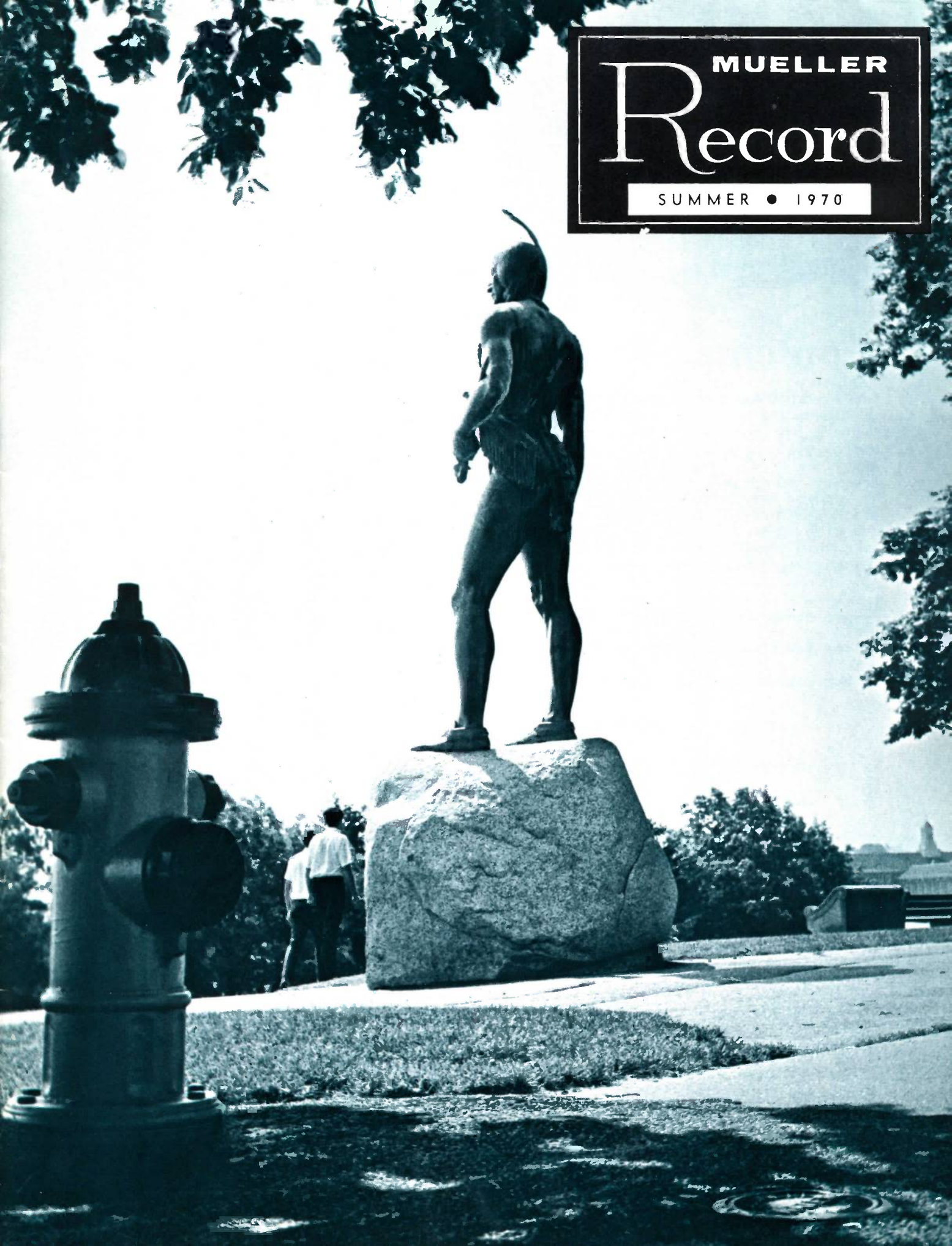


MUELLER
Record

SUMMER • 1970



MUELLER RECORD

SUMMER • 1970

Joe Penne
Editor

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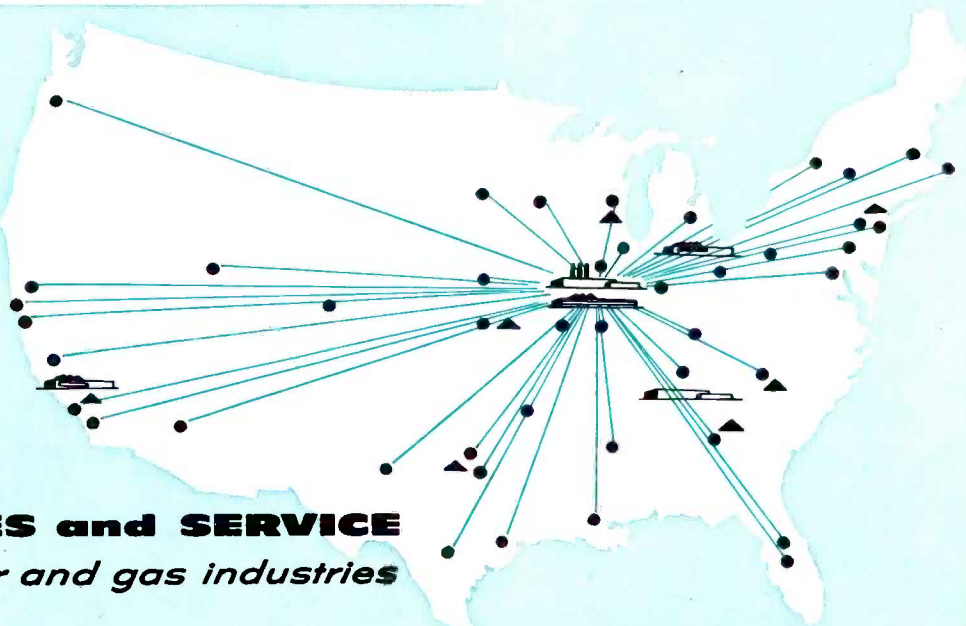
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This huge statue of Massasoit overlooking Plymouth Harbor is the photo on OUR COVER. Massasoit was chief of the Wampanoag Indians, who befriended the Pilgrims and helped them survive their first winter in this country.

Since 1857

Quality Products for the
Waterworks and Gas
Industries

MUELLER SALES and SERVICE
...serving the water and gas industries



PLYMOUTH



EASY LIVING AND RELIVING CORNERSTONE OF AMERICA

Using Plymouth Rock as its cornerstone and Pilgrim life as its framework, the historic Massachusetts town of Plymouth, has constructed a community that makes living and "relying" easy, educational and entertaining.

As you walk the streets, examining the markers and visiting the restored or reconstructed sights (sites), it is easy to drift back 350 years and recall the many tales of the Pilgrims that are a basic part of America.

You can stand where Myles Standish drilled his guard of matchlock musketeers. You can climb the hill overlooking the harbor and see Mayflower II, replicas of original Pilgrim homes and the canopy over "The Rock." This

same hill was the burial ground for the many Pilgrims who failed to live through their first horrible winter.

Even though we surround ourselves with early America, it is easy to find all of the comforts of modern America in Plymouth, too. Although we like to relive the past, we prefer to live in the present and this community with its colonial charm has excellent restaurants, modern lodging, golf, fishing and the seashore.

