

England's N. F. S. Developing Radiophone Facilities

Blitz Taught Its Need; British Sent Expert To Study American Developments

Editor's note: There is one phase of the blitz on England, and the efforts of its fire forces to control the numerous and large scale fires started by German incendiaries of which the fire service of this country is ignorant. That is the use to which radio—or as our British cousins call it, "wireless"—was employed.

That the problem of maintaining communications between forces on the fire ground, and between the fire ground, or grounds—for there were many—and fire headquarters, was so serious as to be almost catastrophic is only now disclosed. Although the British Army made use of portable two-way radio facilities, it is reported that no comprehensive effort was made to employ radio in the National Fire Service—the NFS—until well into 1943. As late as 1944 radio communication between mobile units of the NFS was limited almost solely to marine units.

It may now be revealed that in September, 1943, an expert on radiotelephone communication, and a member of the British Central Scientific Agency, Mr. Hopkins, was sent to this country to study the progress made here in the application of two-way radio,—primarily the portable "walkie-talkie" types.

All possible information available in Washington was placed at Mr. Hopkins disposal and shepherded by a member of the Fire Defense Section of the national Office of Civilian Defense, Mr. Hopkins visited representative fire departments of this country that had experimented with portable radio units. At the time of his visit, although several municipalities and radio manufacturers had been experimenting with knapsack or back-pack type portable radio phone sets, war-time restrictions had practically called a halt to developments. Only one City, New York, was going ahead with its experiments and these were being conducted by the fire departments's own radio technicians, in its own radio laboratories.

By personal order of Mayor Fiorello LaGuardia, Mr. Hopkins was given demonstrations of these fire department sets and their design and operational details were laid before him. Mr. Hopkins returned to England that month with the complete picture not only of the types of mobile and portable radio equipment—including "walkie-talkies" and "handy-talkies," in use by or being developed for the fire service of this country, but also a clear picture of the ways in which such radio facilities were utilized by our own fire forces.

The extent to which this cooperation and information was of assistance to our British cousins can only be conjectured at this time. That the National Fire Service did inaugurate two-way radio in some measure, and that it was at least partially successful, is indicated by the following article which we are privileged to quote in its entirety from "Fire Protection" (July, 1945) published by Lomax, Erskine & Co., Ltd., London.

ONE of the principal aims in Fire Service organization has always been the speediest means of communication. What speedier means is there than wireless? But the nature of wireless and special conditions obtaining in Fire Service work have precluded an immediate and wholesale application of its use.

In the London Region, before the war, several fire brigades were experimenting in the use of wireless. But the war cut short these experiments when manufacturers of wireless equipment had to devote themselves entirely to Service needs. Heavy raiding on London, however, the necessity of rapid concentration of fire-fighting forces, the occasional breakdown of telephone communications—all served to emphasize the need for a short distance wireless scheme. And on the equipment that was available it was clear that the River Thames Formation had the first claims.

River First

Once a fireboat had left the shore the only means of communication was visible signalling. This was chancy. Fur-

ther, the Thames estuary was becoming increasingly a rendezvous for convoys, and the responsibility of the River Thames Formation mounted. Fireboats had sometimes to go out of sight of land to attend burning ships. The need for wireless was indisputable.

Early in 1942, two fireboats and three speedboats were equipped with wireless, and a 100-watt station was set up at Southwark. The site, however, was found to be unfavorable, and the equipment was transferred to Tower Bridge, where it was operated by a remote control from Southwark. From the Bridge messages go out to the many fireboats and control boats now equipped (1945) with receiving and transmitting apparatus, operating from Staines to South-bend.

The very shape of the river has been a difficulty for the National Fire Service wireless experts to contend with. A line has had to be covered rather than an area, and this has required the establishment of subsidiary stations to pass on the messages. For instance, at Tilbury and Southend, is equipment that enables fireboats operating out at sea in

the estuary to keep in touch with their base.

