MUELLER Record

AUGUST • 1954

Our Cover Story . . .

'Mueller Gadget Aids Housewives,' Garden City, Kan., Newspaper Reports

The newspaper formula of looking inside a story for an angle that will interest the average reader recently was carried out successfully by the Garden City (Kansas) Telegraph in an article describing the purchase of our valve inserting equipment.

Faced with a somewhat technical subject, the Telegram came up with a story that interested not only the men but the ladies as well. Our cover this month shows this equipment as it is pressed into service.

Mueller Record readers will notice that the reporter was not entirely accurate in the use of some terminology. We believe, however, that he did an excellent job in explaining what the equipment is and how it is used in order that Garden City residents might become more familiar with progress made by their city.

The story, preceded by the headline "New Gadget Aids Housewives," follows.

Housewives usually aren't much interested in machinery. They should be familiar with the job of the new valve inserter though because it is going to save them a lot of trouble.

The city recently purchased the machine at a cost of $4,300. Robert Peart, city manager, says it will pay for itself in a short time.

This valve setter enables two men to insert a valve in a water pipe without shutting off the main for blocks around the site. Usually, the work has to be done at night by a whole crew of men and households are without water for hours at a time.

If a fire hydrant is in need of repair, only houses within a block of the location will be shut off. Repairing a fire hydrant has been a major task in the past.

The inserter, weighs about 1,000 pounds and is easily transported from place to place. Harry Seevers of Ottawa, Kansas, a representative of Mueller Co. which manufactures the machine, was in Garden City to supervise city workers in use of the inserter.

Utilities officials from Dodge City, Plains, Liberal, Salina and Cimarron, Kansas, were here to watch the demonstration. The machine is used in many

(Continued on page 9)

MUELLER Record

August ● 1954

WALTER H. DYER, Editor

MUELLER CO.

MANUFACTURERS OF WATER AND GAS DISTRIBUTION AND SERVICE PRODUCTS

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Recording Our Thoughts

THE CURRENT TOPIC of fluoridation been widely publicized in recent years and persons associated with the water works industry, especially the water superintendent, realize that they must become familiar with this subject in order that they may be qualified to answer the questions of an inquiring public.

We recently had the opportunity to read an article "The Water Superintendent and Fluoridation," in the May issue of THE MUNICIPAL SOUTH. The author is Dr. A. P. Black, an eminent authority on fluoridation and head of the Department of Chemistry at the University of Florida. A past president of the American Water Works Association, Dr. Black is chairman of the special committee on American Water Works Association policy regarding fluoridation of public water supplies.

Dr. Black and the Clark-Smith Publishing Co., publishers of THE MUNICIPAL SOUTH, have given the MUELLER RECORD permission to reproduce the article in this issue. The author has presented the subject in considerable detail, and this is as objective a presentation as the controversial nature of the subject permits. We believe this presentation will be of interest to our readers.

* * *

IN A MONTANA community recently an undentified motorist took two sharp turns with his car and:

1. Knocked off a fire hydrant at its base;

2. Drained the town's water tank of 110,000 gallons of water;

3. Left the community of 2,000 residents without usable water for nearly five hours.

The mayor reported that shutoffs on the city's water system were not functioning properly and before the chief of police and workers could get the water stopped at the hydrant the tank was dry.

Oh, brother, if they ever catch that motorist!

Moral to the story, of course, is that . . . now if they had just been using a Mueller Improved Fire hydrant . . .

* * *

SPEAKING OF FIRE hydrants, a New York City employee is $500 richer today, thanks to a novel idea that won an employees suggestion award contest.

The New York City Employees Suggestion Award Board has announced that Raymond J. Cassidy, an assistant mechanical engineer employed in the Water Supply, Gas and Electricity Department, hit the jackpot with an idea to convert standard hydrant caps into sprinkler shower heads. The shower heads are to be used in congested areas in the hot summer months to sprinkle children.

Cassidy's shower heads were given a trial during the hot spell last summer. The result: Kids were delighted at the fine, cold spray, the city was delighted at the tremendous saving in water and Cassidy was delighted with the check for $500.

* * *

HARRY V. SEEVERS, Mueller Co. sales representative in Kansas, and parts of Nebraska and South Dakota, wrote from his home in Ottawa, Kansas in his usual good natured tone the following note in mid-July: "Don't know if the Mueller Record accepts paid ads, but if it does please insert the following and bill me. For Sale: One suit red flannels and one fur lined overcoat. Owner wants to make down payment on air conditioner. All heat records broken here (Ottawa). Was 115 and 117 on successive days."

We can sympathize with Harry. Decatur, Illinois experienced 113 for a record high on July 14.

Water works men everywhere are deeply concerned. No rain and continued high temperatures mean just one thing. We are entering another drought period that could be far worse than that of 1953.

* * *

ONE WAY TO COMBAT the drought and heat is through conservation. The June issue of WILLING WATER, published by the American Water Works Association, Inc., consists of a number of articles and notes on conservation and methods of conserving water. We highly recommend it for your reading.

The Water Superintendent and Fluoridation

By DR. A. P. BLACK
Head, Department of Chemistry,
University of Florida

(Reprinted with permission from the May, 1954, issue of The Municipal South, published by the Clark-Smith Publishing Company of Charlotte, N. C.)

DR. A. P. BLACK

(In reading the municipal news as it comes from the South, one constantly reads of the controversies going on in numbers of towns concerning whether to fluoridate, or not fluoridate city water supplies. THE MUNICIPAL SOUTH asked Dr. A. P. Black to prepare this article as a guide to water works superintendents who might be embroiled in present or future fluoridation controversies. Dr. Black, as well as being head of the chemistry department at the University of Florida, is also president, Black and Associates, Engineers, Gainesville, Florida. He is chairman of the special committee on American Water Works Association policy regarding fluoridation of public water supplies.)