The old and the new may suggest a contrasting situation, but they blend together into a wonderful vacation spot. The tender, simple love story of Pilgrims John Alden and Priscilla once was lived in the same city where the local

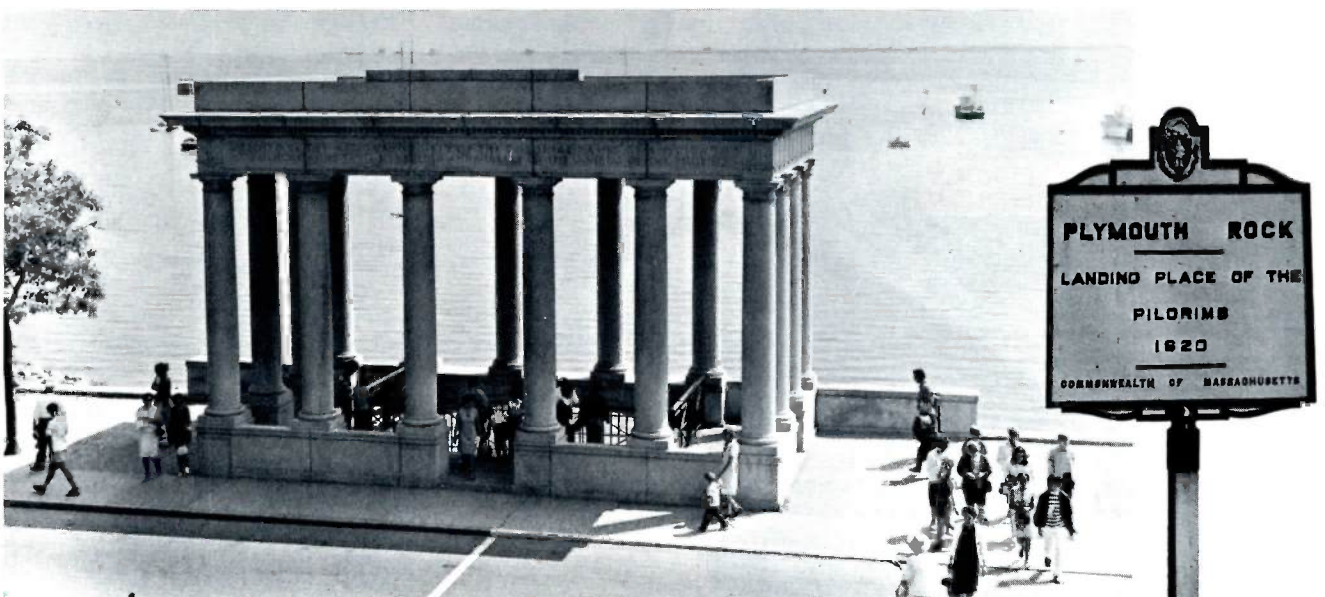
theater advertises today's film "Ted and Carol, Bob and Alice."

Plymouth is called "America's Home Town" where parents bring their children on a pilgrimage to see Plymouth Rock, the relics, villages and to learn of the courage and determination of our forefathers. All this is there, but with the comfort of today's living.

In your 1970 automobile you drive 2½ miles outside Plymouth to Plimoth Plantation. After going through the new air conditioned office and snack bar, we find ourselves in a full sized farming community from 1627. We are greeted by a farmer with his dog, watching sheep graze in the open countryside. Nearby, the crack of blanks shot from the fort-meetinghouse

Plymouth Rock, one of the most widely known historical landmarks, is enshrined in this structure on

the edge of the water of Plymouth Harbor.





Plimoth Plantation, 2½ miles south of Plymouth Rock, is a replica of the Pilgrim settlements of 1627. In this full-scale village, trained guides and hostesses in Pilgrim dress tell about and demonstrate (left, below) what life was like in their historic village.



startle the visitor but the sheep never stir. You see men cutting planks in a pine grove adjoining the village, splitting shingles, building a fire or working on the roof of a home. Costumed women may be cooking a meal or carding wool inside their houses or working in their gardens. The grey and white Plymouth Rock chickens scatter as the school kids race to examine a musket. An Indian campsite has been erected adjacent to the village to show the way of life of the Pilgrims' allies.

After a seafood lunch at a well-appointed dining room, you may return to 17th century life and visit Mayflower II. This full-scale reproduction of the type of ship which brought the Pilgrims from England to America in 1620 shows what life was like for the 102 Pilgrims during their 66-day voyage. Mayflower II was built in England and sailed across the Atlantic in 1957, a crossing which took 53 days. Returning the visitor to 1970 is the roar of a sleek power boat

skimming across the bow of this sailing ship.

Near Mayflower II is Plymouth Rock. There are many stories and much more speculation about "the Rock" marking the landing site of the Pilgrims, but despite these uncertainties it stands as a symbol of the strength and perseverance of the Pilgrims and the country they started.

Across the street from "the Rock" we climb the steps to reach the top of Cole's Hill. About half of the 102 Pilgrims who landed at Plymouth died the first year and were buried on this hill in unmarked graves so that the Indians would not know how greatly their numbers had diminished. Nearby, is a huge statue of Massasoit, chief of the Wampanoag Indians and peacemaker. His tribe eventually befriended the Pilgrims and helped many of them survive the terrible first winter.

Standing near the statue of Massasoit overlooking the bay is a reminder of today—a Mueller®/107® fire hydrant. The hydrant isn't just a contrast between 17th century and 20th century. It points out that although Plymouth



A different kind of Plymouth Rock.



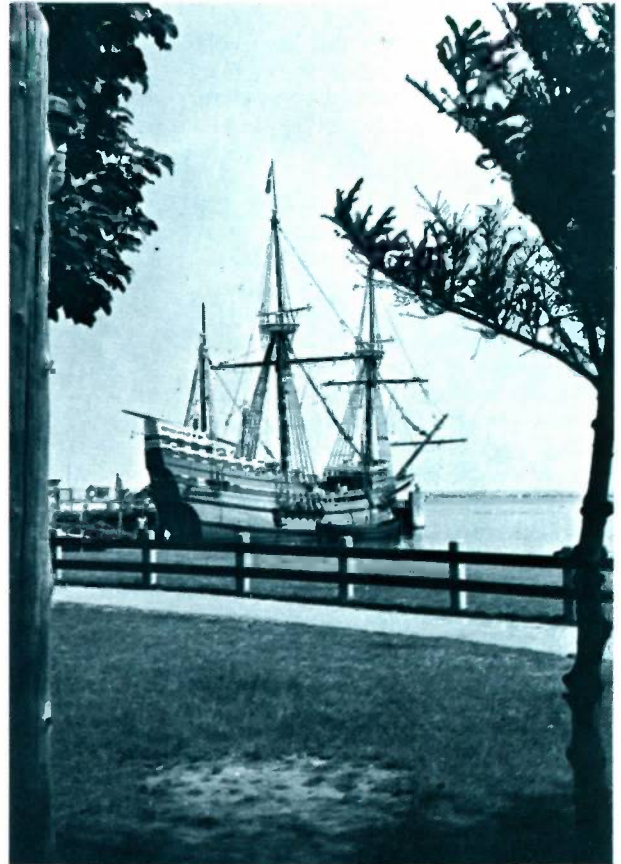
John E. Holmes, superintendent of the Plymouth Water Department, drinks from a unique fountain at Plimoth Plantation.

lives somewhat in the past because of its emphasis on tourist attractions, it must still have a modern water system.

The Plymouth Water Department under Superintendent John E. Holmes is quite modern, but old in terms of years of service. Before the town started its own water department, some water was brought to the center of the town from Town Brook (from 1796 to 1854) in wooden mains. Then in 1854 the Plymouth Aqueduct Co. was bought out by the community when it started to construct its own system. On August 15, 1855 water flowed through the new mains from Little South Pond to the center of town. Seven months later about 11 miles of water main had been installed by the town. For many years, the flow of water from the South Pond was entirely by gravity and only those in areas below the level of the reservoir could be served.

