GAMEWELL PUBLIC ALARMS

For Volunteer Fire Departments, Industrial and Institutional Fire Brigades—the Diaphone has been the standard of excellence for nearly half a century.

← THE OLD FIRE TOWER
When the watchman discovered fire he manually sounded on the bell the number of his tower, the signal would be heard by the watchman on the next tower and repeated by him, and in this manner the alarm was gradually announced to the entire city.

THE MODERN DIAPHONE HORN
Automatically directs the Firemen to the Scene of Fire.

Note: All dimensions mentioned herewith are approximate.

the GAMEWELL® company · newton upper falls 64, massachusetts

PUBLIC ALARM EQUIPMENT

Essential Characteristics

Sound provides the most satisfactory method of disseminating intelligence throughout areas such as exist in municipalities, industrial plants and institutions, and the sound producing device must possess the essential characteristics hereinafter described.

1. Operability. Capability of operation both from remote points and by manual operation of the device itself. The results obtained by either method should be equally effective.

2. Carrying Capacity. The projection of effective signals over a wide area—to the end that a minimum number of sounding devices may be required, thereby simplifying supervision, maintenance and operation.

3. Sound Penetration. The capacity for providing an effective signal at all points within its effective range.

4. Distinctive Tone. Distinctive and unmistakable tone which cannot be confused with the tones of other sound producing devices.

5. Coding Ability. The ability to emit signals quickly and in a manner conveying easily understood information which directs the firemen or other relief forces to the location of fire or other emergency.

6. Reserve Capacity. The ability to provide for continuous protective service during temporary disruptions of the local electrical power supply.

The GAMEWELL public alarm outfits operated by compressed air and equipped with the Diaphone horn, or other horns described herein, possess in a high degree all of the essential characteristics mentioned.

Diaphone Horn. The Diaphone, first developed for fog signaling along the sea coast and on the Great Lakes, emits a distinctive and unmistakable tone—entirely unlike any other tone—with a peculiar pitch or quality that enables it to cut through street or other noises and to instantly arrest attention. Local conditions—such as high buildings, uneven terrain, and to some extent atmospheric conditions—affect sound penetration, but under reasonably favorable conditions the Type B Diaphone Horn, as adapted by GAMEWELL to fire alarm service, has been distinctly heard at distances up to six miles.

The Diaphone units emit coded signals in clear, sharp and distinct blasts, definitely indicating the location of fire or other emergency. When operated, the Diaphone emits full tone instantly—there is no lag in building up to the full tone—and is capable of sounding, in a highly satisfactory manner, coded signals consisting of blasts of one second duration at one-half second intervals.

Convincing evidence of merit is afforded by the use of the Diaphone for public alarm and other emergency signaling purposes in more than 1000 municipalities, industrial, institutional, and governmental properties—in some instances for more than 30 years. An extract from an official report of a test made by the National Bureau of Standards and published in an issue of the magazine MUNICIPAL SIGNAL ENGINEER, by authority of Dr. Lyman J. Briggs, Director of said Bureau, in a letter dated April 2, 1942, and addressed to the International Municipal Signal Association, Inc., is quoted as follows:

"The Gamewell Company: This device was a Type B Diaphone with an aluminum piston. *The air pressure used when testing was 35 pounds per square inch and the air consumption 1.2 cubic feet of free air per second. The signal strength at 100 feet was 114 decibels.* For all practical purposes this device is non-directional."

PUBLIC ALARM EQUIPMENT

GAMEWELL Diaphone compressed air outfits are supplied in two standard capacities as follows:

Type B. Main air reservoir approximate dimensions, 3 feet by 9 feet; auxiliary reservoir approximate dimensions, 1⅓ feet by 4 feet. Motor compressor, 3 H.P. with automatic control.

Type D. Air reservoir approximate dimensions, 2 feet by 6 feet. Motor compressor, 2 H.P. with automatic control.

The air reservoirs are of rolled steel plate, ASME specifications. A maximum pressure of 150 pounds per square inch is provided for in the main reservoirs; with a pressure drop to approximately 120 pounds per square inch the automatic action of the associated motor compressor restores maximum pressure. The reservoir pressure is automatically reduced by a pressure reducing valve to 35 pounds per square inch, further reduced towards the end of a signal to 25 pounds per square inch for blowing pressure at the horn, and the valve is adjustable to provide a wide range of secondary pressure.

