

OUR FIRE INTERESTS.

THE APPARATUS AND MEN.

A VISIT TO THE ENGINE HOUSES—THE CONDITION OF THE DEPARTMENT—READINESS FOR EXTINGUISHING FIRES, ETC.

In the pending investigation into the fire system of this city, some needs and some faulty practices have been brought to light. One of the most notable of these is the practice of each engine drawing a hose carriage after it. Only five steamers out of the twenty-three comprising the department are exempt from this hinderance. It is evident that this is a drag upon the engine and checks the speed, the hose carriage, with its hose, weighing from 1300 to 1600 pounds. There is also the disadvantage that leading hose is not upon the ground till the arrival of the steamer, which necessitates delay in laying the lines; whereas, were the hose carriage drawn separately its greater lightness would permit of its reaching the ground in advance of the engine, and laying the leading hose ready to take water when the steamer is in position. To correct this there are two courses, one being to add two more horses to each steamer, making the number four, as is done in St. Louis, Mo., or to detach the hose carriage and draw it separately. The latter course has been deemed the more expedient by the fire committee, it being found that drawing the hose carriage strains the engine, and is, besides, dangerous in case of an accident, such as the breaking of an axle upon the steamer, as the men in such a case leap off, and in doing so they are liable to fall short and drop between the hind wheels of the engine and the wheels of the hose carriage. The fire committee have at once perceived the force of this, and are about to issue an order for steamers not to draw their hose carriages in future.

In the investigation it was further urged that the engine routes of this city should be made shorter; but it was found that the present routes are no longer than those of other cities. It was then urged, with more reason, that the engines should be of such power as to be able to throw water higher than the third story of a building. On this head much evidence was taken, but it did not prove that any of the engines are deficient in this respect. It is said that the Babcock engine in use has answered its purpose well; and its admirers urge that two or three more should be added to the force.

Some believe that the fire department should be increased in regard to its permanent force, so as to have a larger number of men about the engine house at all times, ready for action. It is urged that most of the men attached to engines are mechanics, whose trade calls them away from the engine house, so that when there is a fire they have to come from a distance, and, perhaps, reach the scene of fire late and too much exhausted for efficiency. These men now receive \$25 per month, and are very desirous to be put on full pay. It is doubted by a large party that this would be expedient, as it would greatly increase the cost of the department, and, perhaps, gather idle groups about the engine houses. As it is, each steamer has an engine-man, fireman and driver, who are permanently employed.

PAY ROLL OF THE FIRE DEPARTMENT.

The present pay roll is as follows:

Chief Engineer.....	\$3200 per annum.
Secretary of Board of Engineers.....	1800 "
14 Assistant Engineers.....	500 "
21 Enginemen.....	\$3 50 per day.
22 Firemen.....	3 25 "
50 Drivers.....	3 00 "
32 Foremen.....	\$225 per annum.
8 do (Ward XVI.).....	250 "
5 Assistant Foremen.....	300 "
10 do do (Ward XVI.).....	225 "
40 Axemen and Bakemen.....	3 00 "
50 Members.....	300 "
12 do (Ward XVI.).....	225 "

This charge upon the city is large enough.

WATER FACILITIES.

There are 2606 hydrants and 96 reservoirs where water can be obtained in case of fire, which are charged to the appropriation for the fire department by the water board at the rate of \$18 apiece, making a total of \$48,636 for the use of water for the extinguishment of fires. There is also charged to this department by the water works, for furnishing and keeping in repair the hydrants and reservoirs, the sum of \$32,256, making a total of \$80,892. From the chief engineer's last report, the following facts are gathered:

"During the past three years, at large fires, much difficulty has been experienced for the want of an adequate supply of water for our steam fire engines; the immediate cause of this failure is this, namely:

"That the hydrants, in every instance, are placed upon branch pipes, the diameter of which varies from three to four inches, while the mains themselves, in almost every instance, are but four inches in diameter that supply them.

"In case of fire, the hydrants upon these branch pipes will afford a supply to only one steamer; all others on the line are useless; the steamer being at work makes a vacuum in the pipe by drawing the water to the hydrant first tapped.

