

MUELLER RECORD

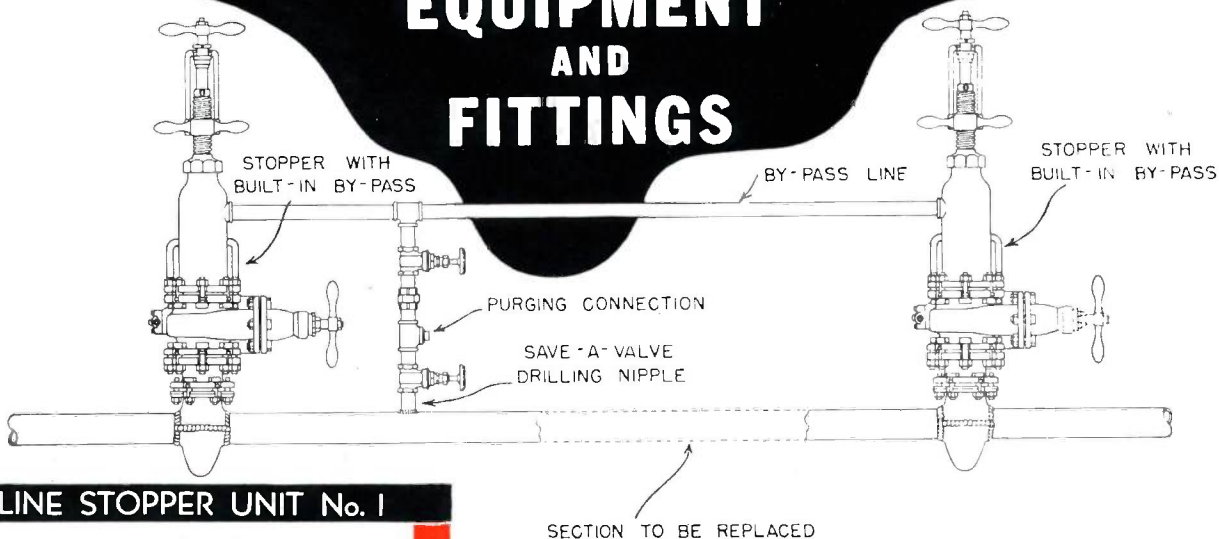


JULY • 1949 • AUGUST

**Repair or Replace a Section of Pipe
Run Laterals
Extend Dead Ends
Install Valves**

ALL WITHOUT INTERRUPTING SERVICE

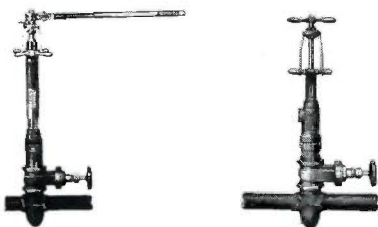
**Isolate and By-pass Any Section
With
MUELLER LINE STOPPER
EQUIPMENT
AND
FITTINGS**



LINE STOPPER UNIT No. 1

RANGE: Steel Pipe (Welding Fittings)
Sizes: 1", 1 1/4", 1 1/2", 2"
Steel Pipe (Mechanical Joint Fitting)
Size: 2" only
Cast Iron Pipe (Mechanical Joint Fitting)
Size: 2" only
Type "K" Copper Pipe (Solder Weld Fitting)
Sizes: 1 1/2", 2"

TEMPERATURE: Up to 250° F.



Mueller Line Stopper Equipment and Fittings permit practically any kind of replacement, addition or repair to a line without interrupting the service or inconveniencing the consumer in any manner. The work is done in absolute safety as the gas does not blow during any stage of the entire operation.

Three different size Units are available. Unit No. 1 has a range from 1" through 2", Unit No. 2 is for 3" and 4" pipe and Unit No. 3 is used on 6" and 8" lines. Line Stopper Fittings are available for use on any kind of pipe in either Welding or Mechanical Joint Patterns. These Fittings are made from the highest grade materials, accurately machined to close tolerances. They are equally efficient when used on low, intermediate or high pressure lines.

The use of this Equipment and Fittings on either small or large jobs is quick, dependable and safe. Our new Catalog No. 50 gives complete information. Write for a copy today.



MUELLER CO.

MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS

OTHER FACTORIES: Los Angeles, Cal.; Chattanooga, Tenn.; Sarnia, Ont. Canada

MUELLER RECORD

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GENE J. KUHN, Editor

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COVER

Harold M. Lambert Studios
Philadelphia, Pa.



MOSTLY PERSONAL

IN THE COURSE of gathering material for the article on the gas light which once adorned the Capitol dome, page 6, we came across a reproduction of a circular issued by the Washington Gas Light Company in the winter of 1858 to enlist the cooperation of customers to prevent meters from freezing.

Since it is assumed the method described would be equally satisfactory for water meters, we are printing several excerpts for the convenience of any gas company or water works personnel who may wish to file it away for possible use this winter.

"The cheapest way to prevent the wet meter from freezing," the circular stated, "is to fill it with whiskey; and it is earnestly recommended that this should be done *at once* by every consumer.

"In any case where it may be desired, the Company will fill the meter *free of expense*, the gas consumer furnishing the whiskey.

"The following table shows the quantity of common whiskey necessary for the *first filling*, to be replenished from time to time during the winter as evaporation may require:

For a	3 light meter	1½ gallons
"	5 do. do.	2 "
"	10 do. do.	4 "
"	20 do. do.	6 "
"	30 do. do.	10 "
"	45 do. do.	15 "
"	60 do. do.	20 "
"	100 do. do.	30 "

"Office hours from 8 A. M. to 5 P. M."

(Continued on page 20)

Utica, New York, Water System Reaches Its

IN THE AUTUMN of 1847, the taxpayers of Utica rejected as a "wild and doubtful project" the proposal that the city build and operate its own public water supply system. Ninety-one years later, in 1938, the city's governing body authorized the purchase of the then existing water works system for \$7,900,000.

The history of Utica's water supply covers a period of more than 140 years. In 1802, the village of Utica was a community of 500 pioneers who made their homes near the banks of the Mohawk River, within a radius of a few rods of Bagg's Square. Open wells and the old oaken bucket supplied the inhabitants with water, even Bagg's Square did not boast a "town pump."

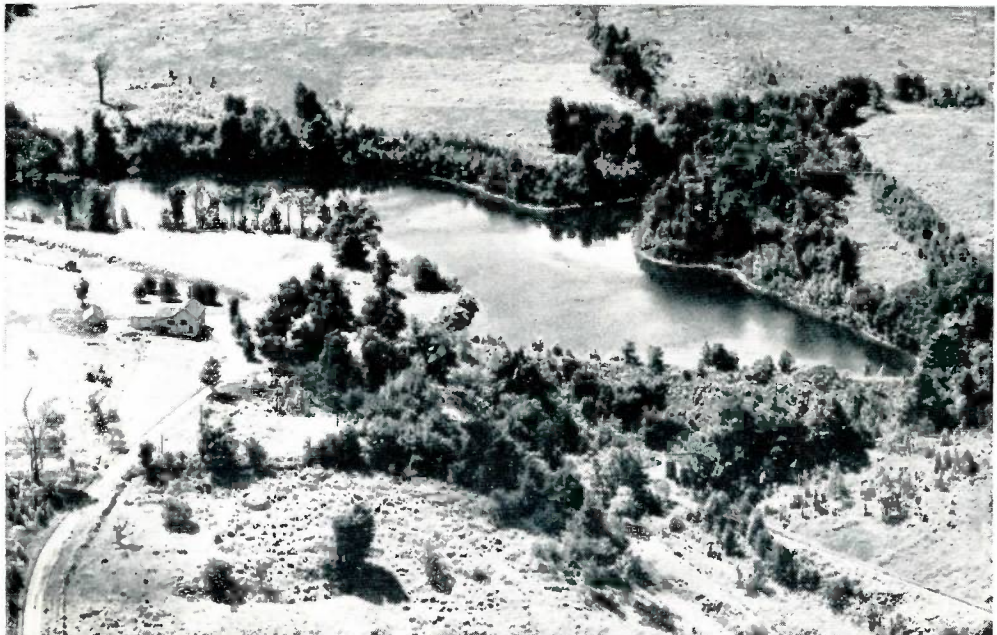
In April of that year, a group of citizens was authorized by an act of the state legislature under the name of the Utica Aqueduct Company to supply the village with water. The company constructed an aqueduct of hollow logs with 2-inch bore from springs located at the foot of the sand bank (now Spring Street) across the pastures to the north corner of Genesee and Liberty Streets

and continued down Genesee Street to Bagg's Square.

