Foster, Rollin H., C. L. Hauthaway & Sons, 638 Summer St., Lynn.
Fox, Henry A., Ex-Chief, Boston.
Galvin, Thomas F., Commissioner Public Safety, Lawrence.
Gardner, Hartley B., 665 Atlantic Ave., Boston.
Gardner, H. G., Ex-Supt. Fire Alarm, N. Liberty St., Nantucket.
Garner, S. Bronson, 3 Summit Ave., Winchester.
Garrity, Stephen C., State Fire Marshal, Boston.
Gately, John J., Chief, Hood Rubber Co., Watertown.
Geyer, John, Chelsea Fire Dept., Chelsea.
Gilbert, L. A., Capt. Fire Dept., 9 Glendell Terrace, Springfield.
Gillis, Augustus C., 3 Bartlett Ave., Arlington.
Gillis, J. A., Chief, Uxbridge.
Goodale, Harry J., Town Manager, Middleboro.
Goodwin, Fred M., Vice Pres. Boston Cons. Gas Co., 100 Arlington St., Boston.
Gorey, Edward F., Chief, Taunton.
Gorham, Joseph T., Gorham Fire Equip. Co., 136 Broad St., Boston.
Gorman, Charles E., Arthur H. Blanchard Co., 25 Hampshire St., Cambridge.
Graham, Fred D., Chief, Wakefield.
Grant, F. M., Arthur H. Blanchard Co., 25 Hampshire St., Cambridge.
Gravelle, Charles L., 57 Pleasant St., Woburn.
Green, Henry L., 249 Harris Ave., Needham.
Greenlaw, Wm. H., City Elect., Beverly.
Grouse, Wm. A., 112 Columbia St., Brookline, Mass.
Gunther, Ernest H., Jr., Chief, 1420 Lakeview Ave., Dracut.

Gutheim, Herman E., Chief, Cambridge.
Habermann, R. J., Dist. Plant Supt., A.D.T., Boston.
Haddock, Henry, Asst. Chief, 65 Victory Road, Lynn.
Haines, Everett S., Asst. Chief, Tewksbury.
Hall, Ralph S., 61 Plymouth Ave., East Milton.
Hall, Richard S., Chief, So. Dennis.
Haller, Julius, Box 52 Assoc., 9 Coulton Park, Needham.
Hammond, Irving C., Chief, Westport, Mass.
Hapgood, Leslie A., 134 Elm St., Marlboro.
Harding, Harry J., Hutchinson Lumber Co., Lynn.
Harlow, W. H. Co., 76 Needham St., Newton Highlands, Mass.
Harrigan, Henry J., Chief, Dedham.
Hartnett, John B., Deputy Chief, Dedham.
Havender, Harold L., Chief, Watertown Arsenal, Watertown.
Healy, D. Edward, Fire and Police Depts., 25 Blossom St., Worcester.
Healey, F. J., Board Fire Engineers, Longmeadow.
Hill, William H., Chief, Belmont.
Hiller, Albert E., Chief, Plymouth.
Hiser, Charles, Chief, Adams.
Hodges, Frederick J., 166 Essex St., Boston.
Hollis, John T., Ex-Chief, Hingham.
Holmes, Dennis D., Assistant Chief, 353 Linden St., Fall River.
Holmes, J. Harry, Chief, Milton.
Horne, William D., Chief, Millbury.
Howland, J. Lester, Chief, Hyannis.
Hoyt, Rev. H. Chester, Bondsville.
Hudson, David M., Chief, Chelsea.
Hurley, Patrick J., Chief, Holyoke.
Hurley, W. C., National Fire Detector, 136 Federal St., Boston.
Hutchins, M. C., State Fire Warden, 20 Somerset St., Boston.
Hutchinson, Oscar R., Chief, Lenox.
Hyland, D., Capt. F. D., Ware.
Ickrath, W. M., Eagle Signal Corp., 15 Glenham St., Springfield.
Ingham, Ernest, 17 Lincoln St., Maynard.
Inkley, Clyson P., Chief, Rockland.
Jameson, Frank J., 4 Mellen St., Dorchester.
Jenks, Fred A., Ex-Fire Commissioner, Plymouth.
Jenkins, Frederick C., 303½ Broadway, South Boston.
Johnson, Ernest P., Chief, Leominster.
Johnson, George L., Chief, Waltham.
Johnson, Robert H., Ex-Chief, Holden.
Johnston, Leicester S., 46 Goss Ave., Melrose.
Jones, Bradford, 14 Endicott Ave., Marblehead.
Kavanaugh, V. T., 20 Marion Road, Watertown.
Keane, James M., Town Engineer, 10 Jason Court, Arlington.
Keddie, L. A., Deputy Chief, Malden.
Kelley, Joseph E., Chief, Danvers.
Kelly, Fergus P., 495 E. Broadway, South Boston.
King, Everett F., Chief, Lever Bros., 164 Broadway, Cambridge.
Kingman, Stanley R., Box 52 Assoc., 21 Gould Road, Arlington.
Kinsella, Alfred, Mine Safety Appliances, 30 Chenery Terrace, Belmont.
Kirk, Paul G., Commissioner Public Safety, Commonwealth Pier, Boston.
Kleinfelder, Henry C., 3 Park St., Boston.
Knight, John F., Graybar Elec. Co., 51 School St., Somerville.
Knowles, C. H., Ex-Chief, Lock Box 32, South Hamilton.