In 1931 Churchill demonstrated that fluorides naturally present in water supplies are the causative agent in endemic fluorosis, or mottled enamel of teeth. His work served to focus attention on the fluorine content of public water supplies, and within two years Dean and Elvove were able to announce that fluorides present in an amount not to exceed 1.0-1.5 p.p.m. do not produce mottling. In 1943, Dean, in a classical paper, made the even more important observation that the incidence of dental caries, or tooth decay, is substantially less in waters containing fluorides than in water free from the element. The importance of ascertaining whether fluorides added to public water supplies would likewise produce this very important effect was immediately realized, and addition of sodium fluoride to the municipal water supply of Grand Rapids, Mich. was begun in January 1945, with Muskegon as the control city; at Newburgh, N. Y., in May 1945, with Kingston as the control city; and in Brantford, Ont., in June, 1945, with Sarnia as the control city.

Publication of annual progress reports from these control experiments has had two important results. In the first place, as will be seen a little later, it has stimulated a large number of American towns and cities to add fluoride in some form to their municipal supply. In the second

place, it has aroused a storm of opposition among individuals who for one reason or another oppose the practice. Accordingly, every water superintendent should be prepared with answers to two types of questions concerning the practice. First, what is the present status of fluoridation? Second, what is the policy of the American Water Works Association with respect to fluoridation, and what should be the local water superintendent's answer when he is approached concerning it? An attempt will be made here to answer briefly and objectively these two questions with the hope that the answers may be found helpful to those water superintendents who are faced with or will later face the problem in their own communities.

The Present Status of Fluoridation

As of March 5, 1954, 927 communities serving 17,064,729 consumers were fluoridating their water supplies. Three hundred and seventy-three additional communities serving 13,815,133 consumers have approved fluoridation and are preparing to put it into effect. Thus, by the end of 1954, even should there be no new adoptions, 31 million people, or about one-third of the total American population served by public water supplies, will be receiving fluoridated water. If the present accelerated rate of adoption continues, however, that number might be 40 million or even 50 million by the close of the year.

The list of cities of large size fluoridating their water supplies includes, among others, San Francisco, Washington, Milwaukee, Indianapolis, Pittsburgh, and in the South, Baltimore, Charlotte, Nashville, Norfolk, Richmond and Miami.

It is doubtful if any advance in public health has ever received the official sanction and approval of so many professional or civic organizations within so short a period of time, since it has been approved by each of the following:

The American Medical Association
The American Dental Association
The National Research Council
The American Public Health Association
The United States Public Health Service
The State and Territorial Dental Health Directors
The American Association of Public Health Dentists
The Association of Casualty and Surety Companies
The Inter-Association Committee on Health.
The National Association of Sanitarians
The National Council of Parents and Teachers
The United States Junior Chamber of Commerce

What is the policy of the A.W.W.A. with respect to fluoridation? In 1949, the American Water Works Association found itself with the necessity and responsibility of advising the water works industry and the American public generally with respect to its stand on a new method of water treatment. Its board of directors appointed a committee, who, after careful study of the problem in all of its various aspects, submitted to the board of directors a statement of recommended policy and procedure with respect to the fluoridation of public water supplies. The statement was approved by the board of directors on May 29, 1949, and thus became the first official statement of policy adopted by any national professional organization with respect to fluoridation. The Statement of Policy of the Association was published in the July 1949 number of the Journal of the American Water Works Association. It was reconsidered and reaffirmed by the Board of Directors on April 29, 1951, and the wording of that reaffirmation constitutes a clear and unequivocal statement of the position of the American Water Works Association. It was as follows:

"Two years ago (June 1949) in Convention in Chicago, the American Water Works Association adopted by resolution this statement of policy on the fluoridation of public water supplies:

"In the communities where a strong public demand has developed and the procedure has the full approval of the local medical and dental societies, the local and state health authorities and others responsible for the communal health, water departments or companies may properly participate in a program of fluoridation of public water supplies.

"The past two years have shown this position to be sound. It is now reaffirmed.

"Recommendations for fluoridation are the prerogatives of the dental, medical and public health groups. When the proper authorities approve the treat-

ment, it then becomes the function of the water works utility and industry to follow through willingly and intelligently where proper controls are assured."

The Water Superintendent and Fluoridation

The medical and dental professions bear the primary responsibility for the promotion of fluoridation of public water supplies. The water works superintendent (properly) neither opposes nor advocates fluoridation, but places himself at the service of the community when and if a decision has been made by the appropriate governmental agencies that the public water supply should be fluoridated. He is, therefore, very much concerned with the technical and engineering aspects of the problem which are his individual concern and responsibility and upon which he, better than anyone else, is best qualified to speak. Here are some of the most important questions, together with their answers . . . .

1. What chemicals are used for fluoridation? The chemicals most widely used for fluoridation are sodium fluoride and sodium silifluoride, although the use of hydrofluosilicic acid is increasing, and amonium silicofluoride has interesting possibilities.

2. How much does fluoridation cost? The cost of fluoridation, like the cost of any other process treatment, depends mainly upon the cost of the chemical used, the amount required, and the size of the plant. The approximate cost of 98 per cent sodium fluoride in the Southeast is 15-17 cents per pounds, and 18.8 pounds of the chemical must be added to each million gallons of water to give 1.0 p.p.m. of fluoride ion. If sodium silicofluoride is used the cost varies between 7-12 cents per pound, and only 13.9 pounds per million gallons of water are required. This establishes the chemical cost of fluoridation at somewhere between $1.40 and $3.20 per million gallons, although for large plants the lower figure may be somewhat reduced. The cost of chemical feeders and accessory equipment will vary from a few hundred dollars for simple type solution feeders to several thousand dollars for large gravimetric type dry feeders. To the local consumer it is much more meaningful to say that the total amortized cost of fluoridation varies between 5-20 cents per person per year.