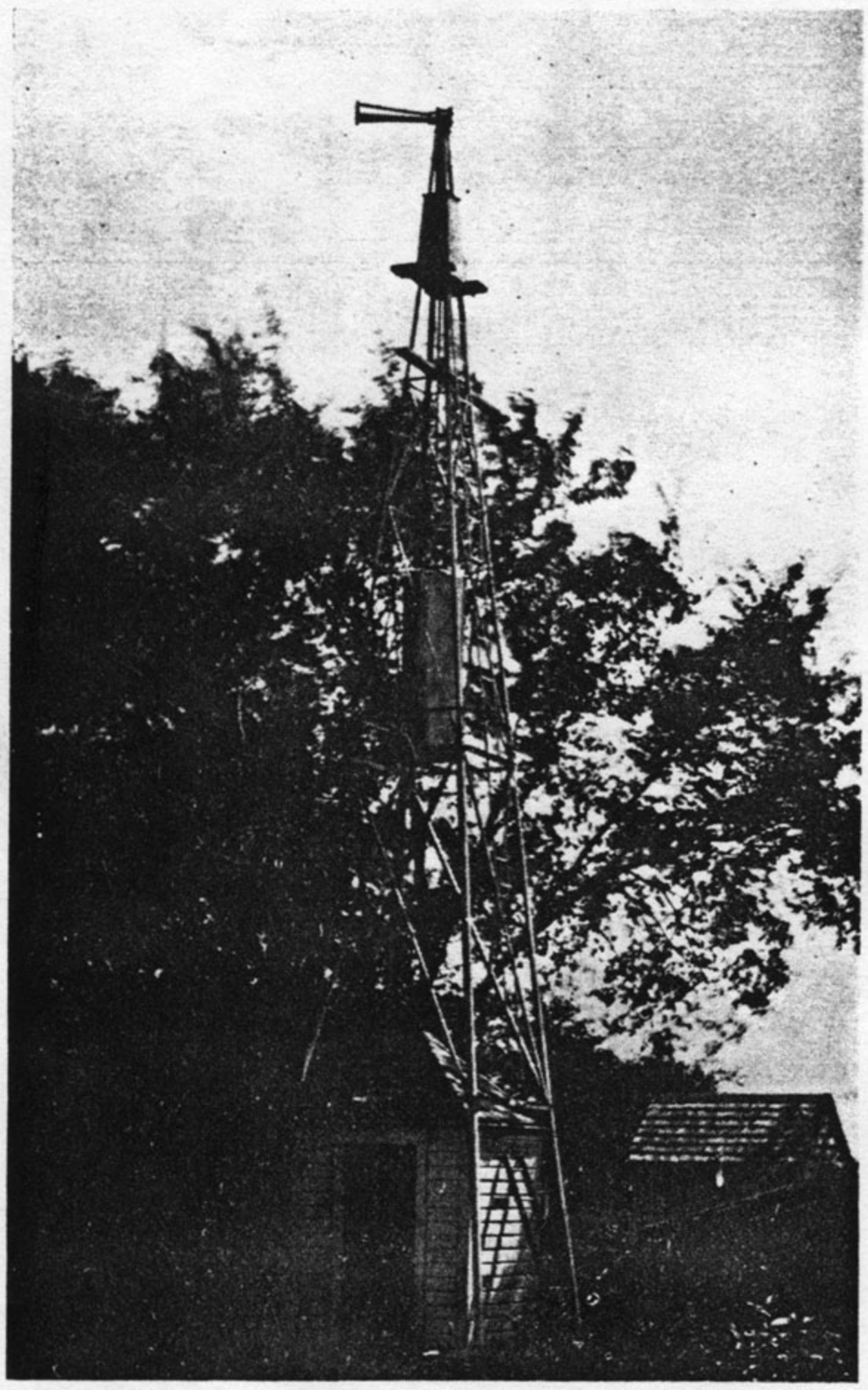
The motor compressor and automatic control are mounted on a common base and thus form a compactly arranged unit.

Type D Assembly. The outfit consists of a GAMEWELL Type B Diaphone horn; an electrically controlled, pneumatically operated balanced valve for controlling horn operation in conformity with code signal impulses and designed to emit signal blasts of uniform time irrespective of duration of circuit opening; a 2 H.P. motor driven air compressor, capable of piston displacement of 9 cubic feet of free air per minute against a maximum reservoir pressure of 150 pounds per square inch, with an automatic control designed to automatically start compression when pressure drops to approximately 120 pounds per square inch and continue until maximum pressure is restored; air reservoir, 2 feet by 6 feet; pressure reducing valve; dirt separator; starting switch; 75 feet of streamlined copper tubing and fittings; safety valve; pressure gauge; and a complete complement of minor accessories.