Landers, Frank E., Chief, Chicopee.
Lane, Charles E., Chief, 64 East Main St., Orange, Mass.
Lane, Edward B., Chief, Wellfleet.
Leary, Arthur C., 329 River St., West Newton.
Leavitt, Charles F., Chief, 81 Spring Road, Nahant.
Lemoine, M. Gale, Homelight Corp., 1 Chickatabot Road, Quincy.
Lewis, T. Julian, Chief, Provincetown.
Lindh, Arthur E., Justin A. McCarthy Co., 176 Federal St., Boston.
Linley, Irving H., Chairman Selectmen, No. Attleboro.
Litchfield, Gordon H., Ahrens Fox Fire Engine Co., Taunton, Mass.
Longden, Ralph L., Cen. Ry. Sig. Co., 272 Centre St., Newton.
Looney, Daniel J., Sec. Mass. State Firemen's Assoc., 448 Old South Bldg., Boston.
Loring, Mason L., Deputy Chief, Hingham.
Lovell, Harry Joseph, B. F. Goodrich Rubber Co., 109 Brookline Ave., Boston.
Lucier, John L., Chief, Northampton.
Lynch, John P., Graybar Elect. Co., 287 Columbus Ave., Boston.
Lyons, C. W., Room 1100, Statler Office Bldg., Boston.
MacGregor, H. S., Chief, West Acton.
Magee, Richard A., Chief, Truro.
Mahoney, Daniel J., Lieut. Fire Dept., Arlington.
Mahoney, William C., Chief, Peabody.
Mansfield, George O., Chief Fire Inspector, Commonwealth Pier, Boston.
Mansfield, Lucius R., Ex-Chief, Rehoboth.
Maranville, Clifton H., Box 458, Middleboro, Mass.
Marchant, Homer R., Chief, Gloucester.
Marshall, Clarence E., Marlboro.
Martin, Bert L., Supt. Fire Alarm, 100 Union St., Mansfield.
Martin, Frank F., Chief, Cohasset.
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Maxim, Leighton L., 23 Webster St., Middleboro.
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Maxwell, Orrin B., Fabric Fire Hose Co., 1018 Commonwealth Ave., Boston.
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McCann, Robert F., The Remedy Co., 51 Riverdale Rd., Wellesley Hills.
McCarrick, Thomas J., Chief, Revere.
McCarthy, E. J., Gamewell Fire Alarm Co., Newton Upper Falls.
McCarthy Co., Justin A., 176 Federal St., Boston.
McCarthy, Chas. L., Chief, Worcester.
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McElhiney, Ernest N., 151 Worcester St., Watertown.
McElhiney, James, 151 Worcester St., Watertown.
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Metropolitan Fire Associates, 60 State St., Boston.
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Minehan, Edw. C., Ex-Chief, 134 Howe St., Marlboro.
Miner, Alfred N., Mass. Safety Council, 40 Broad St., Boston.
Mitchell, Melvin P., Ex-Chief, 48 Felton St., Hudson.
Moloy, James E., State Forest Warden, 17 Elijah St., Woburn.
Montle, John H., Dist. Fire Warden, 284 President Ave., Fall River.