3. Is it possible to add fluoride ion to water accurately and uniformly? Fluorides may be added either in solid form or in solution. In either case there are a number of types of chemical feeders which meet all requirements. As a matter of fact, the guaranteed accuracy of some of these feeders is greater than the method of analysis employed in the laboratory for the analytical control of the process.

4. Can the fluoride ion in water be accurately determined? A simple, rapid and accurate method for the determination of fluoride ion in water has been available for several years. It is a colorimetric method which may be carried out by operators who are not trained chemists. In addition, most State Boards of health, as an additional precaution, make periodic checks of the water when fluoridation is being practiced.

5. Are fluorides harmful to the water plant operator? Not when normal precautions are taken. Any of the several chemicals customarily fed during the process of water treatment may be harmful when proper precautions are not taken. It is these occupational safeguards which are important—not the toxicity of the chemical being fed. Silicosis for years took a heavy toll of workers exposed to dust, yet silica is one of the most inert and least toxic of all chemical compounds. State Boards of health see to it that when the equipment is installed, provisions are made to safeguard the operator at every point of contact with the chemical.

6. What is the difference between fluoride added to water and fluoride naturally present? There is no difference between the two types. Most salts, including the salts of fluorine, which occur in water or which are added to water, dissociate into positively and negatively charged ions. The salts themselves are thus not present, but only the ions resulting from their dissociation. In the case of both the naturally occurring fluorides and fluorides added to the water, these ions are identical and it is not logical to suppose that the same

ions in water would produce different effects depending upon whether they are naturally present or have been added. Furthermore, chemical methods for determining fluorides work equally well for fluorides naturally present or fluorides added. As a matter of fact, there is no known method for differentiating physically or chemically between fluorides naturally present and fluorides added.

7. What proportion of public water supplies normally contains fluorides? Until comparatively recent years, the fluoride ion was rarely, if ever, determined, and it was supposed that few waters contained the element. However, fluoridation has served to direct attention to its importance and most chemical analysis made today include the determination of fluoride ion. A committee of the American Water Works Association has prepared a partial census of the natural fluoride contents of about three-fourths of the public water supplies of this country. The data are given in the table below:

NATURAL FLUORIDE CONTENT OF WATER SUPPLIES IN UNITED STATES

Fluoride Content p.p.m.	No. States Reporting	No. Water Works Systems	People Served 1950
Unknown	24	2,768	6,508,930
Less than 0.69	44	10,506	87,736,609
0.70 to 0.99	38	524	2,031,900
1.00 to 1.49	35	424	1,025,578
1.50 to 1.99	24	170	427,119
2.00 to 2.99	28	171	405,125
3.00 or more	23	112	298,425

From the above table, it will be noted that 1,401 public water supplies in this country serving 4,188,000 people contain more than 0.7 p.p.m. of fluoride. Of these 877 supplies serving 2,156,000 people contain more than 1.0 p.p.m., and 283 water works systems, serving 703,550 people, contain more than 2.0 p.p.m. of fluoride.

It is easy to understand, therefore, why fluoridation should be regarded as merely an adjustment of the fluoride content of the water to the optimum concentration for the protection of the teeth of children. In the case of cities having less than the desired amount, that naturally present is supplemented by a certain amount of fluoride added. On the other hand, many of our public water supplies, as the table indicates, face the problem of removing part of the fluoride naturally present.

8. Do fluorides produce taste in water? In the concentration of 1.0 to 1.5 p.p.m. employed in fluoridation, none of the fluoridating chemicals have any effect on the taste of water.

9. Do fluorides render water undesirable for industrial uses? There have been no serious objections to fluoridation on the part of any major American industry. At Charlote, N. C., excessive cracking of cakes of ice manufactured from fluoridated water was observed and definitely proved to be due to the presence of the fluoride. A simple and inexpensive remedy was found and this phenomenon has not been reported elsewhere.

10. What is the legal liability of the city with respect to fluoridation? The water superintendent will refer this question to the city attorney who will advise him that the legal liability of the city in the practice of fluoridation differs in no way from its legal liability for any of the other operations involved in the production, treatment and distribution of its public water supply. For liability to be incurred, negligence must be established. In 1952, five court decisions on fluoridation were handed down. They were carefully reviewed by Walter W. Land and Edward K. Mosenthal (attorney and counsel, American Water Works Association) in the April 1953 JOURNAL of the AMERICAN WATER WORKS ASSOCIATION. They summarize the situation as follows:

"Based on the foregoing court decisions and the other available legal authorities, the only possible conclusion is that, upon compliance with local law, there is no legal obstacle to adopting and carrying out a fluoridation program. For this reason, it would appear that the decision of a legislative body on the matter is controlling and that the desirability of initiating or continuing fluoridation of a public water supply can properly and usefully be argued only before the local governing body.

11. Does fluoridation violate regulations of the Food and Drug Administration? Much has been heard in recent months concerning the report of the

Delaney Committee. Accordingly, it is worthwhile to record the official position of the United States Food and Drug Administration with respect to fluoridation. That statement is as follows:

"The Federal Security Agency will regard water supplied containing fluorine within the limitations recommended by the Public Health Service as not actionable under the Federal Food, Drug and Cosmetic Act."