All wireless operators in the River Thames Formation are men; aboard they are operational firemen as well as "sparks." At the fire, under certain conditions, boat can speak to boat; but normally the message from the officers in charge is flashed to the land control and thence to the fireboat.

Land Scheme

On land a separate and modified scheme is at present operating. This was inaugurated in 1944, but the scarcity of equipment has precluded extensive development until now. And in the near-future fire-fighting tactics in the London Region are likely to be affected radically by wireless.

Underground, at Regional Fire H. Q., Albert Embankment, is the control of the land scheme. But, as with the River Formation, the wireless equipment is remote from the control, this time at Hampstead, at the highest point in London. A firewoman operator, wishing to pass a message to a Fire Force Headquarters, does so through this installation which, with a power of 100 watts, transmits the message on the special frequency appointed for the use of the Fire Service. This frequency is maintained by a quartz-crystal in each set.

The message can be received not only



Type of portable, "back-pack" two-way radio designed by two young radio experts of the New York Fire Department, Arthur H. Meyerson and Samuel Hamatuk, which was demonstrated to representatives of the British Central Scientific Agency, and the National Office of Civilian Defense during the critical days of the war. Picture shows fireman Meyerson talking with a co-fireman on the ground from the roof of a New York skyscraper.

by the Headquarters, but also by the cars of the Fire Force Commanders and the special vehicles equipped with wireless. These cars and vehicles played an important part during the incendiary raids of 1944 and the flying bomb and rocket attacks.

For instance, while crossing Waterloo Bridge on his way to a reported fire, a staff officer saw a further fall of incendiaries on the Middle Temple. He wirelessed at once for a section of pumps. The time saved by this action saved considerable damage.

"Peace-Time" Uses

But it is the use of wireless at "peace-time" fires with which we are now concerned, and a great factor in the imminent developments is that the installation and maintenance of all wireless equipment in the Fire Service in London is carried out by Fire Service officers and men. All personnel who use wireless equipment—and they are a growing number—were trained at the Fire Service wireless school in London.

At the Workshops may now be seen a hint of things to come. It is a fire engine—a pump escape to be exact—which carries on the uprights of its windscreen two rod aerials. Fitted into the dashboard is the control panel of a receiving set carried under one of the seats. By means of wireless, therefore, the appliance, while on the road or operating at a fire, will be able to keep in touch with its station, and though a single member of the crew will be appointed operator, all members of the crew will be trained in the use of the equipment. The present proposal is to equip 148 pump escapes with these sets.

To the citizens of London the value of this will be that the officer in charge of a pump-escape—and these appliances attend every call—can immediately, without looking for a fire alarm post or a telephone, inform his station of the nature of the fire and request reinforcements if necessary at once. Seconds, possibly minutes, will be saved; so, too, will be life and property.

"Walkie-talkies"

On order, too, is apparatus for selected firemen to carry and use, apparatus made familiar to us by the Army and sometimes referred to as "walkie-talkies." A small set, no bigger than a respirator in a haversack, with a microphone that fits round a fireman's throat, leaving his hands free, and with a range of three-quarters of a mile, will enable firemen at large fires to report developments to the officer in charge. He may be in a building, in smoke, on a branch (hose line) or confronted with a difficult rescue; at once he can inform his officer of his discovery or requirements. A larger set, that can be strapped to a man's back, will be used at control points or at fire stations to provide communications with the fire ground.

Thus far the story of the use of wireless in the National Fire Service in the London Region. But it is only the first chapter.

Long Beach, Cal.—Plans are being prepared for the construction of a new fire station to replace the present old No. 3 station.

FIFTEEN DIE, FIFTY INJURED IN DETROIT FLASH FACTORY FIRE

Unexplained Blaze During Rest Period Traps Many Workers Who Were Listening to Juke Box

A Staff Report

A FLASH fire, starting from unknown causes in the two-story plant of the Export Box & Sealer Co. in a busy section of Detroit, Mich., swept the factory, bringing death to fifteen persons—twelve women and three men, and injuries to fifty others, some of whom are expected to die. The fire was the worst in Detroit since the Study Club disaster of 1929 in which nearly thirty persons lost their lives and dozens of others were injured.