How many of the inhabitants forsook their wells in favor of the new-fangled water system is not known, but the aqueduct supplied water to a considerable part of the village until 1824, when the construction of the Erie Canal through Utica's downtown district severed the wooden pipe line.

In the early years of candles and whale oil lamps, wood fires and sparking chimneys the hazards of property fires were great. As an auxiliary to the wooden aqueduct, for better protection against fires, the village trustees in 1805 ordered that three wells be dug and fitted with pumps. The pump at Bagg's Square was a popular gathering place and outlived the other two, not being discontinued until 1822.

After the aqueduct was severed in 1824, there was a 10-year period during which the inhabitants of Utica depended entirely on their wells. In 1832, when the city charter was obtained, the population numbered about 10,000, and during the summer cholera ravaged the new municipality. The matter of water sup-



Graffenburg Reservoir, which has a capacity of 28,700,000 gallons, was built in 1854 and is still in use. Located near original "water cure" springs, it was city's first storage reservoir.

Hundredth Anniversary

ply was of grave concern. That same year the Utica Water Works Association was formed, but did not construct its works until 1834. The association connected two or three springs located in the vicinity of Spring Street and from there laid small pipes through part of the city which furnished water until 1850, when the works were abandoned.

In the meantime the Utica Water Works Company had been incorporated in 1848 with a capital of \$75,000. Many of the leading citizens subscribed and became stockholders, but the sum of money required appeared too great, and only about \$22,000 was subscribed. After considerable delay, the originator of the enterprise subscribed for one-half of the amount required and entered into a contract on April 21, 1849, to build the works.

The source of water for the new system was located on Graffenburg Hill, where a well patronized "water cure" had been conducted prior to 1848. The company constructed a collecting well or basin on the site and the water was conveyed in a brick aqueduct to the city's first distributing reservoir, which was constructed on Corn Hill. In November, 1849, the company began distributing water from the "water cure" springs.

By 1854, as the supply of water from the springs, about 800,000 gallons per day, was becoming inadequate for the demands of increasing population and industry, the company purchased 40 acres of land for its first storage reservoir. This reservoir was also located on Graffenburg Hill, a short distance northwest of the springs.

When the company was again seeking to further increase the water supply in 1856, it purchased a lot located at the corner of South and Steuben Streets and began drilling for water. The drill found only hard slate until 345 feet down, then after drilling through two feet of sandstone, oil and gas were struck. The gas burned brightly and the oil was there, but not in sufficient quantity for commercial purposes. The operations were discontinued and abandoned.

From time to time, new sources of supply and additional storage were need-



ed and acquired to meet the increasing demands of the growing city. At the close of 1886 the public water supply of Utica consisted of three storage reservoirs located on Graffenburg Hill and Pleasant Street, with total storage capacities of 368 million gallons which was distributed through about 50 miles of water mains. The High Street reservoir was drained, filled in and sold for building lots in 1868. Later, two additional reservoirs were constructed. These increased the storage capacity to 833 million gallons. In 1902 the embankment of No. 3 or Savage reservoir gave way, draining the reservoir, which was never rebuilt. Following the draining of No. 3, the city was dependent on the four remaining reservoirs until 1900 when the Deerfield reservoir was constructed and an additional supply of water was obtained from Reels Creek.

The water from the West Canada Creek was first brought to Utica in 1906. In 1899 the Utica Water Works Company merged with the West Canada Water Company, which had secured franchises to supply water from West Canada Creek to Utica and the surrounding villages. The stockholders of the two companies incorporated the Consolidated Water Company which entered a new era of progress. Modern and improved methods of construction and operation were introduced, resulting in an extended system of reservoirs, pipe lines and buildings. The Deerfield reservoir, the Reels Creek supply, twenty odd miles of supply mains connecting the West Canada Creek with Utica, the compensating reservoir at Gray, the Marcy reservoir, the erection of a modern office building, the installation of water purification equipment and the establishment of one of the first water analytical laboratories



Main source of supply for Utica's water system is Hinckley State Reservoir, which has a capacity of 25 billion gallons. The reservoir supplies about 99 per cent of the city's supply.

in this country were all accomplishments of the new company.

The New Hartford and Whitestown water systems were acquired and connected to the Utica system, steel storage tanks were erected to improve distribution in Deerfield, New Hartford, Oriskany and Whitestown. The greatest accomplishment of the new company was its foresight in acquiring lands, reservoir sites and riparian rights on the West Canada Creek and its tributaries, for the possession of these rights secured an inexhaustible supply of soft, potable water for the inhabitants of Utica and vicinity. It gave the Consolidated Water Company and its successor, the City of Utica, the right to divert 50 million gallons of water per day from the state reservoir at Hinckley, which the state constructed as a source of supply for the Barge Canal in 1911.

West Canada Creek is a spring-fed mountain stream, located on the western slopes of the Adirondack Mountains, with a drainage area of approximately 400 square miles containing many lakes and streams with outlets and tributaries emptying into the main stream above the state reservoir. The water is of excellent quality for domestic, commercial and industrial purposes. Gray res-

ervoir with a capacity of more than one billion gallons, is located on Black Creek, a tributary of West Canada Creek. Flood and freshet waters are collected and impounded at that point and used for compensating purposes when the natural flow of West Canada Creek falls below 2,500 gallons per second.

The point of diversion is about 18 miles north of the city in the state reservoir, which has a capacity of 25 billion gallons. The intake in the reservoir comprises two 42-inch cast iron pipes through the dam with the necessary screens, gates and operating controls. Below the dam the two 42-inch pipes converge into a 24-inch cast iron supply main on which electrically-operated, centrifugal booster pumps are installed to increase the gravity supply when required. The 24-inch supply main extends about 10 miles to Marcy Summit, the location of the Marcy surge tank or pressure regulator. At that point the 24-inch main is divided into 16-inch and 24-inch mains. The 16-inch main extends four and three-quarter miles to the Deerfield reservoir and the 24-inch main extends about two miles to Marcy reservoir, and from that point a 24-inch main extends about three and three-quarter miles

to Utica. A 24-inch main also parallels the 16-inch main from Marcy reservoir to Deerfield reservoir.

The first section of approximately 1.53 miles of new 36-inch supply main was constructed and connected to the original 24-inch supply main in 1946. As the systems' demand for additional water increases, subsequent sections will be constructed to parallel the original main to the source of supply.