12. What about the medical and dental aspect of fluoridation and the results of the controlled studies? Many hundreds of papers presenting data with respect to medical and dental aspects of fluoridation have appeared during the past few years and are widely scattered in scientific journals and therefore not available to the average citizen. The American Dental Association has performed a most valuable service in bringing together a large amount of these data into a FLUORIDATION KIT which is available to the city officials or to individuals of any community considering fluoridation. (Order Department, American Dental Association, 222 E. Superior St., Chicago 11, Ill.) The KIT contains not only a large amount of scientific data, but also detailed instructions as to the procedure which should be followed when fluoridation is being considered, and a model ordinance, embodying the best features of ordinances which have been enacted by many cities throughout the country.

13. Opposition to the fluoridation. The progress of fluoridation has not been altogether peaceful. Individuals in several local communities have banded themselves together to oppose fluoridation. In instances where the town meeting or voters referendum is established practice, 49 communities have approved fluoridation and 48 have rejected it. There are scattered over the country from the Pacific to the Atlantic, groups of individuals who oppose fluoridation on the grounds that it is mass medication. They maintain contact with each other by circulation of mimeographed or printed material. They are particularly skillful in bringing together the discontented groups in a community. These activities are a modern form of the opposition to vaccination which existed many decades ago in England as well as in the U. S., when the practice was becoming recognized as a means of prevention of small pox. There was a minor degree of opposition to alum as a coagulant in water supplies and there was somewhat greater opposition to chlorination as a water treatment procedure. The opposition to fluoridation is far more well organized and nationally evidenced than was the opposition to chlorination or coagulation. While practically none of the opposition to fluoridation is supported by professional evidence, its effectiveness in influencing local community action cannot be disregarded.

It is hoped that the material which has been presented is sufficiently comprehensive in scope and detailed in character to enable the water works superintendent occupied with his many responsibilities and able to devote all too little time to intensive study of particular questions, to properly advise his governing board on the technical aspects of this still controversial issue when he is called upon to do so.

"What," asked the first Russian, "was the nationality of Adam and Eve?"

"There is no possible doubt," the second Russian replied, "that they were Soviet citizens. They had nothing to wear, nothing to eat but an apple, and lived in paradise."

* * *

His car and her car met head-on. Both drivers got out, and with that fine courtesy so characteristic of motorists nowadays, both began to apologize profusely.

"I'm sorry," said the woman; "It was all my fault."

"Not at all, madam," the man responded with gallantry; "I was to blame myself."

"But I insist the fault was mine. I was on your side of the road."

"That is true, my dear madam, but I am responsible for the collision. I saw you coming blocks away, and I had ample opportunity to dart down a side street."

* * *

First Ubangi: Peter Piper picked a peck of pickled peppers.

Second Ubangi: Fine! Now I'll fan you.

Introducing:

J. T. Leahy, Sales Division Asst., Water Dept.

In his first year of service with Mueller Co., John T. Leahy has proven himself to be one of the Sales Division's promising young men. He has shown considerable ability in the field of administrative sales work, and has held the position of assistant to A. O. Yonker, assistant sales manager, water department, since he joined our firm on June 29, 1953.

A native of St. Louis, Missouri, Mr. Leahy, who is 27, attended St. Louis schools and was graduated from high school in that city. In 1945, shortly after his graduation, he enlisted in the United States Navy to serve for the duration of World War II. Much of his service was spent in the South Pacific area.

Jack, as he is known to his friends, returned home in 1946 in time to enroll in Washington University at St. Louis where his field of study was mechanical engineering. He left school in 1947 to enter sales work, and for the next six years, he acquired considerable experience in both sales and administrative work.

During this period he met and married his wife, Sue, in 1948. They are the parents of a three-year-old son. A second child is expected in September.

Mr. Leahy joined Mueller Co. because he felt our firm would give him an opportunity to learn the administrative side of selling with a large company such as ours whose customers are located throughout the United States and abroad.

The majority of our customers are familiar with correspondence written by J. T. Leahy. His principle duty is the handling of business letters with customers and Mueller Co. sales representatives. In this capacity, he gives our sales representatives and customers information on prices, products, product

JOHN T. LEAHY

application and shipping information, and recommends to customers when called upon what Mueller Co. product should be used on a particular job.

Of his work, Jack says he enjoys every minute of it. "I have had an opportunity to meet a great many people through correspondence," he says, "and I am beginning to feel that I know each of them personally."

Jack's favorite recreation is golf; no Ben Hogan, however, he's the first to admit that some sort of special observance will be due the day he is able to break a score of 100.

Our Cover Story . . .

(Continued from page 2)

Kansas cities, but this is the first one in this part of the state.

Workers manning the machine turn the crank at the machine's top. This sends the cutter down to the pipe. It cuts out a section and reverse turns on the handle bring the piece of pipe to the top. A valve is then inserted through the machine.

No water escapes into the hole when the machine is used. There is also a big saving in time and labor. It is also safer, Seevers says, because water will always be available in case there is a fire.

Shown with the United Pipe Line Contractors' "trouble-shooting" truck in front of the Beloit, Wisconsin, firm are, left to right, Clif Auer, Mueller Co. sales representative; E. "Gene" Alters, a partner, and his son, J. "Jack" Alters, who is associated with the company.

Trouble Shooting Truck

When E. "Gene" Alters and R. "Bob" Soehnlen joined forces three years ago to organize the United Pipe Line Contractors, they brought some new and refreshing ideas to the water and gas industries on how to get a job done quickly and efficiently.