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Neal, Ernest L., Deputy Chief, Waltham.
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Tracey, Hubert W., Amer. Fire Equip. Co., 45 Broad St., Boston.
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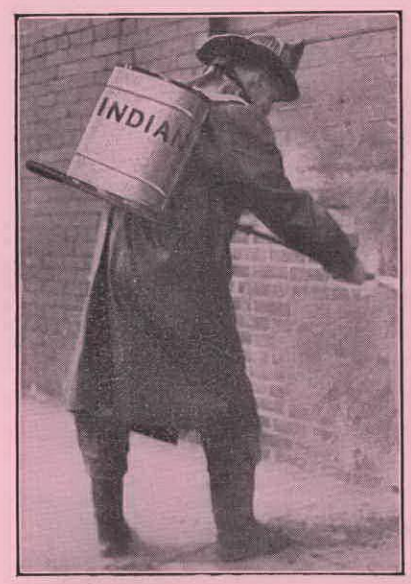

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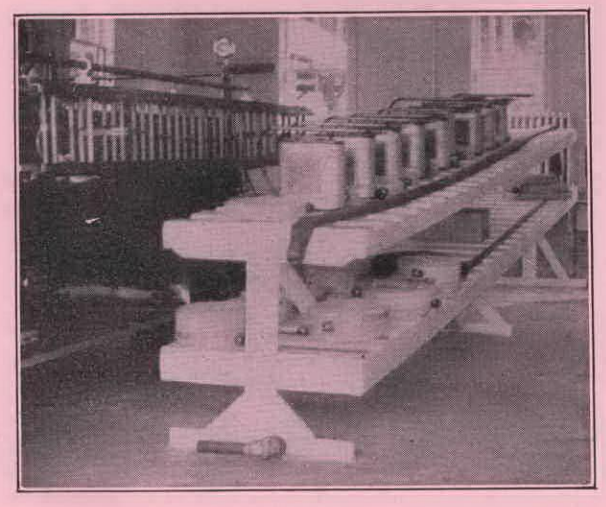

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Brown, Geo. E., Chief, 34 Oak St., Apponaug.
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Smith, John, 69 Granite St., Westerly.
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Chesson, Frederick W., Fire Commissioner, Waterbury.
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VERMONT	37
MASSACHUSETTS	444
RHODE ISLAND	51
CONNECTICUT	131
NEW YORK	22
ILLINOIS	2
LOUISIANA	1
OHIO	4
PENNSYLVANIA	1
WASHINGTON, D. C.	2
WISCONSIN	1
CALIFORNIA	1
CANADA	1
INDIANA	1
	791

PROTECT INDUSTRY

Property Created by Years of Industry Is Destroyed by Fire in an Hour

as the result of only a slight delay in sending an alarm.

Three-Fold Fire Alarm Box

Fire is the greatest destroyer of property, and DELAY due to inadequate facilities for transmitting alarms to the fire department is the greatest accelerator of the flames.

A reliable Fire Alarm Telegraph System with adequate box distribution protects property, gives the fire department a chance to keep losses small, and relieves the community as a whole from the responsibility for fire waste due to DELAYED ALARMS.

Surveys, plans and estimates furnished without cost or obligation.

THE GAMEWELL COMPANY

NEWTON UPPER FALLS MASSACHUSETTS