

"another mode of annoying enemies' ships was by throwing fire therein, which they did after different ways, some using for that purpose siphons, and fire buckets, others threw in pots filled with fire." From an expression of Dr. G. A. Agricola, a physician of Ratisbon, of the last century, in a work on gardening, it would appear as if something like the Greek fire was then in use. Enumerating several pernicious inventions, he notices "that infernal one of gunpowder. How many cities and fortresses has it ruined? How many thousands of men has it destroyed? And what is more deplorable is, that this art grows more and more complete every day, and is brought to that perfection that in Holland and some other parts they have fire pumps filled with burning compositions, wherewith they eject fiery torrents to a great distance, which may occasion dreadful and irreparable damages to mankind."

Fires and wars have ever been deemed the most awful of earthly calamities, and, unfortunately for our race, they have too often been united, for warriors have generally had recourse to the former to multiply the miseries of the latter, and in almost every age cities have, like Jericho and Ai, Hebron and Ziglag, Troy and Thebes, Carthage and Athens, Saguntum and Bagdat, been burnt with fire, and in some cases "all the souls therein destroyed."



SCENE AT A FIRE IN LONDON, 1670.

As Greek fire preceded gunpowder in Europe, so pumps or the "spouting engines" for projecting it may be considered the forerunners of guns; it is even possible that the first idea of the latter (supposing they were not introduced from the east) might have been derived from accidental explosion of the liquid in the pump cylinders, when the pistons would of course be driven out of them like balls out of cannon. Be this as it may, enough has been adduced to show that the forcing-pump and its modifications have exerted no small degree of influence in ancient wars, and consequently in the affairs of the old world.

Although the police and other arrangements for the actual suppression of fires in ancient Rome are not well ascertained, some interesting particulars are known. A body of firemen, named *matricularii*, was established, whose duty it was to extinguish flames. Similar companies were also organized in provincial cities. This appears from Trajan's reply to Pliny respecting the formation of one in Nicomedia, and from which we learn that these ancient firemen frequently created disturbances by their dissensions and tumults. Pliny (the younger) was governor of Bithynia; after giving the emperor an account of a fire in Nicomedia, a town in his province, he continues: "You will consider, sir, whether it may not be advisable to form a company of firemen, consisting only of one hundred and fifty mem-

bers. I will take care none but those of that business shall be admitted into it, and that the privileges granted them shall not be extended to any other purpose. As this corporate body will be restricted to so small a number of members, it will be easy to keep them under proper regulations." In answer the emperor sent the following letter: "Trajan to Pliny: You are of opinion it would be proper to establish a company of firemen in Nicomedia, agreeably to what has been practiced in several other cities. But it is to be remembered that societies of this sort have greatly disturbed the peace of the province in general and of those cities in particular. Whatever name we give them, and for whatever purpose they may be instituted, they will not fail to form themselves into factious assemblies, however short their meetings may be. It will therefore be safer to provide such machines as are of service in extinguishing fires, enjoining the owners of houses to assist in preventing the mischief from spreading, and, if it should be necessary, to call in the aid of the populace."

The direction to procure "machines as are of service in extinguishing fires" was in consequence of Nicomedia being destitute of them—an unfortunate circumstance for the inhabitants, but one that is hardly now regretted by those who are in search of information respecting fire-engines among the ancients, since it led Pliny to mention them, and thereby afford us a proof of their employment by the Romans. "While I was making a progress (he writes to Trajan) in a different part of the province, a most destructive fire broke out in Nicomedia, which not only consumed several private houses, but also two public buildings, the town house and the temple of Isis, though they stood on contrary sides of the street. The occasion of its spreading thus wide was partly owing to the violence of the wind, and partly to the indolence of the people, who, it appears, stood fixed and idle spectators of this terrible calamity. The truth is, the city was not furnished with either engines, buckets, or any single instrument proper to extinguish fires, which I have now, however, given directions to be provided."

It has been generally imagined (observes Melmoth) that the ancients had not the art of raising water by engines, but this passage seems to favor the contrary opinion. The word in the original (for engine) is *sypho*, which Hesychius explains, "*instrumentum ad jaculandum aquas adversus incendia*"—an instrument to throw up water against fires. But there is a passage in Seneca which seems to put the matter beyond a conjecture, though none of the critics upon this place have taken notice of it. "Solemus," says he, "*duabus manibus inter se junctus aquam concipere et compressa utrinque palma in modum siphonis exprimere*"—Q. N. ii. 16, where we plainly see the use of this *sypho* was to throw up water.

In the French translation of De Sasy (Paris, 1809) the word is rendered pumps: "D'ailleurs, il n'y a dans la ville, ni pompes ni seaux publics, enfin nul autre des instrumens necessaires pour eteindre les embrasemens." And Professor Beckmon quotes both Hesychius and Isadore to prove that "a fire-engine, properly so called, was understood in the 4th and 7th centuries by the term *sypho*," and we may add that Agricola in the 16th century designated syringes for extinguishing fires by the same term. Heron's engine is also named a *sypho*.

From an expression in the letter of Pliny just quoted, we learn that men were regularly brought up