Located at 822 Broad Street, Beloit, Wisconsin, they now have a firm that employs about forty men. The company is prepared to work on anything from city gate stations through the laying of new lines or the replacement of old ones to making hookups and the lighting of customers' appliances.

Both men have worked for contractors throughout the Midwest on gas, water and sewer jobs and their combined work records bring more than twenty-five years experience to their customers.

As Mr. Alters, whose responsibilities include the making of and setting up all contracts and handling office business, says, "We are specialists in the field of city distribution problems in both low and high pressures where service must be maintained." Mr. Soehnlen supervises all field work.

To enable their firm to perform quick and efficient service for water and gas customers, they set aside one of their many trucks and equipped it for trouble-shooting. It is completely equipped with Mueller Co. material, and enables the company to tackle any kind of a water or gas job and take care of it within the size and limitations of the equipment.

"We feel this truck which is equipped with most Mueller equipment is a vital necessity in our field of operation," Mr. Alters said. "We have many other trucks equipped with Mueller material and machines to handle smaller main and normal service tie-ins in the low pressure field," he added.

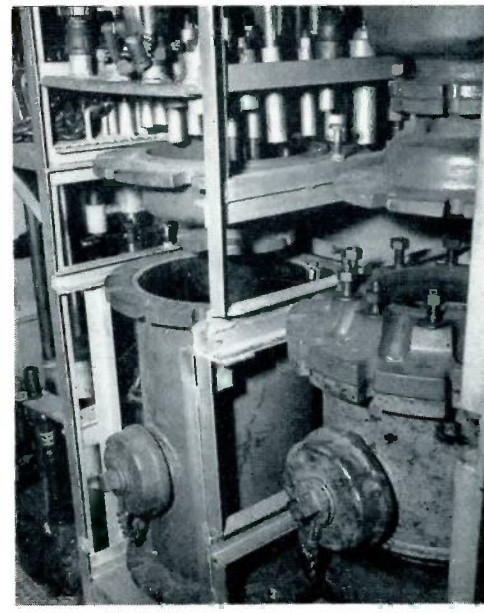
This trouble shooting truck has been in existence the past year and it is believed to be the only one like it in exis-

tence. The service offered is especially good for small water systems that haven't been able to take full advantage of all Mueller Co. equipment. It is a simple matter for United Pipe Line Contractors to rush in and insert gate valves in a distribution system giving quick and efficient service. The company keeps all Mueller valves and fittings for the gas industry in stock. There is no delay in their service, thanks to this novel idea. They have the equipment and the know-how to get a job done.

For the water works industry, the company can do valve inserting operations for four, six and eight inch cast iron pipe. They can make a lateral connection through tapping sleeves and valves or standard valves up to 12-inch. In addition they can make service connections with the B or E-4 machines and could do line stopper work if the occasion ever arose.

They have a complete complement of

(Continued on page 17)

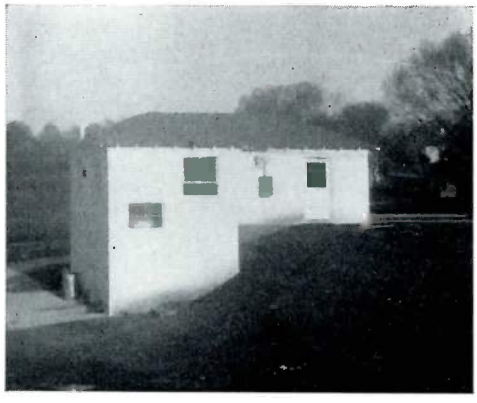


This photo shows our large and small adapters for valve inserting equipment, our C-1 machine adapters and miscellaneous equipment.

Mueller equipment in the photo above includes upper left, B machine and equipment; upper center, E-4 machine equipment and C-1 machine adapter; upper right, C-1 machine shellcutters; right center, steel wedge line stoppers; lower left, No. 3 steel wedge line stopper equipment and air motor; center, inserting valve equipment.

In left center is our No. 1 line stopper unit equipment while the D-4 machine and equipment is at center. Our No. 3 line stopper unit completion machine is at upper right while below the shelves, left to right, are our C-1 machine adapters, gate valve for No. 3 line stopper unit and our slide valve for valve inserting unit.

Drexel's Dream Comes True



Missouri Town Completes Modern Water System

The pump house and settling tank as they appear today.

A dream came true this year for the nearly 600 residents of Drexel, Missouri. That dream—the completion of an adequate water works system after seven years of planning and struggling to achieve their goal—may well become the dream of other communities of similar size. Water works men have labeled Drexel's new system as an example of what other small communities may do in the future to acquire a modern water works system.

Official recognition to the completion of the new system was made at a gala celebration on Saturday, May 8. Great tribute was paid to those civic-minded citizens who had done so much to make a modern water works possible for this little Missouri city located about 60 miles south of Kansas City near the Kansas-Missouri border.

Hundreds of visitors joined townsmen at the observance which included a free barbecue, parade, band concert and other forms of entertainment that kept spirits high. The surprise of the day came when Mayor H. T. Smith, who probably more than any other one person spearheaded the water works drive, was presented with a plaque from the community appropriately inscribed for the occasion.

Dr. Warren Kramer, chief of Water Supply, State of Missouri, was guest speaker. He told residents that their plant would be used as an example to show other small cities that they, too, could install a water system. He complimented the people of Drexel and stressed the urgency for other towns of similar size to provide for adequate water needs of the people.

Drexel's new system, of course, was not obtained overnight. Its coming about followed a trail of hope and despair and even heartbreak at times for those citizens working toward adequate water needs. At times, the community's apparent inability to finance the project all but made the new system an impossibility. The people never gave up, however, and finally, seven years after plans were first announced, the community's water system was completed.