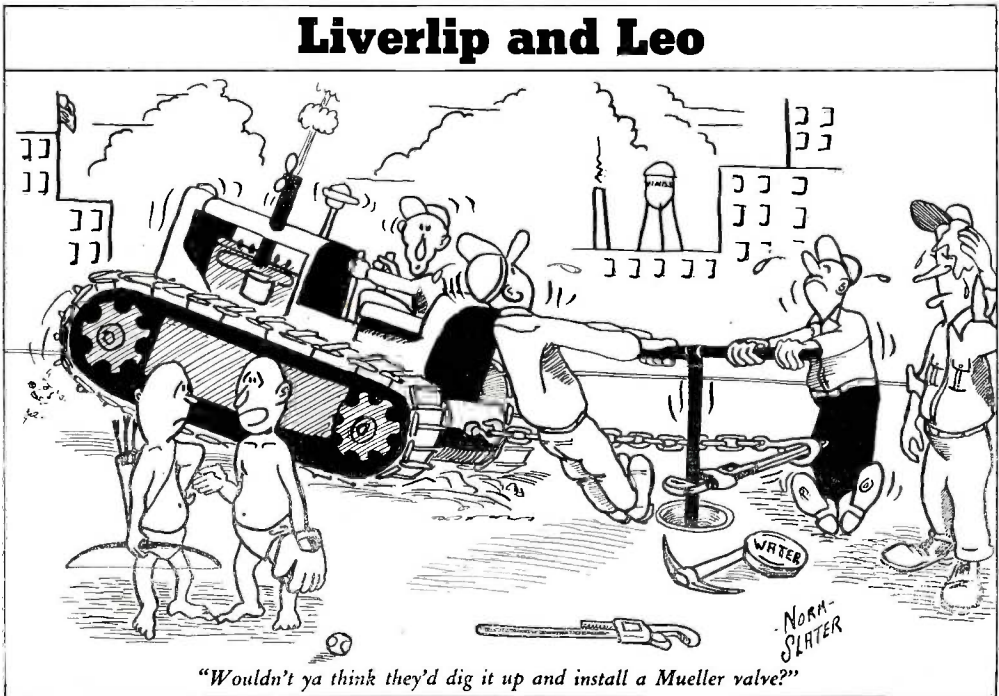
From the Deerfield reservoir, located on Trenton Road, a 20-inch distribution main extends to Bagg's Square, where it connects with a 20-inch main extending east and west in Main and Whitesboro Streets, and also connects with a 20-inch main extending south in Genesee Street. A 30-inch main also extends from Deerfield reservoir to a point just south of the Barge Canal in North Genesee Street.

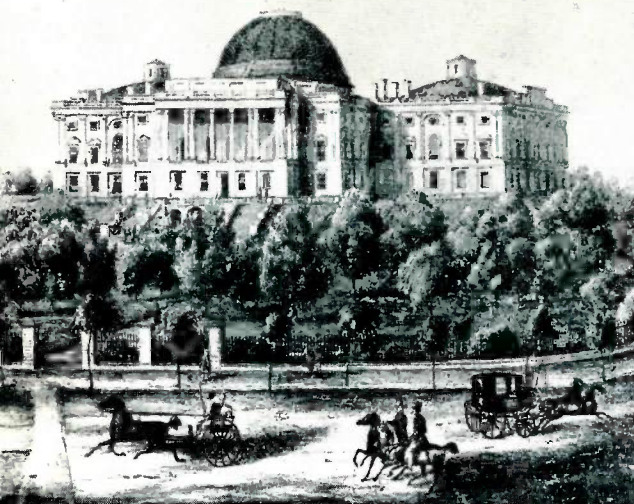
Approximately 98 per cent of the water supply for the city and surrounding towns and villages is obtained from West Canada Creek, the remainder being obtained from the Graffenburg spring-fed reservoir, built in 1854 and still in service. The Graffenburg supply is softened and furnishes water to the high elevation area, principally in the town of New Hartford.

The supply and distribution systems are operated by gravity with auxiliary pumps located at strategic points for emergency purposes, and comprises more than 30 miles of supply mains and over 250 miles of distribution mains, connected to seven storage reservoirs and six storage tanks with total capacities of more than 650 million gallons.

Purification stations are maintained at each point of distribution. There are approximately 26,000 service laterals and 22,900 meters, 4,700 gate valves and 2,000 fire hydrants. The average quantity of water furnished by the distribution system is approximately 16,000,000 gallons per day. In addition to the city of Utica, water is also furnished to the villages of New Hartford, New York Mills, Oriskany, Whitesboro and Yorkville and the towns of Deerfield, Frankfort, Marcy, New Hartford, Russia, Schuylar, Trenton and Whitestown.

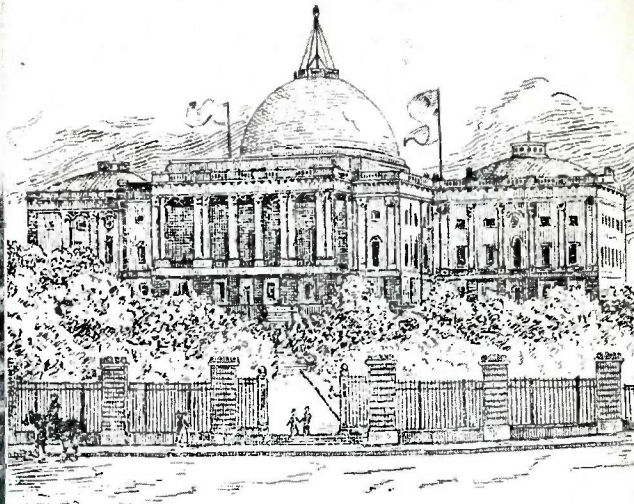
The system is managed by a non-partisan board of five commissioners appointed by the mayor under authority of local laws adopted in 1938 and 1941. The system is self-supporting, as all expenditures for every purpose, including bond retirement and interest, are obtained from the revenues received.





BETTMANN ARCHIVE

This view of the Capitol shows the building before Crutchett's gas lantern was placed on the dome.



WASHINGTON GAS LIGHT CO.

A sketch of the Capitol, showing the mast and lantern. The mast was 80 feet long, weighed 1½ tons.

Mr. Crutchett's Light

Illumination of the Capitol dome in 1847 led to the formation of today's Washington Gas Light Company.

A MORE STARTLING innovation in its day than the present administration's addition of a porch to the White House was the 80-foot mast, supporting a gilded iron gas lantern, which adorned the dome of the Capitol a little over a hundred years ago.

This was not Washington's first experience with gas, but it was certainly its most spectacular. Benjamin Henfry had experimented with gas as early as 1802, illuminating a house on Pennsylvania Avenue and the lamp in front of his house. Later, in 1841, Robert Grant had lighted a room in the Treasury Building with gas, and there were several other successful projects in the city.

Like Mr. Truman's porch, the mast and light atop the dome occasioned a flurry of controversy. For one thing, James Crutchett, who was one of the gas industry's real pioneers, had proposed to light up a mile or two of the city, and the illumination furnished by the lantern fell far short of fulfilling his promise.

One critic, Congressman John Fairfield, wrote to his wife on December 4, 1847:

"Crutchett's big light on the dome of the Capitol I don't think much of. It affords a tolerable light immediately about the Capitol, but the light is not extended as far as had been anticipated.