Finally in 1880, a pumping station was built near Lout Pond and water was pumped directly into the mains during hours of greatest consumption. Then in 1887, an entirely new water distribution sys-

Mayflower II is a reproduction of the sailing vessel that brought the 102 Pilgrims to America. It is tied up in Plymouth Harbor, near the "Rock", and available to go aboard.



Plymouth Water Superintendent John E. Holmes (left) points out a place of interest to Jack C. Hall, vice president and assistant treasurer of the George A. Caldwell Co., (right) and Stan Johnson, retired Mueller Co. sales representative.



tem was built that would operate independent of the old gravity system. A new open ground reservoir was built, new mains were laid and the higher pressure system went into service.

The system currently serves more than 14,000 of the community's 15,500 residents. (During the summer season the estimated population rises to more than 20,000.) There are about 6,000 services, more than 800 hydrants and about 117 miles of main in the system. The sources of supply for the average daily consumption of 3,400,000 gallons are ponds and wells.

The personable John Holmes joined the staff of the Town of Plymouth in 1960 and in 1966 he was named superintendent of the water department.

Plymouth, Massachusetts—a blending of the old and the new. At Plimoth Plantation an open fire cooks food, provides heat and light in the Pilgrim tradition. A few miles away on Cape Cod Bay Pilgrim Nuclear Power Plant is nearing completion.

Most of us enjoy re-living some of our history, but few of us would give up the way we live today. In Plymouth, we stand on the deck of Mayflower II or walk the streets of a Pilgrim village of 1627, but willingly return to the comfort of our air-conditioned motel and its color television, an instrument that shows us how 20th century pioneers visit the moon. One of the most pleasant and interesting places to get glimpses of the past, present and future is in Plymouth, Massachusetts.

History is fun and entertaining for all ages, and teenagers here know that "Plymouth Rock" doesn't refer to a music beat.

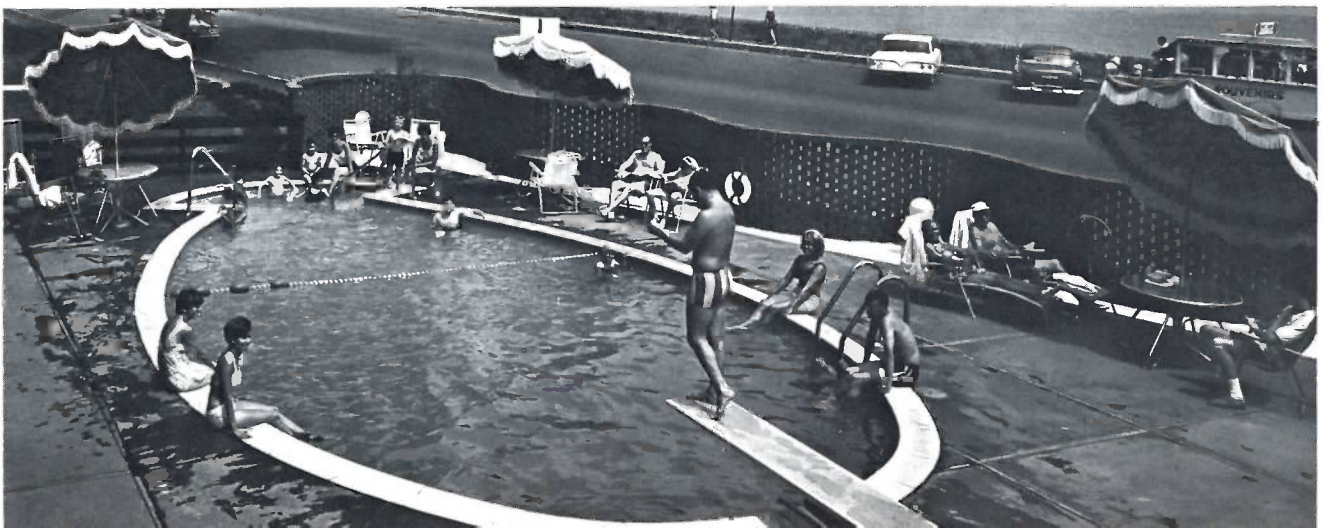


Although the shops are modern, they have managed to retain some of the appearance and charm of old New England.

Pilgrim Hall was built by the Pilgrim Society in 1824 and today houses actual possessions of our Pilgrim fathers.



It is easy to re-live the days of the Pilgrim in Plymouth, and it is also easy to live and enjoy life there with the town's modern motels, interesting shops and enjoyable dining rooms and restaurants.





ASHDOWN is on its way UP

One of the 86 Mueller Improved fire hydrants installed in a major expansion in Ashdown, Arkansas, is checked by, from left: Cecil A. Brown, Mueller Co. sales representative; Clyde Tipton, superintendent for Worth James Construction Company; Noble Daniel, superintendent of public works, Ashdown; and John E. Hawkins, of John E. Hawkins & Associates, consulting engineers.

Until the mid 1960s Ashdown was just one of the many small communities in the pine-clad country of extreme southwest Arkansas. Although it had State Highway 59, U. S. Route 71 and the main lines of the Kansas City Southern Railroad, it seemed isolated from much of the economic growth that was sweeping the country, and the 3,000 population was relatively static with their economic dependence on farming, cattle and raw wood products.

In the middle '60s the Nekoosa-Edwards Paper Co. "discovered" Ashdown, its potential labor supply and the raw wood products that the company needed to produce top quality bond paper. The company built a \$50 million plant and production began in 1968. It provided jobs directly for about 450 and another 450 found work supplying local products to keep the complex operating. In addition, it led to a number of smaller firms locating in Ashdown and currently about 1,400 are employed by industries which have annual payrolls totalling about \$7½ million.

The switch from the agrarian to industrial economic base was sudden and rewarding, and demands grew for housing, business sites and retail outlets. Boom conditions can also lead to problems. New industries and a sudden surge in building mean new demands on utilities, and in a community where the population figures had been constant, it was especially burdensome.

Ashdown Mayor W. L. Davis, other city officials, and Noble Daniel, superintendent of public works, were aware of impending problems and they took immediate steps to find solutions so that the communi-

ty could handle demands and take advantage of Ashdown's blossoming economy.

The Consulting Engineering firm of John E. Hawkins & Associates of Texarkana, Arkansas, started preliminary work on water and sewer improvements in early 1969. A government grant of \$432,000 was made to the city, and \$288,000 in revenue bonds were sold by Ashdown, making \$720,000 available for the project. Bids were taken on Sept. 9, 1969 and work began Dec. 1. on the improvements which included: a new one-half million gallon elevated storage tank; three new supply wells with a total capacity of three million gallons per day; nine miles of new water distribution mains which included 27,800 feet of 12 inch main for a loop around the city, and six miles of new sewer collecting lines.