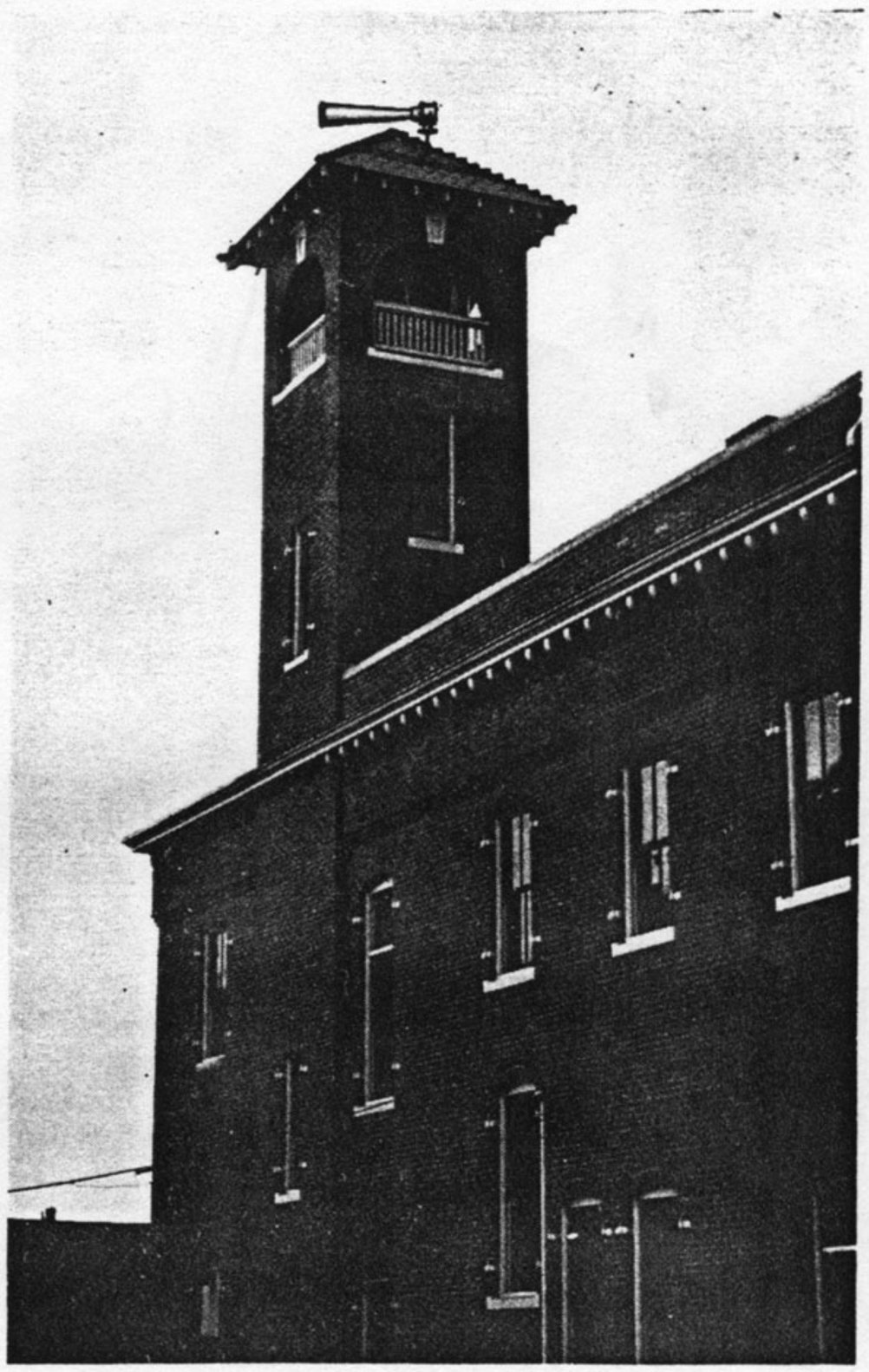
Type B Assembly. The outfit consists of a GAMEWELL Type B Diaphone horn; an electrically controlled, pneumatically operated balanced valve for controlling horn operation in conformity with code signal impulses and designed to emit signal blasts of uniform duration irrespective of duration of circuit opening; a 3 H.P. motor driven air compressor, capable of piston displacement of 13 cubic feet of free air per minute against a maximum reservoir pressure of 150 pounds per square inch, with an automatic control designed to start compression when pressure drops to approximately 120 pounds per square inch and continue until maximum pressure is restored; main air reservoir, 3 feet by 9 feet; auxiliary air reservoir, 1⅓ feet by 4 feet; pressure reducing valve; dirt separator; starting switch; 75 feet of stream lined copper tubing and fittings; safety valve; pressure gauge and a complete complement of minor accessories.

PUBLIC ALARM EQUIPMENT

DIAPHONE INSTALLATIONS



TYPICAL OUTDOOR INSTALLATION ON A TOWER



TYPICAL INSTALLATION ON A FIRE STATION

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