

RECOMMENDATIONS.

appliances and tools, including "Pompier" ladders, quick handling of hose and in life saving, these drills to be in charge of a competent instructor, who shall be sent to one or more cities which maintain drill schools, to obtain experience in modern fire methods.

33. That engines be tested annually, and after any extensive repairs, following methods published by the National Board of Fire Underwriters; pumps showing more than 7 per cent. slip, or delivering less than 90 per cent. of their rated capacities should be overhauled or their crews drilled, or both. Attention is called to the fact that none of the engines in service meet these requirements.

34. That company officers inspect all manufacturing, mercantile and storage buildings in their running districts quarterly, to familiarize themselves with local conditions.

FIRE ALARM SYSTEM.

Headquarters.

35. That fire alarm headquarters be removed to a fireproof building, especially constructed to reduce as far as possible all liabilities to interruption of service. In the new location all apparatus to be placed on incombustible mountings, and no unnecessary combustibles to be permitted in the fire alarm rooms. Until this is done every effort should be made to safeguard the present quarters by placing an adequate number of chemical extinguishers throughout the building, providing an approved system of automatic sprinklers in that portion of the building occupied as a stable and storeroom and sand pails in the operating and battery rooms.

36. That apparatus be provided as follows:—

AT FIRE ALARM HEADQUARTERS:—

(a) Automatic recording apparatus to record alarms received over all box circuits and all alarms sent out over both joker and gong circuits.

(b) A universal recording set to record on same paper tape, incoming and outgoing alarms, this set to be provided with automatic time and date stamp.

(c) An automatic repeater of the proper capacity to prevent interference between circuits and arranged to automatically transmit alarms over the joker circuits without manual intervention or the use of relays.

(d) Additional storage battery controlling boards, storage batteries and racks, for the proposed additional box, joker and gong circuits; storage batteries for each circuit to be in duplicate, also a stand-by motor generator set.

(e) A modern manual transmitter to replace the machine now in service.

AT EACH FIRE STATION:—

(f) A punch register and take-up reel.

Circuits.

37. That reliability of service be increased—

(a) By placing circuits underground in the principal mercantile and congested value districts.

(b) By removing overhead circuits from buildings and from poles carrying high-tension wires.

(c) By providing additional circuits and limiting the number of boxes on each circuit to 20.

(d) By providing an additional gong and joker circuit, so that one joker circuit and one gong circuit will serve 6 fire stations and the other joker and gong circuit the remaining 6 stations.

(e) By remodelling wiring in all fire stations to conform to the Standard of the National Electrical Code.

Boxes.

38. That the future installations of boxes be of the positive non-interfering successive type, with platinum or hard silver contacts and proper protection against abnormal currents; outer doors to be provided with brass handles under glass guard and outer shells properly grounded.

39. That additional boxes be installed in residential and outlying districts. In general, it is considered from any building in the mercantile and manufacturing districts it should not be necessary to traverse over 400 feet in order to reach a box; in closely built-up residential districts this distance should not be over 800 feet, and in outlying residential districts this distance should not be over 1,200 feet.

40. That a conspicuous sign in the English and French languages, stating the manner in which alarms are to be transmitted, be attached to supporting pole immediately above each box, also that box locations be indicated by red lights; that all boxes and a portion of each supporting pole be painted red annually and that letter boxes be painted a different color from the fire alarm boxes.

Telephones.

41. That a private branch exchange be installed at fire alarm headquarters with direct circuits to all fire stations; provided with at least two trunk lines, one of which should be reserved solely for fire alarm purposes. It is also desirable that an arrangement be entered into, if possible, with the Bell Telephone Company to have an emergency call number for fire only, printed in the English and French languages on the outside of the telephone directory cover.

General Alarm Bell.

42. That an independent general alarm bell and striker in connection with the fire alarm telegraph system be installed in the City Hall tower; according to present arrangement this source of notification