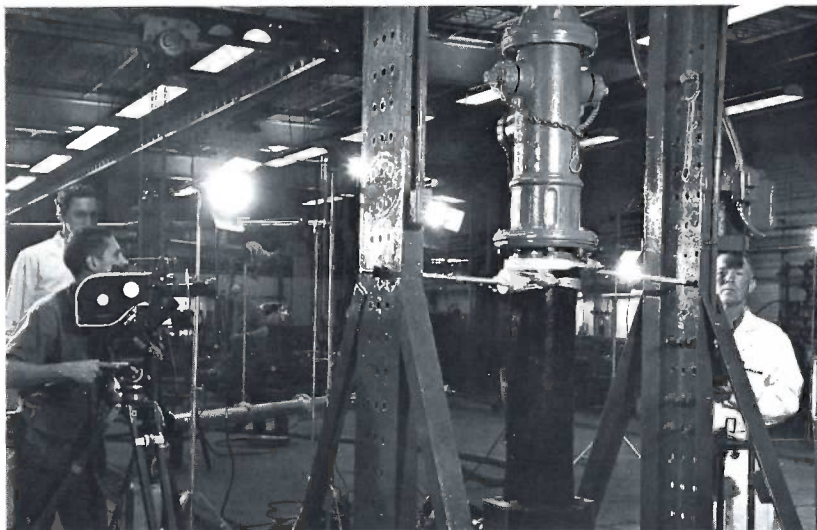
Worth James Construction Company of Little Rock, was successful bidder on the water and sewer line installations. More than 100 Mueller gate valves were installed to control the new system and 86 traffic model Mueller Improved hydrants were set to provide better fire protection to some older portions of the community, plus making water available for fire fighting in those areas under development. The Mueller products were purchased from Waterworks Supply Company of Little Rock.

Director Daniel says that when all the improvements and extensions are complete, Ashdown will have facilities available to serve a community of from 10 to 12 thousand people. With current population at about 3,500 and about 1,200 metered water customers, Ashdown is well prepared to take advantage of the great growth potential that looms during the next decade—thanks to the courage and foresight of its city officials and community leaders.

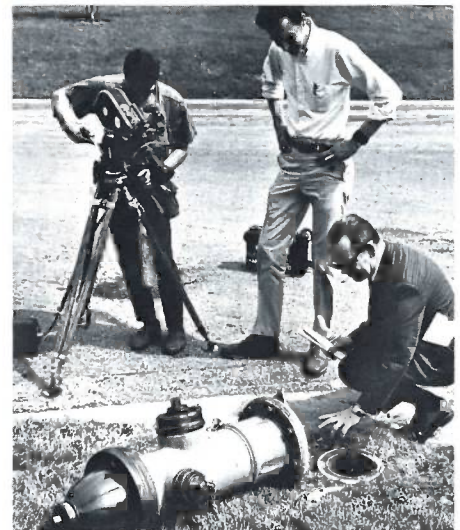


Decatur firemen rush to connect pumper hose to a Mueller fire hydrant during the filming of a scene for "Fighting Fire With Science." Two 30-minute educational films sponsored by

Mueller and 11 other firms are being made, describing some of the techniques, equipment and material used today to prevent and fight fires.



A scene in the Mueller Engineering Lab shows cycle testing equipment used to automatically open and close a fire hydrant thousands of times to prove the design and strength of parts used in hydrants.



Checking details on a hydrant scene is Mueller Advertising and Sales Promotion Manager James S. Cussins. Film crewmen from Walter J. Klein Company, movie producers of Charlotte, N. C., are cameramen Chris Cafege and John Burgess.

Fighting Fire With Science

Mueller Co. is one of 12 major firms in the United States co-sponsoring the production of two 30-minute movies entitled "Fighting Fire With Science" and starring Raymond Burr as narrator.

According to Walter J. Klein, president of the firm producing the movies, the films will "reveal the powerful new weapons and firesafe products American industry is creating to protect people and property against fire."



RAYMOND
BURR,
NARRATOR

The educational films will be released late this year for use on television and available for trade associations, schools and groups associated with fire fighting around the country.

One 30-minute film deals with the many construction and consumer products available for fire pre-

vention and fire protection. The movie involving Mueller is tied in more directly with fire fighting and features the use of hose, chemicals, communications, hydrants and specialized equipment and methods.

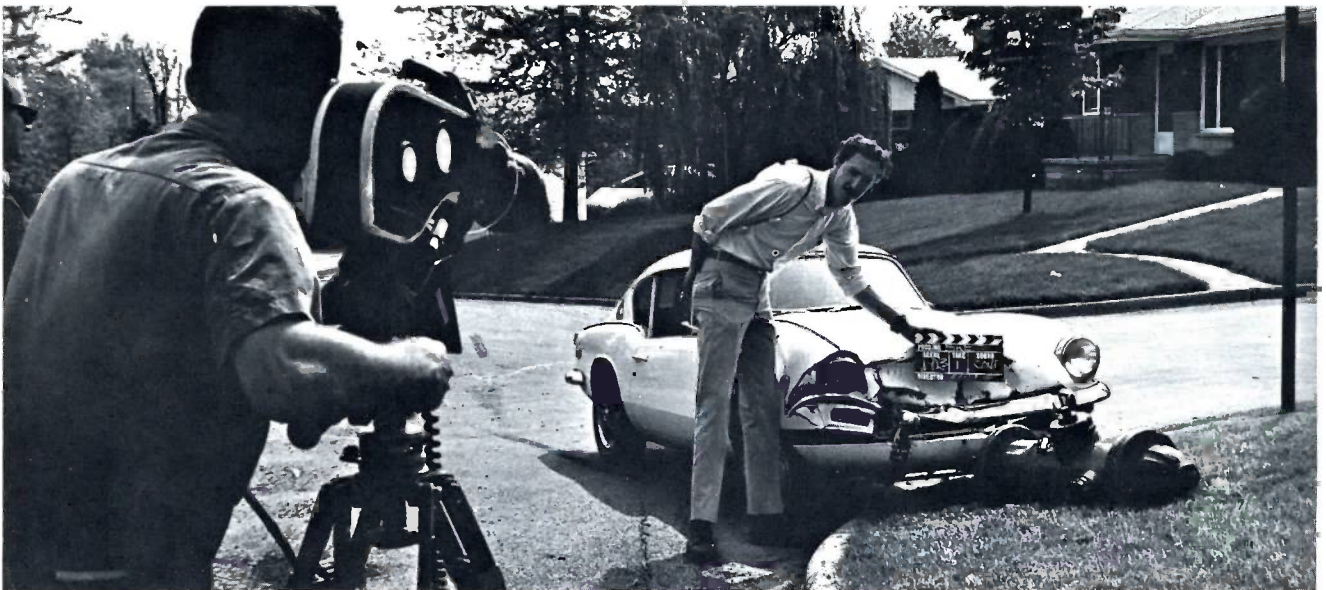
Mueller Co., as a leading designer and manufacturer of products used for the control and distribution of water and natural gas, fits directly into the fire fighting movies because of the broad line of fire hydrants that it manufactures and distributes throughout the 50 states and in several other countries.

In mid-May a film crew was in Decatur, Illinois, headquarters of Mueller Co., shooting fire hydrant scenes. This crew from Walter J. Klein Company, Ltd., of Charlotte, N. C., has been all over the country shooting scenes on location.

The film scenes in Decatur included some of testing, engineering and development of hydrants in the Mueller Engineering Labora-

tory; Decatur fire fighters connecting hose to hydrants; drilling of a lateral main for a hydrant installation, and the simulation of a Mueller Improved fire hydrant being knocked over by a moving car gone astray. The Mueller traffic model hydrants feature a safety flange which prevents flow or water loss even though the hydrant section above the ground is knocked over. When this hydrant section is broken off, the damage is confined to three inexpensive parts that are easily replaced: the safety flange, safety stem coupling and safety sleeve. The barrel is not damaged, the stem is not bent, and the damage can be quickly fixed with a Safety Flange Repair Kit.

Along with Mueller, such well-known names as American La France, The B. F. Goodrich Company, Diebold Incorporated, Gypsum Association, P. P. G. Industries and Owens-Corning Fiberglas Corporation are listed among the sponsors.