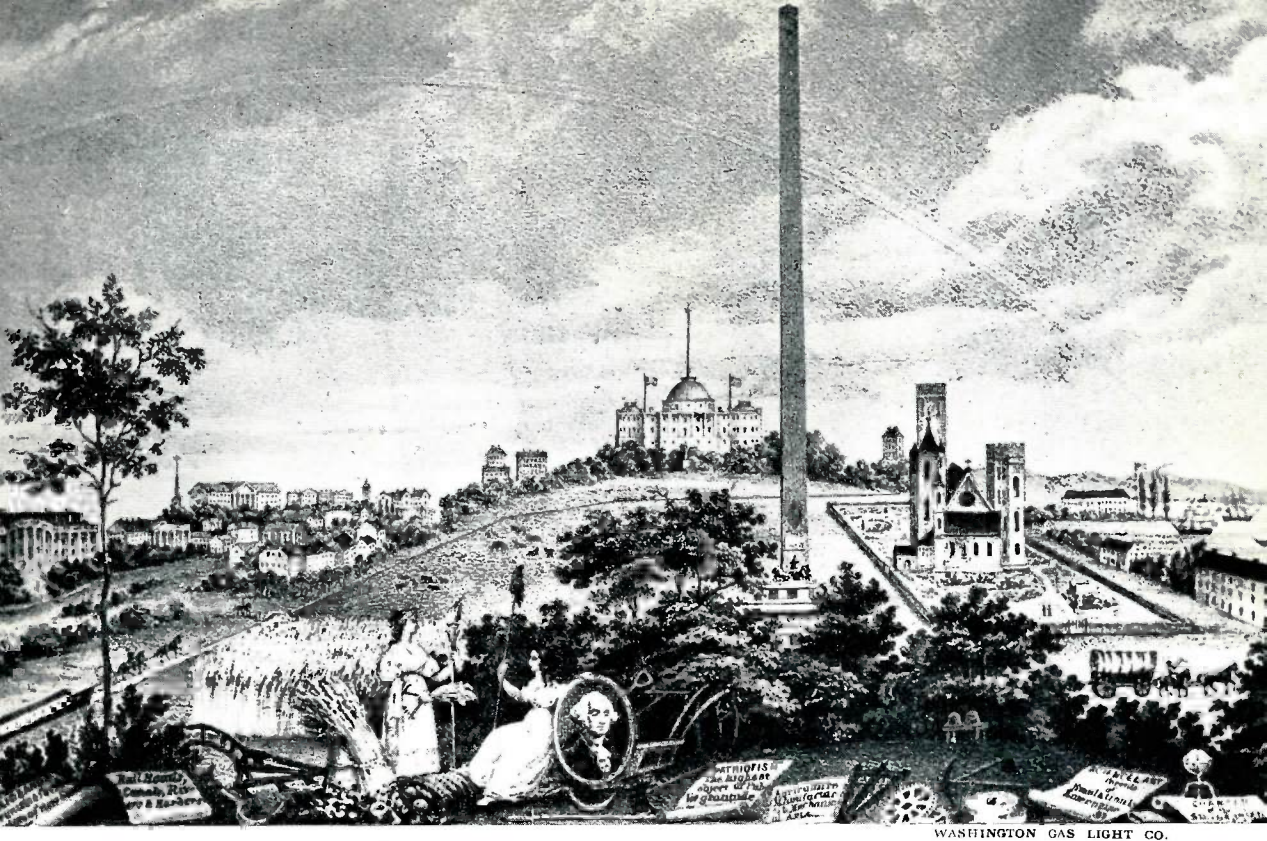
The Senate Chamber was lighted up last evening with gas, and looked splendidly. The light proceeded from a sort of chandelier suspended in the center and quite up to the ceiling. This alone makes light enough to write by and read the finest print in any part of the chamber."

Crutchett came to Washington in 1846 from Dayton, Ohio, and purchased a house at North Capitol and C Streets, just north of the Capitol grounds. He had demonstrated gas as an illuminant in St. Louis, Cincinnati, Wheeling, and other cities, and he carried on his experiments at his Washington home.

Shortly after his arrival he built a small gas plant on his property, installed nine lamps around it, and his "solar gas," as he termed it, soon became one of the wonders of Washington, noticed not only by the city's residents but members of Congress as well.

He approached Congress with the idea of lighting the Capitol and grounds, and, despite considerable skepticism, he was able to wangle a contract. An Act of March 3, 1847, appropriated \$17,500 for the necessary construction and equipment. Crutchett built a gas plant and gas holder on the northwest terrace of the Capitol grounds and introduced gas into the building.

The mast for the dome, according to a



This old lithograph, which shows numerous aspects of Washington in 1847-48, emphasizes the

height of the mast on the Capitol dome. The mast supported the gilded lantern, six feet in diameter.

newspaper account published September 11, 1847, was cut from "a beautiful stick of white pine from Pennsylvania," which weighed 1½ tons. The lantern and iron work were made by two local men, a Mr. Buckingham and a Mr. Naylor.

The lantern itself, according to another newspaper, was of "strong iron work, 6 feet in diameter with a gilded roof about 7 feet in diameter; the roof surmounted by a dome shaped like the dome of the Capitol; above that an arrow 6 feet long—and above that again a ball about 15 inches in diameter; all gilded."

The failure of the lantern to provide as much illumination as Crutchett had indicated was not the only source of friction between him and the Congress. He was also, it appeared, somewhat careless in his business enterprises, and in 1848 Charles Douglas, commissioner of public buildings, advised in his annual report to Congress that arrangements to supply gas be made with some other group.

Accordingly, on April 12, 1848, a petition was sent to Congress requesting the incorporation of the Washington Gas Light Company. It was signed by Ben-

jamin B. French, chief clerk of the House of Representatives; John F. Callan, a druggist; Jacob Bigelow, a lawyer; William H. English, who rose from Treasury clerk to congressman from Indiana; Michael P. Callan, a postoffice clerk; William H. Harrover, hardware merchant; and William A. Bradley, the city's mayor and postmaster.

The incorporators purchased Crutchett's patent rights, and in April began to supply gas to the Capitol and grounds, using the plant at the Capitol. The bill incorporating the Washington Gas Light Company, which has the distinction of being the first public utility chartered by Congress in operation today, was signed by President James K. Polk on July 8, 1848.

Later in the summer the newly-formed company constructed its own plant, and Congress appropriated \$320 for the removal of the lantern. The mast, interestingly enough, was donated to the Washington Monument Society, which used it as a boom in the construction of the famed monument.

Mueller Tees for Gas Service Connections

Safety and ease of installation under pressure without shutting down line among features of these products.

A FITTING USED in making a gas service connection should conform to these four requisites: (1) assured safety throughout the installation operation and while in service; (2) ease of installation under pressure, without shutting down or permitting the gas to blow; (3) serviceability; and (4) permanence.

Mueller No-Blo service tees meet all of these conditions, and, in addition, they permit a high degree of flexibility in outlet connections for the service. The service line may be joined to the tee by a solid weld, compression coupling, or threaded connections.

The photographs on this and the following three pages illustrate the step-by-step procedure in making service connections, using a plain welding tee and a machine-inserted gas service valve tee. A welding inlet valve tee, similar in outside appearance to the plain welding tee illustrated, also is available. Valve tees are constructed with a built-in valve, which permits the shutting off of the service at the tee with simple hand tools.

Both the welding and machine-inserted tees are made of forged steel, and are designed and tested for working pressures up to 500 p.s.i. Welding tees have an inside and an outside thread at the top. The inside thread takes a bronze plug, and the outside thread is for an iron completion cap, thus affording a double seal. In the case of welding tees, the outside thread also is used to attach a Mueller full-opening gate valve or control chamber and the drilling machine during the installation. Valve tees, both welding inlet and machine-inserted, also provide a double seal by means of the threaded bronze stem bushing and steel valve stem inside the body of the tee and the iron completion cap.

The control chamber illustrated in the series showing the installation of the welding tee may be used interchangeably with a full-opening gate valve with pressures up to 125 p.s.i. The chamber is built to withstand this pressure with a generous safety factor. However, Mueller Co. recommends and has provided other equipment for use with higher pressures.