"The result of this difficulty is, that much time is consumed in shifting the apparatus to lines of pipe in other streets, by reason of which, long continuous lines of hose have to be used to convey the water to the scene of conflagration; and, by this operation, the amount of friction to overcome is very great, requiring, oftentimes, a water pressure from 180 to 200 pounds to the square inch, to be effectual in our high buildings.

"To overcome this evil, I would suggest that upon our main thoroughfares hydrants be connected with the main pipes, of size not less than eight inches in diameter, with a proper outlet, which would give us a supply of water fully equal, if not more than we now get from six of the ordinary hydrants.

"One of these hydrants would afford a supply for three of our engines, with one-third the amount of hose now used to reach the fire. The pressure upon the hose would be reduced thirty per cent., and the bursting correspondingly decreased."

HOSE.

There were in this department 66,205 feet of hose at the close of the municipal year, classed as follows:

14,537 feet of leather.	3,426 feet of rubber.
7,988 feet of leather.	12,921 feet of cotton.
25,773 feet of rubber.	1,850 feet of linen.

There were destroyed at the fire of November 9, 10 and 11 in this city 20,000 feet of hose. There had been condemned previous to the great fire 3723 feet of hose of all kinds, making a total of 24,623 feet lost or condemned. To replace the hose destroyed and that unfit for use, 46,000 feet have been added to the stock of this department.

STATE OF THE ENGINES.

There are twenty-three steamers in the department, the company of No. 22 not being yet organized. Nos. 1, 2, 7 and 22 are relief engines. In order to gain an insight into the efficiency of the department and the views of practical firemen, a visit to the several engine houses was made by a reporter of THE GLOBE, who found that most of the steamers are in a state of efficiency, both as to their apparatus and *attelage*. Some were in a more ready state than the others, but few had any serious defects. They will be referred to here *seriatim*.

MAZEPPA ENGINE, NO. 1.

This engine is a double-reciprocating vertical engine, with cylinders of 7½ inches diameter, and 8 inches stroke, and pumps of 4½ inches diameter, and 8 inches stroke. It can throw 600 gallons per minute, and, the engine-man claims, can play a stream over a five or six-story building. If there be water enough, this engine can play two streams as high as most of the buildings of this city. Mr. Ray, the engineer, has found the water supply to be equal to the demand, generally. The engine draws its hose carriage, with 450 feet of cotton hose. Mr. Ray thinks it would be better to draw the hose separately, and he also is of opinion that it would be well to retain in permanent service half of the hosemen, including the foreman, which would enable the engine to throw water sooner. At present, only the engineer, fireman and driver are permanently employed, which is the case with all the engines. The weight of this steamer as drawn to fires is 8600 pounds. It was put into service, September 17, 1872, but the company was organized, December 10, 1869. The horses and *attelage* are in good condition; if the hose carriage were drawn separately, another horse would, of course be necessary. State of engine, efficient.

A. T. SPINNEY ENGINE, NO. 2.

This steamer is also a double-reciprocating vertical engine, 7-inch steam cylinder, 8-inch stroke, 4½-inch pump, so constructed as to work doubly or singly. The engine can throw 500 gallons of water per minute, and two streams of water over a five-story building, if there be water enough, but Mr. Twiss, the engineer, has often found the water to fail. This steamer also draws its hose carriage, with 400 feet of rubber hose. The engine-man says that not only does the hose carriage act as a heavy drag upon the steamer, but the "tongue" is apt to be broken at a sharp or a sudden turn in driving full speed to a fire. He believes, also, that it would be well to have three or four more men on permanent service, taken from the hosemen. The weight of this steamer, as drawn to fires, is 9200 pounds; can turn out in twenty seconds; horses in good condition, though, perhaps, a little too old. The engine was put into service, August 7, 1872, and the company was organized, September 17, 1860. State of engine, efficient.

EAGLE ENGINE, NO. 3.