The Mueller Traffic Model fire hydrant is designed to eliminate any flooding of streets or flowing of water even though

the upper barrel of the hydrant is knocked over by a car. A scene illustrating this feature is simulated by film crewmen.



Greensboro and Golf

They've Changed A Great Deal In Last 30 Years

Jaycee Plaza in downtown Greensboro combines modern sculpture with a bubbling pool of water to make an interesting park for shoppers.



In 1938 when the touring golf professional arrived in Greensboro, North Carolina, to enter the first Greensboro Open tournament, he lived out of the trunk of a Model A Ford, ate in hamburger stands and wasn't always welcome in a private clubhouse.

This spring, as golf's biggest names returned to Greensboro for the Greater Greensboro Open, they arrived in their private jets, attended dinners in formal attire and were warmly welcomed by the 150,000 residents of Greensboro as the pros chased the \$180,000 in prize money.

Professional Golf has changed a lot in 30 years, but so has Greensboro.

The more obvious changes occur in numbers, square miles, new jobs, and buildings. These improvements are usually the result of the less obvious changes—changes in attitudes of local citizens who strive to "Make Greensboro Greater." As for numbers, the population in 1920 was about 20,000 and 20 years later it reached 60,000 and now it is near 150,000. On July 1, 1957 the city was doubled in size by extending the city limits from 25 square miles to 50. In 1958 there were about 54,000 people working in the area and today there are about 90,000. These increases are largely the result of growth of industry, either new industry or old businesses getting bigger. Such companies as Western Electric Company, Inc., American Can Company, PPG In-

MUELLER RECORD

dustries, Burlington Industries, Inc. and Lorillard Corporation have arrived or expanded in Greensboro.

As a city grows, its services must expand to meet the new needs of its individual and corporate citizens. A review of the building and expansion program of the City Water and Sewer Department during the 1960s is a clear indication of efforts being made to keep facilities ahead of needs. It also shows that voters have confidence in the administration as residents approved millions of dollars in bond issues, providing funds for these projects.

The first major project in the 1960s was the replacement of the city's original sewage treatment plant with the new North Buffalo Creek Plant. This plant has a design flow of an average of 18 million gallons per day (mgd) and a maximum flow of 45 mgd. It was designed originally to meet the needs of the City of Greensboro until 1985.

The following year, a service center was opened which consolidated units of the Building and Grounds, Recreation, Public Works, and Traffic Engineering departments. While operating independently within their own areas of responsibility, the center combined certain functions and operations for greater efficiency. By centralizing communications, vehicle maintenance and administration at one location savings were gained for the taxpayer. The service center cost was near \$1 million but more than 141,000 square feet of space are included in the buildings on the 17 acre site. More than 400 vehicles are serviced at the location and more than 400 employees work out of the center.

The big program just completed was a new water treatment plant and supply source. The \$7,500,000 project is part of a \$19 million bond issue passed in 1965 for water, sewers and streets. The new impounding reservoir, Lake Townsend, has more than twice the capacity of Lake Brandt and Lake Higgins which are the old sources of supply. Townsend Reservoir will impound water over an area of 1,440 acres and hold about 6,500,-



Inside and behind this administration building of the Municipal Service Center for the City of Greensboro are facilities for one of the most complete and functional operations of its type in the country.



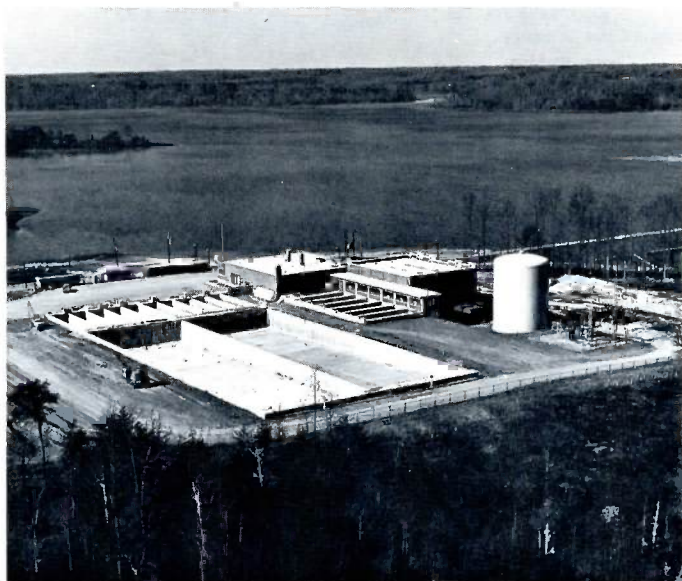
Donald E. Knibb, chief engineer for the Water and Sewer Department, operates a Mueller fire hydrant during a water volume test on a new 36 inch transmission line. Pressure gauges were placed on both capped 2½ inch hose connections and the 4½ inch pumper connection opened. Mr. Knibb said, "We did not know how much turbulence there might be in the hydrant head or how much difference we would observe between the two gauges. It developed that the pressures were even on both gauges and we recorded a peak residual pressure of 25 psi. Based on hydraulic tables of the Factory Insurance Association, we estimated that this would mean a flow of just over 2,700 gallons per minute." The static pressure on the line without the hydrant flowing was 69 psi.

000,000 gallons behind its 276 foot long dam. Townsend Treatment Plant adds 20 mgd to the capacity of the system which is expected to supply the needs of the community for the next 15 to 20 years. If the Townsend project had not been completed this spring, it was possible that a water shortage could have resulted during extended periods of peak demands. The building program also includes a low lift pump station with a capacity of 44 mgd and a 36-inch transmission line 10 miles long that ties in with the city's distribution mains.

Due to economies built into the new plant, Townsend will supply the major share of the current water needs of the system. The two older filter plants with a capacity of 32 mgd will supplement the supply during peak periods and be available as needs increase with future growth. Under the old system, raw water was pumped about seven miles from lakes Brandt and Higgins to the treatment plant and then into the distribution system. With the addition of Townsend, the city has a treatment capacity about triple the average 1969 daily

demand of 17,500,000 gallons. This figure compares with one of 12,600,000 gpd in 1957. Other comparative figures showing rising demands: In 1960 there were 32,500 house services and meters compared with 44,000 the end of 1969. The distribution system has grown from 400 miles of main to 600 miles in nine years and the number of fire hydrants has increased from 3,700 in 1960 to about 4,600 in 1969.

Citizen support is necessary to every water system that is striving to improve and grow to meet fu-



Construction work on Townsend Water Plant was nearing completion when this photo was taken. Lake Townsend, the source of water supply for the plant, will also be available for recreation when the multi-million dollar program is finished.



About 6,500,000,000 gallons of water for the City of Greensboro are stored in Lake Townsend which is formed by this 276 foot dam. The lake has a shore line of about 32 miles and an area of 1,440 acres.