MAKING A WELDING TEE INSTALLATION



1. These parts comprise the Mueller welding tee: cap, bronze plug and forged steel body.



2. Main is cleaned, tee welded on, and service line is welded to outlet end of the tee.



3. Test cap is screwed on fitting, air pressure applied, and welds tested with soapsuds.



6. Bronze plug is inserted in tee by means of machine's inserting and extracting tool.



4. Control chamber (or Mueller gate valve) is securely attached to the welding tee.



7. Completion cap is securely screwed on fitting, and the installation is complete.



5. A Mueller E-4 drilling machine is used to drill into the gas main under pressure.



8. Inserting and extracting tool in position for removing plug for gas service shut-off.

MACHINE-INSERTED VALVE TEE



1. First step in the installation is to thoroughly clean the main before placing the gasket and saddle of the Mueller B gas tapping and inserting machine in position.



2. Lower portion of machine is placed on saddle and securely chained to the main. The machine should be drawn down solidly by evenly tightening both nuts on chain yoke.

STEP-BY-STEP PROCEDURE in making a gas service connection under pressure, using a Mueller machine-inserted No-Blo service valve tee and a Mueller B gas tapping and inserting machine is illustrated on these two pages. This method of making service connections is recommended with working pressures up to 125 psi.

After the installation has been completed, the built-in valve of the service tee permits the shutting off of gas to the service line at the tee with simple hand tools.

Machine-inserted No-Blo service valve tees are furnished with a $\frac{3}{4}$ " standard iron pipe thread inlet, and with either welding outlets in $\frac{3}{4}$ " or 1" sizes or $\frac{3}{4}$ " inside iron pipe thread outlet.



4. Using the Mueller B gas tapping and inserting machine, the main is drilled and tapped under pressure. Operator regulates amount of feed for tool with the feed yoke.



3. Before inserting the combined drill and tap in the machine, it should be coated with Mueller cutting grease for easier operation and to prolong life of tool's cutting edges.



5. Built-in valve of tee is closed and tee threaded in easy-release screw plug, which now replaces the combined drill and tap on the boring bar of the B machine.



6. The cap and boring bar, which carries the screw plug and the tee, are placed on the machine, and the tee inserted in the drilled and tapped main without loss of gas.



9. The service line is then connected to the tee. Machine-inserted No-Blo service valve tees are furnished with either welding or inside iron pipe threaded outlets.



7. Chips from the drilling and tapping operation are carefully brushed away so as not to interfere with the copper-retained rubber gasket at the base of the service tee.



10. With the service line connected, the built-in valve is opened and the cast iron cap screwed on, completing the job except for testing under pressure with soapsuds.



8. The tee is permanently tightened by hand. Tightening the compression nut forces the sealing ring against the surface of the pipe and the plain portion of the valve tee inlet.



11. This photograph shows the completed installation. Gas to service line may be shut off at tee by removing the cap and closing built-in valve without further use of machine.

VINCENNES, INDIANA

Gen. George Rogers Clark's capture of the post in 1779 gave U. S. possession of the vast Northwest territory.

VINCENNES, INDIANA, whose founding dates "anywhere from 1680" and before 1732, has as rich a history as any city in the Midwest. The exact date of its establishment has been forgotten, but it was probably at first a military and trading post for the purpose of maintaining the sovereignty of France against the Spanish and English.

Yet, historically, Vincennes is not so important as a French post nor later as an English fort, when it was acquired by the British under the Treaty of Peace in 1763. Its greatest importance came with its capture by General George Rogers Clark during the American Revolution, and the stake it represented in the new country's claim for territory in the settlement that followed. As a result of General Clark's victory, the territory between the Ohio River and the Great Lakes came into the possession of the

United States, ruling out any pretensions of either Spain or France.

Clark, a Virginian, had settled in Kentucky in 1775, and it was apparent to him that the depredations suffered by the frontiersmen at the hands of the Indians in the early years of the Revolution were occasioned by the influence of the British, who manned the posts of Detroit, Vincennes on the Wabash, and Kaskaskia on the Mississippi.

He was able to enlist the interest and support of such influential men as Patrick Henry and Thomas Jefferson in a scheme for the conquest of the Northwest. The first bold stroke of his daring campaign was against Kaskaskia, which he surprised and captured on the night of July 4, 1778, with a small band of about 150 men.

On February 5, 1779, he crossed the Kaskaskia River and set out for Vin-



This circular Doric temple, the George Rogers Clark Memorial, is built on the site of old Fort Sackville. Murals depict the story of the capture of the fort by General Clark during the War of the American Revolution. The memorial was erected at a cost of more than \$3,000,000.



This is a view of Vincennes' filter house and pumping station (filter plant is at the left). Property was privately owned from 1886 until 1935, when it was acquired by the city itself.

cennes with an augmented army of 170 men, including some French recruited at Kaskaskia. After a difficult march of 18 days, the force reached a spot of high ground overlooking the fort.

"Our situation," Clark wrote in his memoirs, "was now truly critical,—no possibility of retreating in case of defeat, and in full view of a town that had, at this time, upward of 600 men in it,—troops, inhabitants, and Indians."

One of the residents, out shooting ducks from horseback, was captured, and sent to the post with this message:

TO THE INHABITANTS OF POST VINCENNES:

GENTLEMEN,—Being now within two miles of your village with my army, determined to take your fort this night, and not being willing to surprise you, I take this method to request such of you as are true citizens and willing to enjoy the liberty I bring you to remain still in your houses; and those, if any there be, that are friends to the king will instantly repair to the fort, and join the hair-buyer general, and fight like men. And, if any such as do not go to the fort shall be discovered afterward,

they may depend on severe punishment. On the contrary, those who are true friends to liberty may depend on being well treated; and I once more request them to keep out of the streets. For every one I find in arms on my arrival I shall treat him as an enemy.

G. R. CLARK.

So effective was this letter and the dislike of the French residents for the British that no word was spread of Clark's advance. However, instead of keeping to their houses, the residents came out in the streets to view Clark's army. That night, when Clark attacked, the British thought the firing came from a party of drunken Indians—until one of the Kentuckians accurately placed a shot through a port, killing an English soldier.

Clark's tactics and the accurate shooting of his frontiersmen led the British to believe a large army was laying siege to the fort. Clark did not take the fort that night, but on February 24 Henry Hamil-



An interior view of a section of the filter house. The plant has nine filter beds, each with a capacity of 500,000 gallons. The main source of supply for the city is the Wabash River.

ton, the British lieutenant-governor and superintendent, surrendered Fort Sackville at Post St. Vincent (Vincennes). With the capture of Vincennes and Kaskaskia, Clark settled the matter of possession of the vast Northwest territory in both civil and military rule. Only the size and weakness of his force prevented him from marching on Detroit.

Even today Vincennes, a prosperous county seat town, has a distinct historical flavor. Its residents are proud of the number of industries that have been attracted there, and of the productivity of Knox County soil, which is predominantly rich, bottom land. The city prides itself on being modern and progressive, as indeed it is, but there is no desire to forget its turbulent past.

The growth of the city during the past decade is reflected in the pumpage figures of its water works. In 1940, the average daily pumpage was 1,861,702 gallons; today the average daily pumpage is 3,212,875 gallons, a 43 per cent increase.

The primary source of the city's water supply is the Wabash River, and although the source is adequate for future anticipated needs, M. H. Schwartz, general manager, admits there is an objectionable treatment problem. The filter plant has nine filter beds, each with a capacity of 500,000 gallons.

The original water works at Vincennes was built in 1886 for public fire protection and pumped raw river water. The filter plant was built in 1901, and rebuilt in 1912 and again in 1931. The property was privately owned until 1935, when it was purchased by the city and its operation supervised by a board of trustees.