The possibility of a water system for Drexel had been discussed for many years, but the present system began to

take form on April 27, 1947. The mayor then was Chris Rapp. He called the city council to discuss a water proposition with W. B. Rollins & Co., consulting engineers of Kansas City, Missouri. Council members voted to authorize the Rollins firm to make an estimate for a water works system in Drexel.

The first estimate was made with the idea that water could be obtained from wells; however, after considerable drilling in the area, it was determined that under ground water could not be found in a quantity that would serve Drexel's needs. On September 30, 1947, a second contract was entered with W. B. Rollins & Co. for a revised estimate using a reservoir rather than wells. This estimate placed the city in the first of numerous financial difficulties. The City of Drexel could not vote the amount of general obligation bonds needed to finance an adequate system.

The plans lay dormant until November 6, 1951, when the city council authorized the new mayor, H. T. Smith, to ask the Frush Engineering Co. to offer a new estimate. The Frush company was the same firm formerly known as W. B. Rollins & Co. Mr. Rollins had since retired, and the engineering firm was known under its new name.

A new estimate was necessary because prices had increased considerably since 1947. The estimate was completed in January, 1952, and a bond issue of approximately $138,000 was needed. It was learned that only $92,000 could be voted in general obligation bonds due to the valuation of the city. It was necessary to sell $46,000 in revenue bonds. To accomplish this, $21,000 was sold in Class A bonds and $25,000 in Class B bonds.

The bond issue election was held April 8, 1952, and passed with an overwhelming majority of 227 to 38. Immediately after the election, subscription for the B bonds began and the entire amount was sold in two days to Drexel citizens. Meanwhile, a bonding company agreed to purchase the Class A revenue bonds worth $21,000 in addition to the $92,000 in general obligation bonds. One other obstacle was that the city had to sell 180 water contracts to the people of Drexel who would agree to use the water

Workmen assemble Mueller Improved Fire Hydrants for installation.

Large earth moving machines digging the lake to desired depth.

for at least one year in order that adequate income to pay for the revenue bonds would be assured.

Surprisingly, this turned out to be a major project. Despite the one-sided election favoring the water system, most residents did not want to obligate themselves in any way until water was flowing down the mains. Volunteer workers found that securing 180 water contracts was all but impossible. Finally, after visits to homes over the community and talks at public meetings over a period of several months, the number of water contracts rose to 186. That figure today has grown to 215.

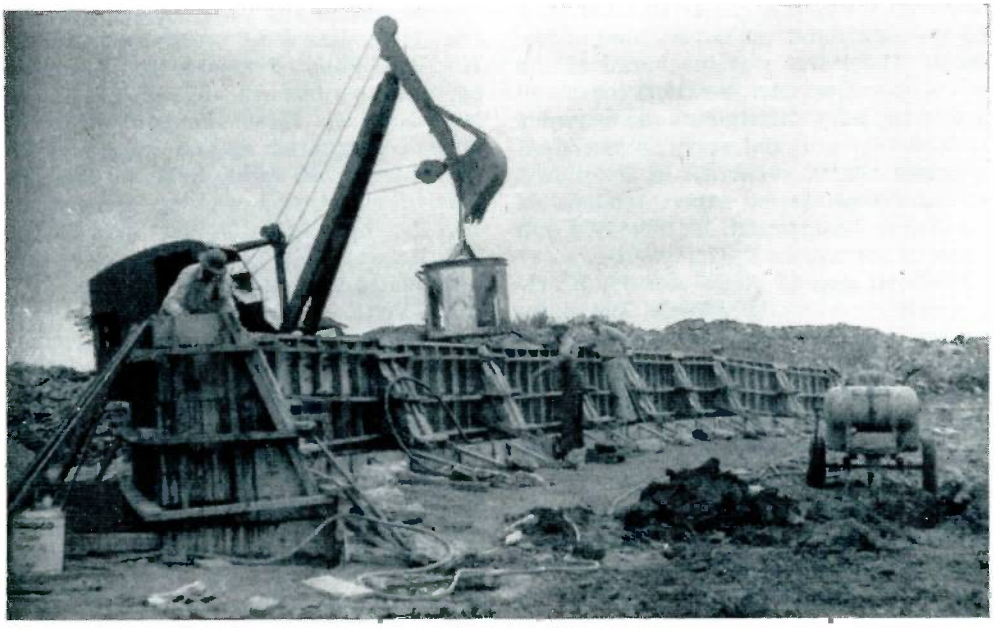
With this accomplished, the Frush Engineering Co. was authorized to advertise for bids for construction of the system. Contract lettings were advertised for September 25, 1952, and more than thirty companies were represented at the letting.

City officials were dismayed when bids were opened for the lowest bid was $65,000 above the engineer's estimate. One week later the low bidder reduced his bid by $35,000, but even this figure made it impossible for the city to let the contract. It was decided not to again advertise for bids, but rather to seek out contractors and attempt to negotiate a contract which is allowable under Missouri law. The contractor nearest to the city's allowable figure was $12,000 above the estimate.

Just when it appeared hopeless, H. L. Pelton of Springdale, Arkansas, who had been unable to attend the letting but previously had talked to city officials, was contacted. He reviewed the plans and after considerable study announced that he could do the job within the estimate.

On May 1, 1953, Mr. Pelton met with the city council and signed the contract to build a water works system. He immediately sublet the earth moving for the building of the lake and the concrete work which included building of the water plant to the Smith-Miller Construction Company of Pleasantville, Kansas.