Skyline of Downtown Greensboro.



ture needs. Greensboro's Water and Sewer Department men and top city management use many public relations tools to "tell their story" of service. One of the most outstanding is their annual promotion program during national "Willing Water Week". Displays of equipment are put on truck beds and taken to shopping centers and other areas of heavy pedestrian traffic. The water department sponsors contests, conducts tours and generally makes an effort to communicate with its customers who

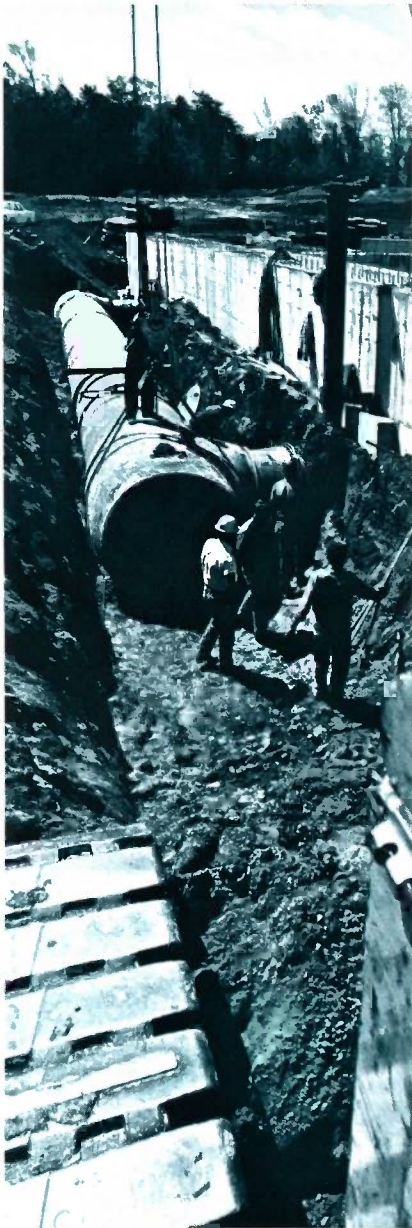
are also the voters at the time of a referendum.

Members of the city administration include:

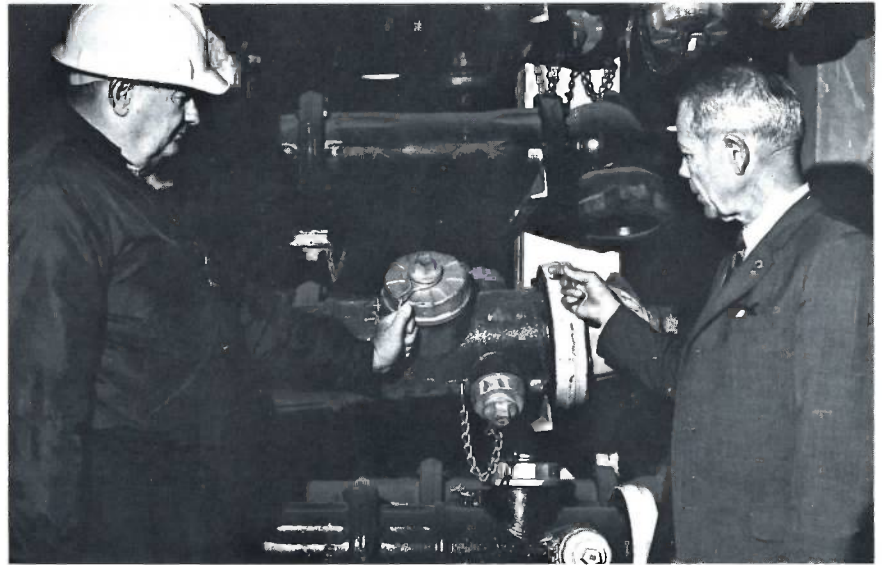
- Mayor Jack Elam
- City Manager John Turner
- Director of Public Works
T. Z. Osborne
- Assistant Director of Public Works John Fox
- Superintendent of Water and Sewer Ray E. Shaw, Jr.
- Superintendent of Pipe System
Joe J. Nuckolls

Chief Engineer, Water & Sewer Division, Donald E. Knibb

Projections for the population increase of Greensboro for the next 10 years are near 50,000 and by 1980 experts think about 210,000 people will be living there. Although this is an increase similar to the '60s, city administrators feel that building programs in the 1960s have prepared them for the 1970s—and for part of the '80s which also promise more people needing more city services.



Workmen install some of the pipe system at the treatment plant.



Lorin Grosboll, Mueller Co. Sales Representative in North and South Carolina, discusses fire hydrants with Greensboro's Pipe System Superintendent Joe J. Nuckolls (left).



This mobile display of some of the equipment and machines necessary to operate a water system visited various shopping areas telling Greensboro citizens about that precious commodity—water.

REFLECTIONS ON WATER

WOMAN ON THE GO

Waterworks men are well-known and active in their communities because their jobs demand it and because they are interested in the city or town they serve. Many of their wives take an active part in community affairs also, and according to a Peoria, Illinois area newspaper, one of the busiest ladies around is Carolyn Behee, wife of John Behee, vice president and manager of the Peoria Water Co.

The *Observer* article says: "Mrs. John Behee is a human dynamo of energy. She is pert and petite, with ash blond hair and snappy blue eyes. Yet, even as she sits in a chair, she seems to be moving and she speaks at a rapid-fire rate."

The article recounts some of the various activities that Mrs. Behee enjoys, including bowling league offices, golfing, Elks Club auxiliary, volunteer work at a local nursing home, service on the YWCA Adult Program Committee and a variety of other meetings and projects.

The wife of a waterworks man can help him in many ways, but Mrs. Behee has a familiarity with operations that many wives do not enjoy. She worked 11 years for the Wichita, Kansas, water department.

Mrs. Behee's story is one of many that could be written about the wives of waterworks men who are active and involved.

Would a water superintendent say that a swimming pool filled with chorus girls has a high chorine content?



Mueller Sales Representative Herman Niehaus snapped this photo near Muncie, Indiana. This is the first time we have seen a head on top of a bonnet!

IS THERE POLYWATER?

Is polywater really water? Some scientists think it is but then there are others who aren't even sure that such a thing exists and now this controversy is even beginning to take on international proportions. Attempts to establish the existence of this new "water" have sparked one of the hottest scientific debates in recent years. The controversy pits Soviet researchers, who claim to have discovered polywater, against some of their Western counterparts who insist the new form of water is merely a concoction of ordinary tap water and various impurities that produce its odd characteristics.

Odd it is, they all agree. Polywater boils at about 600 degrees Fahrenheit and freezes into a glassy substance at minus 40 degrees. It's so thick that it's described as being somewhere between heavy motor oil and molasses. Experts say that it is (if it exists) a polymer of water. A polymer is formed when small molecules are bonded together to form a chain of giant molecules.

Some researchers speculate that polywater has a rosy future. Soviet scientists assert that the liquid can probably be reduced to a solid form by heating. If so, goods ranging from chairs to piping could be manufactured from a material made literally from water.

Those who claim that it exists say that it takes an incredibly complex and laborious process to produce even a few microscopic droplets of polywater and, so far not even enough has been produced to test or analyze it.

We think that science should be working on something a little more practical. How about instant water? Just stir and add water.

ASLEEP IN THE DEEP WITH WET BEDDERS

In the previous item we speculated about the possibility of making furniture and other items out of material derived from water.

There is a company in Long Beach, California, that is currently marketing a water (H₂O) bed claiming "the newest way to get a deep sleep." The bed, with a polyvinyl plastic mattress that can be filled with a garden hose, comes in king, queen and single sizes. Aqua Health Products, the manufacturer, also offers to provide a wall-to-wall model if a customer wants one. We assume they use soft water. Next thing we know, they will make a sleeping bag like this and store it in the water closet.

THE OPOSSUM WENT PIGGYBACK FROM BREA TO SEATTLE

This isn't a fairy tale, but rather a ferry tale about a opossum (no furry tail) that lived in the hole in the hollow of a tapping sleeve.



This young creature found his way into the tapping sleeve in the Mueller storage lot in Brea and played his part while the sleeve was being loaded, and wound up in a piggyback truck shipment to Western Utilities Supply Co. in Seattle. According to the report from Brea Sales Office Manager Paul Caho, the opossum arrived safely, but a little hungry and thirsty. He was given to the Seattle zoo and is apparently living happily ever after. There was no charge to the customer for the extra feature of the tapping sleeve and Mueller paid the freight.