Mr. Schwartz has been associated with the Vincennes water works since his grade school days, when he worked there during vacations. This vacation work continued through high school and later when he was attending Purdue University. He became chief engineer of the water works in 1920, continuing in that capacity until 1929, when he was appointed general manager.

Ads from History Books

Philadelphia Suburban Water Company plugs purity of its product with tie-in to region's eventful past.

PHILADELPHIA SUBURBAN Water Company has based an effective newspaper advertising campaign on the history of the region it serves, emphasizing the purity of the water it supplies with neat tie-ins to events of the past.

The company's current campaign consists of a series of 12 illustrated advertisements, inserted once a month in 37 newspapers.

Four typical ads in this successful series are reproduced on this and the following two pages, because of the increasing interest on the part of water works and other utilities in all types of public relations media, including paid advertising space.

The introductory ad in Philadelphia Suburban's series set the keynote for the campaign. Headed, "Your Historical Heritage," it read:

"In all the United States there probably is no other region richer in history

than Suburban Philadelphia. Since the first Dutch explorations on the Delaware in 1609, few years have passed without events of note. But unfortunately, as each year added new pages to the story, the bulk became so unwieldy that historians were forced to reduce many events to a line or two—or eliminate them altogether. As a result, much of our local history is now little known or entirely forgotten.

"Yet many now-neglected incidents of the past still influence our daily lives. Often, without our knowing it, they help shape our attitude toward our government. Frequently, without our realizing it, they are reflected in the names we use when we refer to our highways, our towns and our streams.

"During the coming months, Philadelphia Suburban Water Company will recall some of the past with a series of historical advertisements. Not every sub-

WILLIAM PENN FOUND SOMETHING TO WRITE HOME ABOUT

No. 1 in the series "Your Historical Heritage." Watch for the next in an every issue of this paper.



After almost a year in the New World, William Penn took his quill in hand on August 16, 1683 and wrote a long letter home to London.

"The country . . . hath the advantage of many creeks, or rivers rather," Penn wrote among other things. "The waters are generally good," he also said, "for the rivers and brooks have mostly gravel and stony bottoms; and in numbers hardly credible . . . Our people are mostly settled upon the

upper rivers; which are pleasant and sweet . . ."

Some of the creeks, "or rivers rather," Penn undoubtedly had in mind were the Pickering, Crum and Neshaminy — streams still "pleasant and sweet" and the source of Pure Springfield Water. We sincerely believe if William Penn could taste this water you enjoy today—dependably on tap the year around—he would find it delicious and wholesome, truly worth writing home about!



Pure **SPRINGFIELD WATER**

• PHILADELPHIA SUBURBAN WATER COMPANY •

The Swedes called it CROOKED CREEK

No. 2 in the series "Your Historical Heritage." Watch for the next in an early issue of this paper.



Johan Printz—a giant of a man weighing 400 pounds—nicknamed "The Tub" by the Lenno-Lenape.

The mouth of Crum Creek is within a stone's throw, so to speak, of the spot where Johan Printz landed on Tinicum in 1643 to found Pennsylvania's first white settlement. From there, the stream winds inland to its spring-fed sources near Malvern and Paoli.

Johan Printz, himself, may have explored the tortuous course and called the stream *Krok*, the Swedish word for "Crooked." But this name failed to endure—giving way

to the Swedish *Crum*. Similar to *Krok*, it means "Curved" or "Curving." Perhaps some poetic Scandinavian thought *Crum* a more pleasant name.

Certainly the stream deserves a pleasant name, for there is none more attractive in all Pennsylvania. And, fortunately, its upper reaches are fresh, clear and sweet-tasting, as in the days of Printz: making it one of the safe, dependable supply points of today's Pure Springfield Water.



Pure **SPRINGFIELD WATER**

• PHILADELPHIA SUBURBAN WATER COMPANY •

The Springfield Township PANHANDLE

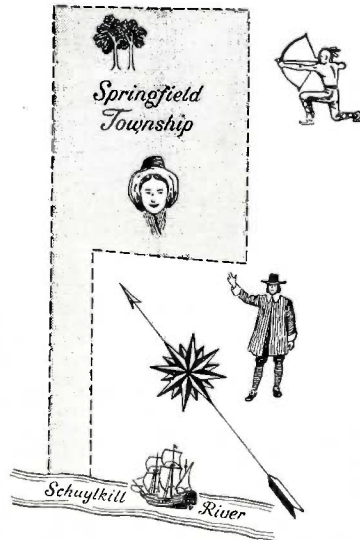
No. 3 in the series "Your Historical Heritage." Watch for the next in an early issue of this paper.

Tradition says that Gulielma Maria—William Penn's first wife—was responsible for Springfield Township, Montgomery County, having a panhandle. Granted 4,000-odd acres to be named the "Mannor of Springfield", she asked that some point of her land touch the Schuylkill. Thus she and her successors could reach the river and use it for transportation without trespassing on the property of others.

And so for nearly two centuries—until 1876—the narrow strip between Whitmarsh and Philadelphia reached the Schuylkill. In

that year, the courts transferred the lower part to Whitmarsh for public convenience.

The need for ready access to a stream, so necessary in Gulielma Maria Penn's day, had disappeared. Yet man was still greatly dependent on water . . . and is today. Chiefly, of course, man's health requires an ample supply of wholesome drinking water. To meet this all-important need, a corps of expert technicians employ their skill and knowledge 24 hours a day—every day—to keep Pure Springfield Water immediately on tap in your home!



Pure **SPRINGFIELD WATER**

• PHILADELPHIA SUBURBAN WATER COMPANY •

ject will be unfamiliar to everyone. But we hope many will read this series with pleasure and perhaps some profit. The region we have chosen is within and adjoining the area of 300 square miles served with Pure Springfield Water."

This series has created interest among many groups and in people of varied and diversified occupations. Needless to say, local historians follow the advertisements in a critical, though constructive, frame of mind. Many troops of Boy Scouts are keen to redevelop the events of long ago by visiting the scenes of these events in their hikes. Classes in history in the schools find these illustrations and descriptions stimulating; and the average family newspaper reader takes some interest at least in wondering what is coming next.

Many of the historical incidents described are identified with the streams and rivers of the locality. The interweaving of an historical incident with present day "Springfield Water" was skillfully developed by Kensil Bell, advertising consultant.

"Springfield Water" has been established as the trade name and every-day

term applied to Philadelphia Suburban Water Company's product, which is supplied to some 400,000 residents of the suburbs of Philadelphia.

The word "Springfield" has a long history of its own. It first appeared when a water company was chartered more than 60 years ago for the supply of water in Springfield Township. The name was retained in the corporate progression of the numerous companies which now form Philadelphia Suburban Water Company, and when that name was given to the unified companies supplying 49 municipalities, the term "Springfield" and its association with fields and woods and clear, sparkling water was such an asset that the phrase "Philadelphia Suburban Water Company supplying Pure Springfield Water" was more or less adopted as a slogan, and a plan was developed for keeping this name before the public through advertising of various kinds and other publicity methods.

Carlton E. Davis is general manager of Philadelphia Suburban Water Company. The company's headquarters are at Bryn Mawr, Pennsylvania.



FOOL'S SILVER ON PICKERING CREEK

No. 4 in the series "Your Historical Heritage." Watch for the next in an early issue of this paper.

Like many early New World arrivals, Charles Pickering undoubtedly had heard tales of this being a fabulous land rich with precious minerals.

So it is easy to understand how Pickering was fooled one sunny day while wandering far from Philadelphia. Easing himself down beside a pleasant stream to rest, he looked about, amazed, so the story goes . . . then scooped the sand of the creek bank between his hands, letting it sift through excited, trembling fingers. There, in the bright sun, he mistook the

gleam of that worthless sand for the luster of silver!

