

# The Fire Hydrant

*At your service for more than two centuries*

BY LISA DE NIKE

It's nothing less than ironic that something so valuable spends so much of its time unnoticed except by the occasional wandering dog or the motorist cursing the lack of a legal on-street parking space.

Yet, for more than two centuries, the fire hydrant—humble, unassuming and definitely ubiquitous—has been quietly saving lives, not to mention billions of dollars.

How these squat scarlet sentinels of safety came to punctuate our urban landscape is a story of necessity inspiring human creativity and innovation.

Though no one seems ever to have traced the fire hydrant's complete story, the few historians who have broached the subject assert that the device traces its origins back to ancient China, where large metal cauldrons filled with water were stationed strategically at corners for use in dousing flames.

The world's first "fireplugs" (relatives of the modern hydrant) apparently did not appear until the 1660s, when underground wooden street mains in Europe provided a handy source of water. When a fire erupted, early firefighters reportedly would have to dig through the street down to the main before drilling holes into these hollowed out logs. A primitive "pumper" was inserted into the holes, and the lifesaving liquid filled buckets that were then wielded by volunteer brigades. When the emergency was over, those openings would be plugged with wooden stoppers: hence the term "fireplugs."

When London was rebuilt after the devastating Great Fire of 1666, mains outfitted with pre-drilled and pre-plugged holes were constructed above ground in an attempt to ensure that no fire would ever again consume the city. By the middle of the next century, those wooden plugs had been replaced by metal

valves that could be opened and closed at will, making access to water even more convenient.

A leap in hydrant technology occurred in Philadelphia around 1800, when engineers in the City of Brotherly Love installed a water-delivery system that included a network of steam pumps that pulled water from the nearby Schuylkill River into a series of standing pipes.

Small wooden casements were constructed around those pipes to protect them from the weather, creating the first "hydrants." Records show that by 1811, Philadelphia had 230 of these wooden hydrant pumps and 185 new, cast-iron hydrants, which were just beginning to be used.

Before long, someone had the idea of rigging these early hydrants with fittings shaped to fit the hoses that fire brigades were beginning to use and another leap in hydrant technology was made.

Though this design was a definite improvement over its predecessors, it still had one large drawback: because the water was standing at the ready in the pipes all the time, it often froze in cold weather. By 1812, a "dry barrel" hydrant had been designed, in which water flows into the hydrant through a valve located below the frost line, but then drains from the hydrant when it's not being used.

By the 1850s, this style of hydrant was widely used and despite some design

improvements, new materials and techniques, today's hydrants really are not much different. Stem nuts at the top open a valve to admit water and a main valve, when closed, drains water out and down into the pipes. (A slightly different, "wet" style hydrant—filled with pressurized water at all times—is popular in warmer climates, such as in California and Florida.) Hydrants, in fact, have changed so little that photos of Civil War-era hydrants remain quite recognizable today. And fire hydrant aficionados don't expect them to change much any time soon.

"My guess is that the fire hydrant of today will look very similar to the fire hydrant of 2101," said Thomas Ingalsbe, a fire hydrant buff who runs [www.firehydrant.org](http://www.firehydrant.org), a Web site for fans of the lifesaving device. ■