This steamer, like the last, is a double-reciprocating vertical engine, 7½ inch diameter cylinders, 8-inch stroke, pumps 4½-inch in diameter and 8-inch stroke. Can throw 500 gallons of water per minute, and said

to be able to play a stream over a five-story building. This engine also draws its hose carriage, with 500 feet of hose, and weighs as drawn to fires, 8510 pounds. It was put into service, November 7, 1867, and the company was organized, May 7, 1860. Horses, etc., in good condition. The drawing of a hose carriage is admitted by the company to be a disadvantage; and the engineer favors the putting on permanent service half the hosemen, including the foremen. This idea is general among the engine-men. State of engine, efficient.

BARNICOAT ENGINE, NO. 4.

This engine is also a double-reciprocating vertical engine, 7½-inch diameter cylinders, 8-inch stroke, pumps 4½-inch in diameter and 8-inch stroke; can throw 500 gallons of water per minute, and play a stream over a five-story building, if the supply of water be abundant. This engine was put into service, November 7, 1867, and weighs, with hose carriage and 500 feet of hose, 8500 pounds. The company was organized, May 7, 1860. Both engine and apparatus are in a state of efficiency. Horses in good condition.

ELISHA SMITH ENGINE, NO. 5.

This steamer is a double-reciprocating vertical engine, 7½-inch diameter cylinders, 8-inch stroke, pumps 4½-inch in diameter and 8-inch stroke; can throw 500 gallons of water per minute, and said to be able to play a stream as high as any warehouse in this city. Draws its hose carriage with 500 feet of hose. This engine was put in service, December 21, 1867, and weighs, with hose and carriage, 8650 pounds. Company organized, September 1, 1860. Horses, etc., in good condition. Both engine and apparatus are efficient.

MELVILLE ENGINE, NO. 6.

This steamer has two steam cylinders 8 inches in diameter and 12-inch stroke, and two double-acting vertical plunger-pumps 4½ inches in diameter, both working in the same air chamber. It can throw 600 gallons of water per minute, and was put in service, December 19, 1864. This engine does not draw its hose carriage, and can reach a fire the sooner on that account. The hose carriage is drawn by one horse, and carries on its reel 750 feet of rubber hose. Mr. Travers, the engineer, who has been 14 years in the department, believes that it would be well to have half of the hosemen in permanent service, including the foreman. He asserts the ability of his engine to throw two streams over any five or six-story building in this city, but finds the water scant sometimes. The horses and apparatus are in good condition; and the engine, which weighs 9445 pounds, is very efficient, the water being kept heated up. The company was organized, January 1, 1860. A driver for the hose carriage is retained in permanent service on this engine.

T. C. AMORY ENGINE, NO. 7.

This steamer is a double-reciprocating vertical engine, 7½-inch diameter cylinders, 8-inch stroke, pumps 4½-inch in diameter and 8-inch stroke. Can throw 500 gallons of water per minute, and said to be able to play a stream as high as a five or six-story building. This is a relief engine. This engine draws its hose carriage, and weighs, with 450 feet of hose as drawn to fires, about 8070 pounds. It was put into service, September 25, 1870; the company being organized, January 1, 1860. Is efficient.

NORTHERN LIBERTY ENGINE, NO. 8.

This steamer was built in Boston, and is a double-reciprocating vertical engine, 7-inch steam cylinders, 8-inch stroke, with 4½-inch pumps, so constructed as to work doubly or singly. Can throw a stream as high as required. This engine also draws its hose carriage, but is light, its weight being only 7200 pounds, including hose and carriage. It was put into service, April 26, 1869. Company organized, November 1, 1850. Is in a state of efficiency.

MAVERICK ENGINE, NO. 9.

This steamer is one of Hunneman's, and is a double-reciprocating vertical engine, 7½-inch steam cylinder, 8-inch stroke, with 4½-inch pumps, so constructed as to work doubly or singly; said to be able to throw a stream of water as high as any warehouse in this city, and draws its hose carriage. This engine was put into service, October 14, 1872, and weighs, as drawn to fires, 9300 pounds. Company organized, December 26, 1859. Is in a state of efficiency.

CATARACT ENGINE, NO. 10.