Hurrying back to Philadelphia, Pickering obtained land-rights along the stream from William Penn. Months later—after digging and shipping his "silver" to Europe—he learned the disappointing truth.

Yet the creek which still bears Pickering's name offered mankind a greater gift than silver: *the gift of untainted, wholesome water.* Today this sparkling, country stream is one of the sources supplying you Pure Springfield Water.



Pure **SPRINGFIELD WATER**

• PHILADELPHIA SUBURBAN WATER COMPANY •

Off the .. Record ..

At long last the minister in a little mountain community had his chance—an opportunity to move up to a big-city congregation. He made a trip to the metropolis to look over and be looked over by the congregation. During the course of this ordeal he was invited to a dinner given by one of the church elders.

A few days later, he retired to the hills, a sadly disillusioned man. "I guess I committed a social error," he reported to a questioner. "When the host asked if I wanted more corn, I absent-mindedly passed my glass."

* * *

The small son of a doctor answered the phone and told the caller that his father was not at home.

"Do you know when he will be in?" he was asked.

"No, I don't," said the boy. "He went out on an eternity case."

* * *

"What's the matter, dear? You look flustered."

"Oh, I've had a dreadful day! Baby cut his first tooth. Then he took his first step. Then he fell and knocked out his tooth."

"Then what happened?"

"This is the worst part of it—then baby said his first word!"

"George, dear," cried the wife when he returned home one evening, "I'm going to be in that amateur benefit show. I wonder what people will say when they see me in tights."

"They'll probably say that I married you for your money," the husband grunted.

* * *

The slightly battered boy went in to see his father. "Pop, me and Billy Brown had a fight today," he confessed. "Yes, I know," his father said gravely. "Mr. Brown has already been to see me about it."

The boy's face lighted with excitement. "Gee, pop, I hope you made out as good as I did."

* * *

As the speaker started to get up, he coughed and his upper plate fell to the floor and broke.

A guest at his side realized the man's plight, dug into his pocket and came up with a set. The speaker-to-be tried them but they were too big. The helpful guest supplied another set. They were too small. The third set fit.

The speaker got along perfectly with the borrowed teeth, and as he sat down returned them with thanks.

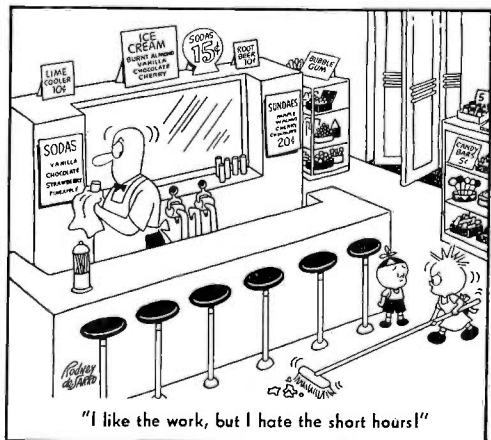
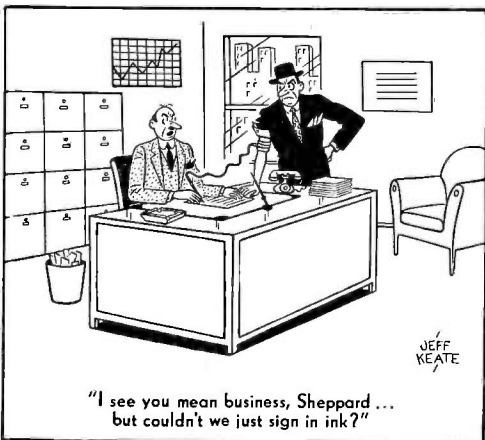
"By the way," he said, "are you a dentist?"

The helpful guest shook his head. "No. An undertaker."

* * *

"Dad, does bigamy mean that a man has one wife too many?"

"Not necessarily, son. A man can have one wife too many and still not be a bigamist."



A prim little old lady standing by a male customer at a department store counter was nervous and embarrassed: finally she said—"Please, miss, I'd like two packages of bathroom stationery."

* * *

"I'm sorry," said the elevator girl, "did I stop too quickly?"

"Oh, no, lady," said the disgruntled passenger, "I always wear my pants down around my ankles."

* * *

A traveler one night found himself obliged to remain in a small town because of a heavy rain which was still falling. The traveler turned to the waitress with: "This certainly looks like the flood."

"The what?"

"The flood. You've read about the flood, and the ark landing on Mt. Ararat, surely?"

"Mister," she returned grimly, "I haven't seen a paper in three days."

* * *

Farmer Cortassel retired and moved to the big city. In the morning, after spending the first night in the new home, his wife said: "Well, Pa, hain't it about time you was getting up to build the fire?"

"No, sreee," replied the old gent. "I'll call the Fire Department. We might as well get used to these city conveniences right now."

* * *

"Will you think of me always, darling?"

"I can't lie to you. Occasionally I might wonder who will win the pennant this year."



"It's not so much for myself, sir, as it is for the government. My income taxes are so pitifully small"

"What's your name?" the store manager asked the young applicant for a job.

"Ford," replied the lad.

"And your first name?"

"Henry."

"Henry Ford, eh?" remarked the manager with a smile. "That's a pretty well-known name."

The boy looked pleased. "Yes, sir, it ought to be," he replied proudly. "I've been delivering groceries around here for two years now."

* * *

Landlady: "I thought I saw you taking a gentleman up to your apartment last night."

Girl: "Yeah, that's what I thought, too."

* * *

"Didn't you men see the sign prohibiting gambling around here?"

"We're not gambling!"

"Then what's that money doing on the table?"

"Oh, that! We're just using it to keep score."

* * *

An Englishman was visiting this country for the first time, and as he was driving along a highway he saw a sign: "Drive slow. This means YOU!"

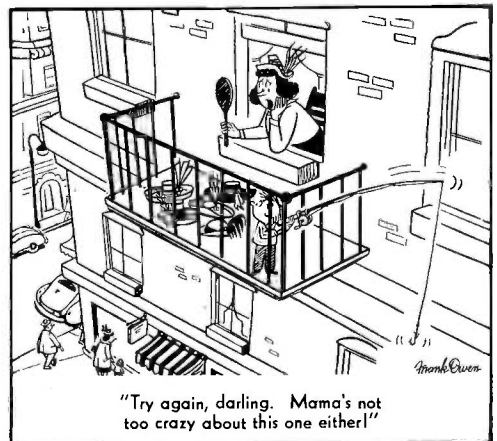
"My word!" he exclaimed. "How did they know I was here?"

* * *

Two women drivers were talking:

First: "I can't see why they say women are such awful drivers. Why I've run into more men than I have women."

Second: "Yes, so have I—even when they were parked."



"Try again, darling. Mama's not too crazy about this one either!"

Mostly Personal

(Continued from page 1)

It is interesting to speculate the hour at which the service crews knocked off work for the day during freezing weather. It seems odd that the *Bartender's Guide* fails to mention some concoction that originated with this practice, such as a Three Light Toddy, a Five Light Cocktail, or, perhaps, a Hundred Light Clambake. Could it be that Washington Gas Light Company is directly responsible for the phrase "All lit up"?

* * *

This method of preventing meters from freezing, we think, almost tops still another practice once used by distribution crews. John H. Maxon, president of Indiana Gas Distribution Corporation and an old-timer in the gas business, recalled during a discussion of Mueller line stopper equipment that at one time it was not unusual for a crew to use an inflated beef bladder to stop off the flow of gas in a main while repairs or extensions were being made.