Soon thereafter, Dan Payton, contractor from Lamar, Missouri, arrived with a crew of men and began concrete work



In June, 1953, the spill-way wall was under construction as shown in this photo.

for the intake structure and the water plant. Mr. Pelton, with his machinery and crew, arrived at about the same time to start construction of the distribution system and the project was really under way. Mr. Pelton's son, H. L. Pelton, Jr., was in charge of the job.

Robert Westhoff, city clerk, was em-

Water stormed over the spill-way on May 1, 1954.

ployed as resident engineer and inspector for the city under the supervision of Mr. Frush. The latter was in charge of the entire operation. Mr. Westhoff continued in this capacity throughout the system's construction and did such an excellent job that the city council later offered him the position of superintendent of the Water Department. He accepted and today is serving in that capacity.

Then, on May 19, 1953, another heartbreaking blow hit city officials. The financial problem returned when the bonding company announced that due to increased rate of interest they would be unable to purchase the $21,000 in revenue bonds and would have to cancel their obligation.

After a thorough search which continued until July, 1953, the city found a buyer for the Class A revenue bonds. He was L. W. Baehr of Paola, Kansas to whom Drexel residents will long be grateful.

Construction work was completed in September, 1953, but the plant was not completed until January, 1954, due to the fact that much of the water plant equipment had not arrived.

A review of the work schedule shows that groundbreaking started about May 10, 1953. This, of course, was preceded by cleanup of brush and debris on the lake site. By June, the spill-way was under construction and on September 25 the water tower which holds 50,000 gallons of water was nearing completion. The Pittsburgh-Des Moines Steel Co. of Des Moines, Iowa, erected the tower and tank which they did in record time.

Mueller Co. is proud to have had a part in Drexel's new water system. Our complete line of distribution and service material and equipment was selected for this project and used throughout the system. The Sebastian Diesel Equipment Co. of Joplin, Missouri, distributors for Mueller Co., supplied Drexel with our products.

It was with a great deal of pride on May 8, 1954, that the city officials of Drexel presented the new water system to the town's citizens. Officials realized, probably more than anyone else, that this was no small undertaking. There is no doubt that every member of the governing body did his best, without which, the project probably never would have succeeded.

Tobias D. Kilkenny Retires

Vallejo, California, City Engineer's Career Parallels Growth of Town's Water, Street Systems

Tobias D. (Tobe) Kilkenny, city engineer and superintendent of streets in Vallejo, California, for 39 years, combined three of the most important dates of his life in a single 24-hour period recently.

His 70th birthday, 39th wedding anniversary, and retirement from his job after 39 years service took place on June 24. Vallejo city employees automatically retire on their 70th birthday.

Mr. Kilkenny made his severance with the city complete when he resigned as a member of the City Planning Commission. "Not that I intend to become completely inactive," he told his friends, "it's just that I may want to appear in behalf of some project in the future and it wouldn't be fitting for me to be a member of the Commission."

He was born April 24, 1884, on a California ranch, attended school in California and was graduated from the University of California in 1906, the year of the great earthquake and fire which virtually destroyed San Francisco.

As a licensed civil engineer, he embarked on a professional career of surveying, working with several consulting firms, road and hydraulic engineering

and many other phases of his profession before he came to Vallejo to carry on some heavy construction work. This was in 1911. He began his service with the City of Vallejo on April 26, 1915. Two months later he and the former Louise Agnes Rhodes were married on June 24.

During the first five years service with the city, Mr. Kilkenny was mainly concerned with the original improvement of many miles of Vallejo streets. During the same years, the sanitary sewer system of the city was greatly enlarged by construction of sewers in all of the improved streets. The water distribution system similarly was extended and new water mains were laid in those streets.

From 1920 to 1927, the engineering department carried on the program of street, water and sewer improvements, but at a slower pace. In addition, much work was done in expanding the water supply system such as construction of the Lake Curry reservoir and dam and installation of a 24-inch steel pipeline from the reservoir to the city. It was during this period that Mr. Kilkenny was made superintendent of the water department.

In the succeeding years, there was a period of continued expansion of the water supply distribution system. This included the construction of many main line trunk sewers.

He recalls that although the "depression years" followed, Vallejo was not greatly affected since activities of the Mare Island Naval Shipyard were maintained at a normal pace and hundreds of thousands of dollars in federal funds were granted for the extension of public works in Vallejo Township. These projects were designed by the engineering department in cooperation with engineers of the county and federal government.

This period was followed, he remembers, by the vast expansion preceding and during World War II, which threw a very heavy work load on his department. It was necessary in those years to keep pace with the expansion of Vallejo and its environs from a local population of 30,000 in 1940 to a population of about 90,000 in greater Vallejo by the end of the war.

Since that time, a large program of municipal engineering work has been required because of the shift from public housing to private housing, addition of subdivisions and division of land into those subdivisions, and the consequent expansion of miles of street improvements, city water mains and sewers. A major feature of the accomplishments in recent years has been the completion of the $6,100,000 Cache Slough water supply system including the construction of a modern treatment plant.

Mr. Kilkenny has been an active civic worker for many years and in 1947 he was given an award for outstanding community service. He has been a friend of Mueller Co. throughout his career with the city. He has used our products for many years, and long has designated the use of our brass goods exclusively.

We join his many friends in wishing for him a long and pleasant retirement.

Trouble Shooting Truck

(Continued from page 11)

equipment and can do every operation for which Mueller equipment has been designed.

They are able to make farm taps off transmission lines using either the DH-2 or E-4 machine and can make service connections using the E-4 or B or H machine using service tees, service valve tees, curb valve tees or machine inserted valve tees.