This steamer is a double-reciprocating vertical engine, 7½-inch diameter cylinders, 8-inch stroke, pumps 4½ inches in diameter, and 8-inch stroke; can throw 400 gallons of water per minute. It was put into service, February 1, 1870, and its weight, with the hose carriage and 400 feet of hose, as drawn to fires, is 8610 pounds. This engine is one of the new pattern, with a crane-neck frame, so that the engine can be turned round within its length. The company was organized, June 1, 1862.

The apparatus was found to be in a good state of readiness for fire. Horses were hitched and steamer ready to run in 20 seconds. Mr. Tyng, the engineer, is of opinion that the hose carriage is too great a drag upon the engine, that it strains it, and should be drawn separately, and that an extra horse should be attached to the engine to be used for uphill localities. He does not think it expedient to put four horses to the engine and to draw the hose carriage with it, as the strain upon the engine would be too severe. He thinks, too, that it is dangerous to draw a hose carriage after the engine, for if an axle happened to break the men would leap off, and, in doing so, might fall between the hind wheels of the engine and the wheels of the hose carriage. The engineer further believes that some of the hose-hands should be put on permanent service. This engine is efficient.

JOHN S. DANRELL ENGINE, NO. 11.

This steamer has one steam cylinder 8 inches in diameter, and one double-acting vertical plunger pump of 4½ inches in diameter, and 12-inch stroke. It has a capacity to throw 400 gallons of water per minute, and weighs, as drawn to fires, 8500 pounds. Draws its hose carriage. This engine was put into service, February 15, 1867; company organized, January 1, 1866. Is efficient.

WARREN ENGINE, NO. 12.

This steamer is a reciprocating engine, steam cylinder 11¼ inches in diameter, 6½-inch pump, and 9-inch stroke. Can throw 600 gallons of water per minute—a large stream—yet is a light engine, of 6800 pounds, as drawn to fires. This steamer does not draw its hose carriage, and this, coupled with its lightness, enables it to reach a scene of fire in good time. A second driver, for the hose carriage, is on permanent service here. The company was organized, September 9, 1864. Engine and apparatus in efficient order.

TREMONT ENGINE, NO. 13.

This steamer was built in Boston, and is a double-reciprocating, vertical engine, 7½-inch steam cylinders, 8-inch stroke, with 4½-inch pumps, so constructed as to work doubly or singly; can throw a stream as high as needed. This engine does not draw its hose carriage, which is drawn separately, by one horse, like that of the last steamer. The engine and apparatus weigh, as drawn to fires, 7500 pounds. It was put into service, April, 1870. Company organized, April 6, 1865. State of engine and apparatus efficient.

DEARBORN ENGINE, NO. 14.

This steamer, like 12 and 13, does not draw its hose carriage. It is a double-reciprocating vertical engine, 7½ inches diameter cylinders, 8-inch stroke, pumps 4½ inches in diameter and 8-inch stroke, can throw 500 gallons of water per minute, and said to force a stream as high as any building in Boston. The hose carriage is drawn by one horse, and the engine, thus rid of this drag, is enabled to reach fires in good time. The weight of this engine, as drawn to fires, is 7525 pounds. It was put into service, September 17, 1870. Company organized, December 17, 1860. Engine and apparatus in good order.

WALTER E. HAWES ENGINE, NO. 15.

This steamer is a double-reciprocating vertical engine, 7½-inch diameter cylinders, 8-inch stroke, pumps 4½ inches in diameter and 8-inch stroke. Can throw 500 gallons of water per minute, and its engineer asserts its ability to throw two streams over a five-story building, if there be plenty of water. It draws its hose carriage with 400 feet of rubber hose. Leather hose is considered better by Mr. Gilman, the engineer, who has been ten years in the service. He believes that half of the hosemen should be put on permanent service. As it is, there are no spare hands to fill the place of an absent one. He, like all the rest, is in favor also of drawing the hose carriage separately. The weight of this engine, with hose carriage and 400 feet of hose, as drawn to fires, is 8500 pounds. It was put into service, December, 1860, and both it and apparatus are in good order.