* * *

We are indebted to Edward T. Stafford, secretary of Washington Gas Light Company, for permission to quote from the circular, which was reproduced in

Growing with Washington, a book issued last year in connection with the observance of the company's one-hundredth anniversary.

* * *

It was with sincere regret that we learned of the death of Frank J. McDonough, 71, mechanical engineer in charge of Chicago's water pumping stations, on July 13. Mr. McDonough was first employed by the city of Chicago on October 5, 1900. He was named assistant engineer of water works design February 12, 1911; assistant mechanical engineer February 4, 1913; and pumping station chief on October 1, 1947.

* * *

We were taken to task by George A. Gieseke, Philadelphia, a civil engineer and a sailing enthusiast, for the condition of the boat in which the young lady who graced the cover of our last issue posed. We were forced to explain that when we took the matter up with our man in charge of maritime affairs he had only a very lame excuse. "I didn't think anyone would look at the boat," he remarked.

* * *

But since the boat was noticed, we'll have to admit that it was in pretty poor shape. Thank goodness, we don't have to say that about the model!



W. L. (Bill) Jett, veteran Mueller Co. salesman who retired April 30 after completing 45 years of service, sent us this photograph, taken at the fire station, which doubles as an unofficial community center in his old Kentucky home, Frankfort. "Colonel" Jett is seated, second from right, next to O. S. Peveier. Standing, left to right, are Chief Robert White, Bernard Carter, Clarence Quire, Benjamin Fallis, John Hackett, William Tucker, Robert Switzer, Delveaux Goins and Virgil Tillott. The others shown in the photograph are unidentified.

MUELLER GROUND KEY CURB STOPS

INVERTED KEY PATTERN

TEE HEAD ROUND WAY

H-15175
Sizes:
1/2" thru 2"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

Outlet—Inside I.P. Thread



H-15125
Sizes:
1/2" thru 2"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

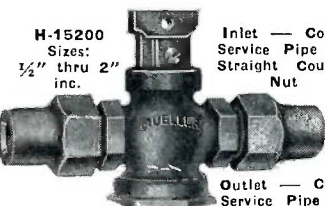
Outlet—Inside I.P. Thread



H-15200
Sizes:
1/2" thru 2"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

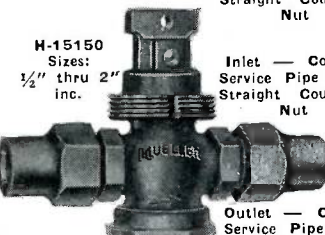
Outlet — Copper Service Pipe with Straight Coupling Nut



H-15150
Sizes:
1/2" thru 2"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

Outlet — Copper Service Pipe with Straight Coupling Nut



H-10201
Sizes:
1/2" thru 2"
inc.

Inlet—Inside I.P. Thread

Outlet—Inside I.P. Thread



H-10207
Sizes:
1/2" thru 2"
inc.

Inlet—Inside I.P. Thread

Outlet—Inside I.P. Thread



Note the many design and construction features of these Mueller Curb Stops that result in Trouble-Free installation and service.

- Precision made ground key construction with each key and body ground and lapped together.
- Ruggedly designed to prevent distortion during manufacture, handling, installation and service. Results in a water-tight stop.
- Threads accurately machined to meet exacting specifications.
- Copper Service Pipe Coupling Nut requires no gasket. Drawn up water-tight with a wrench.
- Every part cast from high copper content bronze for maximum resistance to corrosion.
- Inverted Key Types furnished with combined Cap and Tee that protects the top from dirt and gives added strength.

For dependable Curb Stops, specify MUELLER. A most complete line is available with all varieties, styles, patterns and end connections to meet the requirements of standardized water works practice.

H-15275
Sizes:
1/2" thru 1 1/4"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

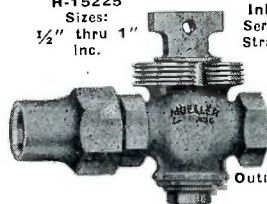
Outlet—Inside I.P. Thread



H-15225
Sizes:
1/2" thru 1"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

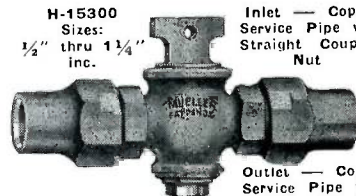
Outlet—Inside I.P. Thread



H-15300
Sizes:
1/2" thru 1 1/4"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

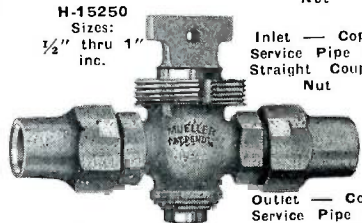
Outlet — Copper Service Pipe with Straight Coupling Nut



H-15250
Sizes:
1/2" thru 1"
inc.

Inlet — Copper Service Pipe with Straight Coupling Nut

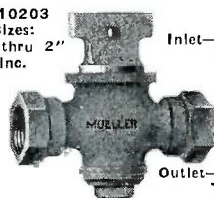
Outlet — Copper Service Pipe with Straight Coupling Nut



H-10203
Sizes:
3/8" thru 2"
inc.

Inlet—Inside I.P. Thread

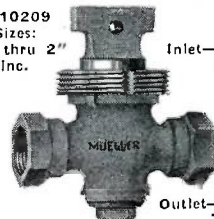
Outlet—Inside I.P. Thread



H-10209
Sizes:
1/2" thru 2"
inc.

Inlet—Inside I.P. Thread

Outlet—Inside I.P. Thread



MUELLER CO.

MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS

OTHER FACTORIES: Los Angeles, Cal.; Chattanooga, Tenn.; Sarnia, Ont. Canada

FOR THAT EXTRA MARGIN OF

SAFETY

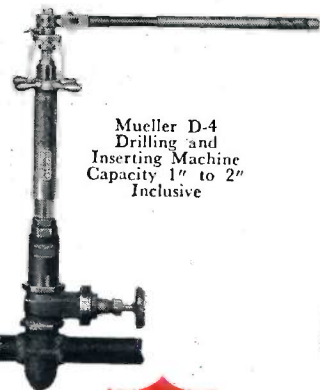
**USE MUELLER
NO-BLO SERVICE TEE**



Mueller H-17500
Welding Tee
Complete with Plug
and Cap

There's an EXTRA margin of safety when you use Mueller H-17500 NO-BLO Service Tees because they eliminate any necessity of the gas blowing or escaping when used with the Mueller E-4 or D-4 Drilling and Inserting Machine. These Tees have both an INSIDE and an OUTSIDE thread at the top. The Tee is first welded to the main and the service line completed. A Valve and the Drilling Machine are screwed on to the OUTSIDE thread of the Tee, the main drilled through the Tee and then a plug inserted into the INSIDE thread. The Machine and Valve are removed and a cap put on the OUTSIDE thread to effect a double, leak-proof seal. In these Tees, a machine-inserted rubber shut-off tool may be placed, stopping off the service under pressure with complete safety. The work is all done with the line under pressure and with complete control at all stages of the operation.

Mueller Welding Tees will handle Low, Medium or High Pressures and are made in sizes 3/4" to 2" inclusive. Be sure to specify size and type of inlet and outlet connections when ordering.



Mueller D-4
Drilling and
Inserting Machine
Capacity 1" to 2"
Inclusive



Mueller E-4
Drilling and
Inserting Machine
Capacity 1/4" to 1"
Inclusive



MUELLER CO.

MAIN OFFICE AND FACTORY.....DECATUR, ILLINOIS

OTHER FACTORIES: Los Angeles, Cal.; Chattanooga, Tenn.; Sarnia, Ont. Canada