WHAT'S **NEW** and **NEWS** FROM **MUELLER**

MUELLER NOW OFFERS LARGER TAPPING SLEEVES

Mueller now offers H-615 and H-616 mechanical joint tapping sleeves in an extended range of sizes for lateral connections to cast iron mains up to 18 inches. Several sizes for pipe sizes 24 inches thru 18 inches have been added to cover most requirements for expansion of water distribution system in these pipe sizes. In addition, even larger sizes of mechanical joint sleeves are expected to be offered in the near future.

The new 14 inch main size offers outlets of 4, 6, 8, 10, 12, and 14 inches. The 16 inch main size of-

fers outlets of 4, 6, 8, 10, 12, 14, and 16 inches. The 18 inch main size has outlets of 6, 8, 12, and 16 inches.

The H-615 and H-616 tapping sleeves are identical except for the end gaskets. The H-615 has duck-tipped end gaskets and is suitable for pipe of ASA Classes 50-100, AWWA Classes A&B and AGA 150W pipe. The H-616 is for pipe of AWWA Classes C&D and ASA Classes 150-250.

One mechanical joint sleeve of nominal size with two sets of end gaskets will fit AWWA Classes A, B, C and D pipe and it is suggested that both sets be stocked if there is any question about the class of pipe with which the sleeve is to be used.

MUELLER TECHNICIANS USE PORTABLE AIR CONDITIONER

As the man walks through the Mueller Co. Engineering Test Lab in Decatur in his olive green coveralls and silver hood with a plastic front, he looks like a creature ready for a walk on another planet rather than a technician preparing to check the torque on a corporation stop.

The testing he will be doing will be in an 11-foot square chamber that can hold temperatures steady up to 150 degrees or in another one that can drop the reading on the thermometer to minus 20 degrees.

The two chambers, resembling stainless steel walk-in coolers, are used in a few of the many tests that Mueller Co. products must endure as they are proved and approved. The "hot box" and "cold box" have delicate controls, testing equipment built-in and air pressure available so that the products can be checked, and operated while under pressure. The products are tested in simulated situations and many times in exaggerated conditions.

The test situations are designed for products and not for the comfort of the technician who must work in the chambers exposed to many temperature extremes. In order to allow the man to work in comfort the company has provided a portable, self-contained heating and cooling system that runs on compressed air. A set of tubes distributes the controlled air to various parts of the body protected from surrounding temperatures by insulated coveralls and hood. The compressed air goes into a 22-ounce packet hanging on the technician's belt. The internal mechanism of

the unit causes the air to spin cyclonically and to change temperature to the range selected by the worker.

Mueller technician, using a portable air conditioning system, tests a corporation stop in a test chamber.



CALIFORNIA SECTION IN A. W. W. A. 50 YEARS

A span of fifty years is a milestone and a major anniversary to celebrate and to recognize anytime. It doesn't matter if it is an individual, married couple, business firm or trade association involved. Since 1970 is the golden anniversary year for the California Section of the American Water Works Association, it should take pride in its accomplishments.

It is only the fifth section out of an 89-year-old organization to reach this milestone, and today, its membership of about 2,700 from California, Hawaii and western Nevada makes it the largest of the 34 sections.

George W. Pracy of the San Francisco area is regarded as the

founder of the section. In 1908 he graduated from the University of California Engineering School and went into water supply when he went to work for the Spring Valley Water Company which was a privately owned company supplying water to the City of San Francisco.

He said he didn't hear of the AWWA until 1915 when a salesman for water materials called on him. The salesman had worked in the east and gotten interested in the association through the New York Section which was the first one, beginning in 1914. The salesman, known now only as Mr. Seeger, suggested that Mr. Pracy join AWWA and help form a group. About that time there were only

San Diego, California

WATER LANDMARK PART OF EVENTS

During another birthday celebration in California—San Diego's 200th anniversary last year—the American Water Works Association honored the city's Old Mission Dam and Flume as one of five of America's Water Landmarks.

The landmark's nomination by the California Section says the Old Mission or "Padre" Dam and Flume in San Diego was the first water impounding and transmission project to be developed by European colonists in what is now the Western United States.

The Pueblo of San Diego was established on the shores of San Diego Bay in 1769, by a combined military and church expedition representing the King of Spain. As was the custom with Spanish colonial expansion in arid country, the pueblo was granted a river as its exclusive source of water. The San Diego River was so granted to the settlers of the area and it fulfilled a custom but did little to supply water. Rainfall in the area has been known to go as low as three inches per year, and there were no dependable, perennial streams reaching the ocean.

After a few difficult years, the lower river went dry and the Franciscan Padres, who also served as the "city officials," moved the mission several miles upstream and started to engineer a more dependable water supply. A low masonry impounding and diverting dam was built in the mouth of a valley some 225 feet higher in elevation and six miles away from the mission corn fields. The dam diverted both surface and water from an underground river to a flume.

The project was built and improved in the period

1800-1816, using newly Christianized Indian labor and what appears to have been some ingenious engineering methods. Construction must have been unbelievably difficult, as the flume traverses a very rugged, rocky canyon for nearly five miles. The flume was lined with half-round inverted tile and side tiles of sun-baked clay; and the dam was built of rock masonry trimmed with sun-baked brick. It is estimated that the flume had a capacity of about 15 cubic feet per second. The dam was 245 feet in length, 14 feet high above stream bed, and 12 feet thick at the base. Most of the structure is still in existence.

Journals left by the Franciscans indicate that the project kept the tiny pueblo from drying up and starving during many lean years. More sophisticated methods of pumping eventually permitted the settlers to obtain water out of wells in the lower river and, by 1834, the flume was no longer in use.

This same San Diego River currently is a major source of local impounded water supplying the city's system, by way of two impounding reservoirs with a total capacity of 200,000 acre feet.

The search for water supply is a continuing process in San Diego, a city of 650,000 located in a semi-arid, sub-tropical land. There are no major permanent streams or natural lakes in the area, nor are there any extensive groundwater sources. This meant that local surface runoff and storage had to be developed, or water had to be brought in from outside sources.

Currently a major source of supply to the area is Colorado River water which is piped nearly 300 miles. Southern California had been able to create a

11 AWWA members in the entire state.

Activities to form a section were started in 1915 but little actual progress was made initially. World War I interrupted efforts, but by 1919 there were about 50 members of AWWA in California. They decided there were enough to justify the request for section status so in November, 1919, a meeting was held in the Spring Valley building in San Francisco and the 11 attending members elected George Elliot, San Francisco, president. Professor Charles G. Hyde of the University of California was elected vice president and Mr. Pracy was elected secretary. They also voted formally to ask AWWA

for the formation of the California Section and agreed to hold the first meeting of the Section in the fall of 1920.

The request for the formation of the new section was approved by AWWA in May of 1920. At that time there were 52 members in the Section. The first meeting was held in October of 1920 and 75 men attended in San Francisco. It was a one day meeting held on a Saturday. From that point, the section blossomed into one of the most active in AWWA.

Mr. Pracy said that there were many men involved in making the section what it is. "All of those men, working together, gave the California Section the start that

has made it what it is today. I hope that it will live and grow and be as much value to the men in the waterworks profession during the next 50 years as it has been to those of the past half-century."