Included in the truck's equipment for the gas industry is a complete set of Mueller No. 1, 2 and 3 line stopper equipment as well as our service line stopper. United Pipe Line Contractors can work on from 3/4 inch to eight inch cast iron or steel pipe. They can make connections up to two-inch at 1,200 p. s. i. with our DH-2 machine and can make connections through standard valves up to 500 p. s. i. in 12-inch pipe with a C-1 drilling machine.

Irate subscriber to operator: "Am I crazy or are you?"

Operator: "I am sorry, but we don't have that information."

Seeing Things?

Nope! Just A Deep Sea Diver Plunging in Street

Ontario, California, residents strolling down Archibald Avenue in that city on a recent Saturday morning stopped abruptly and after a quick double-take probably decided they were seeing things.

But what they saw was really there. A deep sea diver in full regalia was getting ready to make a plunge in the middle of the street.

Instead of the regulation ship, he arrived via truck manned by a crew of engineers and mechanics. Purpose of the equipment was to tap the Colorado River Aqueduct at Archibald Avenue, designed to furnish service for the Mid-Valley district which was recently annexed to Chino Basin Municipal Water District.

Normal procedure, according to Howard F. Clark, manager-engineer for the district, is to pump the aqueduct dry at the point where the connection is to be made. This was the first time, he said, that a diver has been used to do the necessary work inside the mammoth pipe while a full flow of water was being maintained. Among those persons on hand to witness the novel procedure was Robert Diemer, chief engineer for the Metropolitan Water District.

The diver enters the 14-foot depths to remove a blind flange from the huge concrete aqueduct. He later connected a Mueller gate valve in place of the blind flange.

An assistant prepares the Long Beach, California, diver for his plunge into "the middle of the street." The diving suit was necessary because the water was too cold otherwise.

Howard F. Clark, general manger and chief engineer, the Chino Basin Municipal Water District, helps the diver emerge from the manhole after the forty-minute job was completed.

The decision to acquire the services of a professional diver was made because at the time the concrete aqueduct had been laid a twenty-inch flanged connection had been made on the large twelve-foot, eight-inch inside diameter of the aqueduct. A blind flange had been installed for future installation of a lateral connection. Rather than drain the aqueduct in order to remove the blind flange, the diver went down into the manhole to remove the blind flange and drop it into the bottom of the manhole. He was able to do this because pressure in the line was low.

The diver allowed the manhole to fill with water. Then a twenty-inch Mueller gate valve, swung from a sky hook, was pushed over against the flanged connection so that the diver could get four bolts in place—enough to hold the water while the manhole was pumped dry. Once the water was out, it was possible to return to the hole and complete the installation of the valve.

The diver, brought from a Long Beach, California, diving concern, first attempted to make the plunge into the 14-foot depts, but decided after an experimental try with his toe that the water was too cold. It was then that he donned the more cumbersome helmet and suit.

In approximately forty minutes, he was able to loosen the blind flange and slip into its place the Mueller gate valve which will make possible later work on the outside of the aqueduct.

By using the diver, Mr. Clark estimated that approximately $600 worth of water was saved which under ordinary circumstances would have had to be pumped out and discarded.

Lon W. Woodson, Mueller Co. Sales Representative In West Texas, Dies

Lon W. Woodson, Mueller Co. sales representative, died July 6 at his home in Lubbock, Texas, after an illness of several months. He was 43 years old.

Although in poor health, Mr. Woodson remained active in his work until recently. His wife, Margaret, assisted him during the early days of his illness and did much of the paper work from their home. She made a number of trips with him this year driving much of the way during his regular calls on our customers.

Mr. Woodson, a native Texan, joined Mueller Co. as sales representative on July 1, 1950. Through the past four years of association with our firm, he has represented Mueller Co. in the West Texas area.

Prior to his association with Mueller Co. he was for several years a sales representative for Well Machinery and Supply Company of Fort Worth, Texas.

He was born December 22, 1910, at Burleson, Texas. Besides his wife, he is survived by a married daughter.

Funeral services were held July 8 at Ballinger, Texas. Burial was in the Ballinger cemetery.

We at Mueller Co. join Mr. Woodson's many friends in sorrow over his passing. His fine record as a sales representative spoke for him professionally. His keen wit and warm personality made many friends for him and for Mueller Co.

LON W. WOODSON

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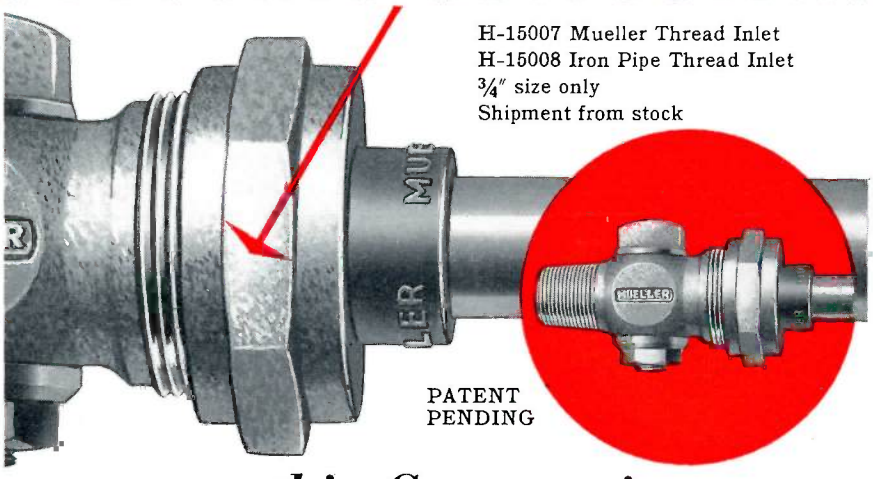

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