S. H. HENARD ENGINE, NO. 16.

This light steamer was built at Pawtucket, R. I. It has one steam cylinder, 9 inches in diameter, and one double-acting vertical plunger-pump, 5½ inches in diameter, and 7½-inch stroke. It can throw 450 gallons of water per minute, and is said to play a stream over a five-story building. The steamer was put into service, October 20, 1869. It is one of the few which do not draw their hose carriages, and weighs, as drawn to fires, 7100 pounds. Company organized, November 8, 1869.

PROTECTOR ENGINE, NO. 17.

This steamer is one of Hunneman's of this city, and is a double-reciprocating vertical engine, 7-inch steam cylinder, 8-inch stroke, with 4½-inch pumps, so constructed as to work doubly or singly. Can throw 600 gallons of water per minute, and said

to play two streams as high as a five-story building, if there be plenty of water. This engine was put into service, March, 1866, and its weight, as drawn to fires, is 8350 pounds. Apparatus in good order.

TORRENT ENGINE, NO. 18.

This steamer was built in Pawtucket, R. I. It has one steam cylinder, 6 inches in diameter, one double-acting plunger-pump, 5½ inches in diameter, and 7½-inch stroke, can throw 300 gallons of water per minute, and play one stream of water as high as needed. It draws its hose carriage. This engine was put into service, January, 1870, and weighs, with hose carriage and 350 feet of hose, as drawn to fires, 7347 pounds. Company organized, December 27, 1869. Engine and apparatus in good order.

ALERT ENGINE, NO. 19.

This steamer is also Pawtucket built, and has one steam cylinder, 9 inches in diameter and one double-acting vertical plunger-pump, 5½ inches in diameter and 7½-inch stroke; can throw 300 gallons of water per minute and play one stream as high as needed. It draws its hose carriage. This engine was put into service, January 1, 1870, and weighs, with 350 feet of hose, 7500 pounds. Company organized, January 1, 1870. Engine and apparatus in good order.

INDEPENDENCE ENGINE, NO. 20.

This steamer is of Pawtucket built. It has one steam cylinder, 9 inches in diameter and one double-acting vertical plunger-pump of 5½ inches in diameter and 7½-inch stroke; can throw (her builder claims) 400 gallons of water per minute, and play a stream over a five or six-story building. This engine draws its hose carriage. It was put into service, January, 1870, and its weight as drawn to fires is 7450 pounds. Company organized, January 1, 1870; apparatus in good order.

J. H. UPHAM ENGINE, NO. 21.

This steamer is of similar build to the last, having one steam cylinder, 9 inches in diameter, and one vertical double-acting plunger-pump, 5½ inches in diameter and 7½-inch stroke; can throw 400 gallons of water per minute, and has a capacity to play a stream over a five-story building. This engine was put into service, December 27, 1869, and weighs, as drawn to fires, 6950 pounds. Apparatus in good order, and company efficient. House on Boston street, Ward XVI.

ENGINE NO. 22.

The company of this steamer is not yet organized. This is one of the four relief engines.

ENGINE NO. 23.

This steamer is one of the newest in the department. It draws its hose carriage, however, but is in a state of efficiency. Company lately organized.

STATE OF HOSE CARRIAGES.

There are eleven horse hose carriages, all in a fair state of efficiency. Each hose company has a driver on permanent service, and 8 hosemen, who do duty only at fires; one of these being designated foreman of the hose. One hose carriage will serve to give an idea of the whole.

WASHINGTON HOSE CARRIAGE, NO. 1.

This carriage is one of Hunneman's of this city. It weighs, with the driver and 800 feet of 2½-inch leading hose, 3000 pounds; put into service, May 1, 1869, and the company was organized, April 1, 1860. Only the driver is on permanent duty. It is urged that half of the hosemen, including the foreman, should be retained in permanent service; and this is, perhaps, a correct view. Most of the hose carriages are of Hunneman's build—that is, home-made. The general state is that of efficiency.

HOOK AND LADDER COMPANIES.

There are seven hook and ladder companies in the department, which appear to be in a state of readiness for fire.

From all this it may be seen that if the hose carriages be detached from the steamers they might reach fires in time; and that the steamers can throw water as high as needed, if the supply be copious. As things are, the steamers are a little slow in getting to fires, though they "hitch up" fast enough, and lose no time on the road.