Officers for the California Section's golden anniversary year are:

Chairman H. W. Stokes, Las Virgenes Municipal Water Dist., Calabasas

Vice Chairman Nathaniel J. Kendall, San Jose Water Works, San Jose

Secretary-Treasurer Harold E. Pearson, Metropolitan Water Dist., La Verne

Director Roy E. Dodson, Jr., San Diego Utilities Department, San Diego.

tremendous water supply from the Colorado River, but it is not unlimited and work continues to find new supplies.

* * *

In addition to the San Diego Old Mission Dam and Flume, the other four American Water Landmarks designated by AWWA are: the High Bridge Water Tower, New York City; the North Point Water Tower, Milwaukee; the Water Tower, Chicago; and the Theodore Roosevelt Dam, Phoenix. Three criteria guide the selection of water landmarks. First,

the landmarks must be tangible, physical properties with a direct relationship to water supply, treatment, distribution, or technological development. Age is the second consideration and the final qualification calls for an understanding that the site be properly maintained.

A sixth landmark was to be formally dedicated during Better Water for Americans Week, Aug. 9-15, in Gary, Indiana. Since then, AWWA has designated the Los Angeles Aqueduct Cascades and the Riverside, Illinois, Water Tower as landmarks.



Spillway section of the Old Mission Dam and Flume which is an American Water Landmark in San Diego, California. The right side of the dam was washed away in 1916. (City of San Diego Photo)

Strictly Off the Record

A shipwrecked sailor who had spent three years on a desert island was overjoyed one day to see a ship drop anchor in the bay. A small boat came ashore and an officer handed the sailor a batch of newspapers. "The captain suggests," he told the marooned sailor, "that you read what's going on in the world—and then let us know if you still want to be rescued."

* * *

"Drive carefully," read the weekly church bulletin. "It's not only cars that can be recalled by their maker."

* * *

The young man took his date to an expensive restaurant. After scanning the menu with horror-stricken eyes, he turned to the young lady and asked, "Have you decided what you'd like to order, Fatty?"

* * *

Two Scotsmen were locked in a bitter golf match under a broiling sun. When one of the Scots had a stroke, his opponent made him count it.

* * *

A pretty young guest of a resort hotel in the mountains took a walk through the woods one day and came upon a lovely lake. It seemed ideal for a swim except for a prominently displayed sign reading "Town Reservoir. No Swimming Allowed". Disregarding the warning she slipped out of her clothes and was poised for a dive when the superintendent of water supply stepped from behind the bushes. "There's a law against swimming in the reservoir, young lady," he told her sternly.

"Why you—you—you" she screamed indignantly. "Why didn't you tell me before I undressed?"

"The sign doesn't say anything about undressing," he said.

"My," said Mrs. Jones, an auction fan, "here's an item in the paper about a pitcher bringing \$1,900 in a sale."

"Hummmmmph!" said Mr. Jones. "He can't be much of a ballplayer."

* * *

Parenthood has its stresses, especially in the early stages. No one is more aware of this than the hospital nurse who answered an emergency telephone call from a nervous prospective father. Trying to calm him down she asked soothingly, "is this her first baby?"

"Oh, no," replied the caller, "this is her husband."

* * *

"How are you getting along?" asked the old-timer of a new traveling salesman.

"Lousy," was the instant reply. "I've been insulted in every place I've made a call."

"That's odd," said the old veteran salesman, "I've been on the road for nearly forty years. I've had all my samples thrown out in the street, been tossed out of an office bodily, man-handled by janitors and kicked in the seat of the pants, but insulted—never!"

* * *



"Well, I've finally got to face it. My vacation starts tomorrow!"

"My teenage daughter is at that awkward age," one mother said to another. "She knows how to make phone calls but not how to end them."

* * *

Do you ever get the uncomfortable feeling that perhaps your gray hair isn't premature?

* * *

A youngster's definition of nervous: "I feel in a hurry all over but I can't get started."

* * *

People who don't count their calories usually have the figures to prove it.

* * *

A drunk had been wandering around Times Square and finally went down into the subway at 42nd street. About half an hour later he emerged at 44th street and bumped into a friend who had been looking for him. "Where on earth have you been all this time?" the friend asked.

"Down in some guy's basement," the drunk said. "And, boy, you should see the set of trains he has!"

* * *

The trouble with good advice is that it usually interferes with our plans.

* * *

Testing a Sunday School class, the minister asked, "What are the sins of omission, my child?"

Little Joe replied: "They're the sins we ought to commit and don't."

* * *

The man who hid behind a woman's skirt used to be called a coward. Today he could qualify as a magician.

* * *

One of life's big disappointments is discovering that the man who writes the advertising for a bank is not the same guy who makes the loans.

* * *

A little boy, caught in mischief, was asked by his mother: "How do you expect to get into heaven?"

He thought a minute and then said: "Well, I'll just run in and out and in and out and keep slamming the door until they say, 'For goodness sake, come in or stay out.' Then I'll go in."

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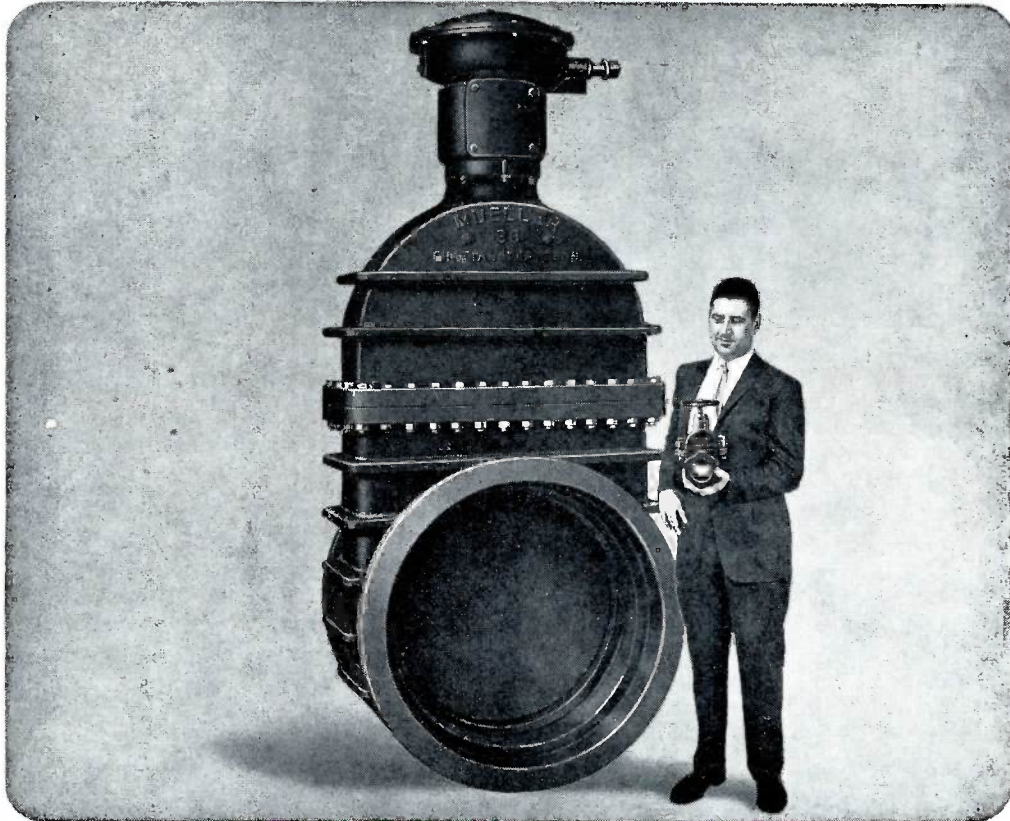
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