

GASOLINE - THE FIREFIGHTERS
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By Ernest W. Peterson

A screeching siren followed by a gasoline propelled machine makes a striking contrast today to the clanging horse drawn vehicle which dashed through Portland's streets a few years ago in response to fire alarms, Gasoline has become the modern firefighter.

The entire "land service" of Portland's modern fire department is gasoline driven. This includes 30 hose companies, four aerial truck companies, two tractorized steam pumpers, one complete chemical company, one fuel wagon, one hydrant repair truck, one emergency electric repair truck and six automobiles used by the chief, battalion chiefs and superintendent of the fire alarm system. Portland's fire department has 46 pieces of "rolling stock" in regular service, and two of the "swimming type," the latter being the fireboats David Campbell and George Williams. In addition, a few ordinary auto trucks are kept handy, which can be pressed into service during an emergency.

With the addition of the motor driven apparatus, the city has been able to reduce the number of fire companies and still give more prompt service than was given when horses were used. In addition, a motor driven machine can carry as much fire fighting paraphernalia to a fire as two wagons and, therefore, the number of pieces of apparatus in each engine house has been cut in two.

Formerly a suburban company consisted of two pieces of apparatus - a hose cart and engine - but today both are combined into one machine in 16 of the 30 fire houses. This modern device is known to firemen as a "combination pumper," and a better type of machine used in four important stations is known as a "triple combination pumper." To the average person these modern machines appear to be nothing more than a motor driven hose cart, but to firemen they spell the latest word in firefighting.

Follow a triple combination pumping machine to a fire and you will see the following: As the automobile, or "engine" as it is known to firemen, passes the nearest hydrant to the fire, a fireman on the rear platform jumps off with the end of the hose in his hand. The engine proceeds laying the hose to the fire. As soon as the engine reaches the burning building another fireman grabs a small shutoff device and slips it over the hose to keep back the water.

During this time the fireman at the hydrant is very busy. To the end of his hose was attached a four-way plug. One opening in this plug is attached to the hose. A second opening is attached to the hydrant. A separate "shutoff gate," which the fireman also took with him as he jumped from the apparatus, is attached to the other side of the hydrant and then the water is turned on, the water passing through the hose to the little shutoff device.

While the fireman at the hydrant is busy making his connections and while the firemen at the burning building are connecting up their hose and nozzles, the driver of the truck has made one or two more trips from the hydrant to the fire laying hose. The driver pays no attention to the other firemen, for as soon as they are ready for water they kick open the shutoff device and they have hydrant pressure in their line and water on the fire.

When the driver has the required number of lines laid to the fire he takes his machine back to the hydrant. A regular line of hoses is then attached from the engine to a third opening of the four-way plug, and then two lines of suction hose are attached from the engine to the hydrant, one connecting at

the fourth opening on the four-way plug and the other connecting to the "shutoff gate."

When these connections are completed the driver shifts a lever under his seat and the truck is instantly transformed from an automobile into a powerful pumping engine. At the same movement the lever is shifted on the four-way plug and the engine draws water out of the hydrant through its two suction lines. The water is forced back through the third line and through the four-way plug into the original line of hose laid to the fire. By this method the men fighting the fire never lose water and at the same time, have increased advantage of engine pressure over hydrant pressure. Years ago when firemen wanted to change from hydrant to engine pressure it was necessary to disconnect the line. This was dangerous to the men in the burning structure and often allowed a fire to gain much headway.

When engine pressure is put in the first line the other lines of hose which were laid to the fire are connected to special plugs on the engine and water is also forced through them.

This type of apparatus saves the taxpayers the expense of supporting a large steam pumping engine in every station in the city and also insures the desired protection, as these auto pumping engines can deliver the firemen enough pressure to enable them to knock down the side of a wooden building if they use full pressure. The average pressure used is 140 pounds.

Some sections of the residential district are not equipped with combination pumpers, but the pumpers are so arranged that whenever two companies answer an alarm, one of them is almost certain to be a pumper. Some of the residential sections have 125 pounds pressure in the mains, so a pumper is not needed except in a bad fire, as 125 pounds is sufficient.

Equipping of the department in the residential sections with combination pumpers does not mean that the steam pumping engines are doomed. They are as necessary today in the business section or a big lumber mill fire as they ever were. They are indispensable where heavy pressure and a large volume of water is desired. A steam pumper can deliver 300 pounds pressure through four lines of hose and keep up the pressure continuously, even if the fire lasts several days.

Another necessary device in fighting fires is the deluge set, which enables firemen to shoot a stream of water six or seven stories high, or on a fire a block away from them. In case of a hot fire on a high floor or a fierce mill fire, such a tremendous pressure is necessary. This pressure is gained through the deluge set, which is formed by joining three lines of hose into one line and forcing all the water from the three lines through one nozzle. If necessary, a separate pumping engine can be connected to each line of hose, thus delivering an enormous pressure to the nozzle. When this connection is made it requires five men to hold the nozzle. Under these conditions 3000 gallons of water can be delivered in one minute through one nozzle. The force of the water from this nozzle is sufficient to tear down almost anything in front of it.

The small shutoff device may not seem much to the layman, but it means a great deal to the fireman. It is not a pleasant experience for a fireman to be half way up the ladder with a heavy line of hose and then have the water suddenly rush into the line and make the hose so heavy he cannot carry it. This small device, which is placed across the hose at the foot of the ladder, holds back the water until the nozzle men are ready and call for water. It might be suggested that it would be wise for the hydrant man to wait and turn on the water when the nozzle men were ready, but this practice would result in the loss of valuable time. Twenty or thirty seconds at the outset of a fire mean more to firemen than a half hour does after they have the blaze under their control. It is for this reason that they desire water as quickly as possible and employ every modern device to save a few seconds of time. This shutoff

device is the invention of Fire Marshal Edward Grenfell.

Portland's firefighting system is under the supervision of City Commissioner C.A. Bigelow and under the personal direction of Chief John E. Young. The city is divided into four districts, two being on each side of the river. Fire fighters on the east side north of Sullivan's gulch are under the supervision of Assistant Chief "Mike" Laudenklos; those south of Sullivan's gulch under Battalion Chief L. G. Holden; those on the west side South of Morrison street under Battalion Chief Edward Grenfell, and those on the west side north of Morrison street under Battalion Chief James Dillane. The entire fire alarm system of the city is directed by Superintendent Charles A. Savariau.

Each battalion chief answers every alarm in his district and assumes control of the men if the fire is serious. If the fire is trivial he leaves it in charge of the first captain to arrive on the scene with his company. The chief answers practically every fire alarm in the business district, and all large fires in any part of the city. Battalion chiefs surrender their command over the men upon the arrival of the chief. Several battalion chiefs respond to a serious fire and assist the chief in directing the men. Should the chief fail to answer an alarm or be out of the city, the battalion chief in whose district the fire occurs remains in complete control.

The intricate workings of the interesting fire alarm signal system, including the why and wherefore of the screeching siren which wakes up Portland at midnight; the workings of the street corner alarm box; how each company receives its alarms; how long it takes a company to get out of its engine house, and the difference between the present system and one used 25 years ago will furnish the material for a subsequent article.