The blaze broke out as the 180 employees, mostly women, were in the midst of a rest period and were listening to a juke box. Apparently disbelieving a shout of fire from the first floor of the building, the workers continued to listen to the music until flames began licking the stairway. Then there was a panicky rush for doors and windows. Most of the victims, seared by the flames or maddened by the intense heat, died after leaping from second-story windows and crashing on the sidewalk of one of Detroit's most heavily-traveled streets. Many of the dead were so badly burned it was impossible to identify them for some time. One woman who, like many of the others, sought to jump from the top-floor windows, was overcome and burned to death lying helpless over the window sill.

Plant Engaged in War Work

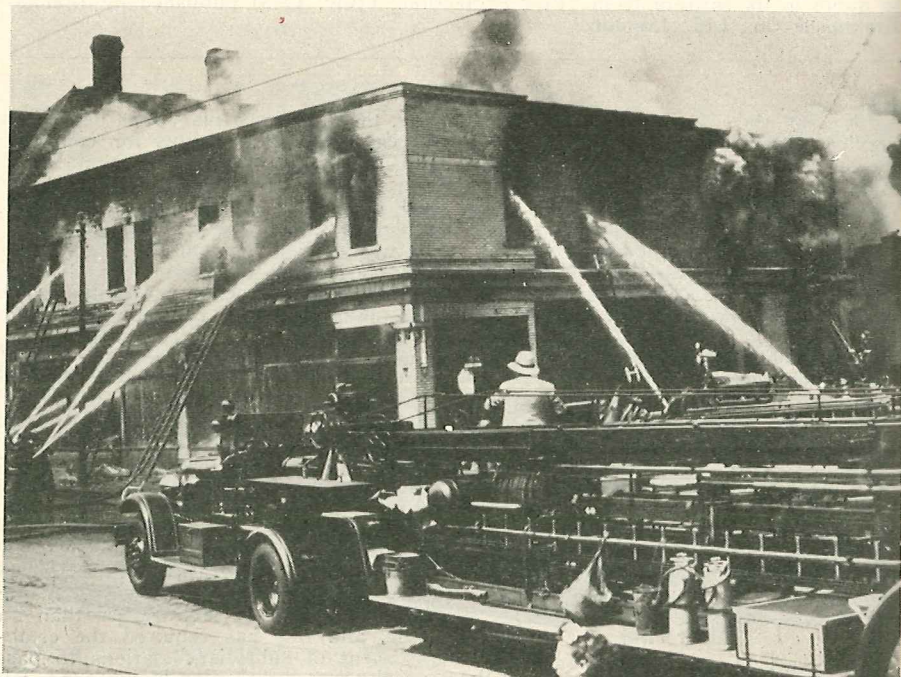
Fire Marshal Edward W. Hall, De-

troit, said the plant which was engaged in boxing materials including replacement parts for tanks and aircraft for shipment overseas, was closed in April after an investigation disclosed several fire hazards. It was allowed to reopen, he said, after later check showed fire department regulations had been complied with.

The fire marshal declined to venture an immediate opinion as to the cause of the fire. He said he had been told that it might have resulted from flammable material leaking from a recently repaired degreasing tank. Another theory was advanced by Louis Markle, an Ordnance Department inspector, who said he believed it resulted from the pouring of a cold oil anti-corrosion fluid into a hot tank. Markle was in the plant at the time and said he saw flames break out under one of the tanks on the first floor.

The condition of the building after the fire clearly indicates the great heat and rapid spread of the flames. Although the fire department report of the catastrophe has not been received, it is understood the alarm was promptly given and the department was quickly on the ground, only to find almost the entire structure fully involved by fire and heavy smoke. Numerous heavy streams as well as hand lines were operated from street level and from ladders.

(Continued on page 688)



Firemen Fighting Flash Fire That Swept War Plant of Export Box & Sealer Co., Detroit, Mich., Killing Fourteen and Injuring Many.