



### LOST: 90 FIRE HYDRANTS.

The following plea was issued in a newspaper after an 18-inch snow fell in Florham Park, N. J.

"Lost-somewhere in the neighborhood of 90 fire hydrants in any section of town on January 20.

"Reward to the finder-super fast water hookup in case of fire -net worth about \$20,000.

"Equipment needed for search -one snow shovel, five minutes and a fear of fire."

According to Mueller Co. Sales Representative Herb Huffine the plea worked. Many of the citizens 7.200 shoveled out the hydrants after the wind-whipped snow covered almost all of the hydrants.

The new director of the American Water Works Association Advancement Program is Eric F. Johnson, who also serves AWWA as Assistant Secretary and Director of Publications.

He succeeds James B. Corey who resigned recently.

A member of the Association staff since 1940, Mr. Johnson came to AWWA from Wilcox & Follett Co., Chicago publishers. He received his AB degree in English and Business Administration from Antioch College in 1939.

As the result of Mr. Johnson's promotion other changes have taken place in the publications program of the AWWA.

Arne E. Gubrud. Associate Editor, has been appointed Assistant Director of Advancement. In addition, Lawrence Farber has moved up from Managing Editor to Assistant Director of Publications.

Recording Our Thoughts

### WHAT'S IN A NAME?

Sometimes there are problems if the name happens to be Jones according to William Manuel Jones Jr., heavy construction contractor in Magnolia, Ark. whose company specializes in sewer and water construction and general dirt moving.

Like so many of the Jones boys the nickname Casey was given William Manuel and the company bears the name "Casey Jones and Son "

Fred A. Pierce, Credit Manager at Mueller Co., while corresponding with Casey Jones asked the oftheard question: "Are you related to the famed engineer of the Illinois Central Railroad?"

He said this same query comes from telephone operators, business acquaintances and most other people he meets. Although there is no relationship the questions have prompted him to become interested in the lore of the famed railroader who met an unexpected death with his hand on the throttle.

He said he had read much about the railroader and has saved clippings from the past 30 years that are related to Casey Jones the first.

The nickname was attached when he was a baby, Mr. Jones said. The song about the famous engineer was a hit tune around the nation at the time of his birth.

Although his parents were not at all happy with the monicker he is not readily known today by any other name.

The famous engineer now has a son named Charles Jones.

That's right, you guessed it. The son associated with Casey Jones and Son is also Charles Jones.

# MIKI, KR RECORD

#### MARCH 1961 •

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### \*

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### **SINCE 1857**

Quality Products for the Waterworks and Natural Gas Industries

The name MUELLER is a registered trademark of Mueller Co.

## Contents

4	WATER VEINS REFILLED BY VENTURA PROJECT is a story about a \$30 million water project in California.
11	<b>TWO NEW DIRECTORS NAMED TO MUELLER CO. BOARD</b> relates the latest changes in the board and pictures the officers.
14	WETTEST WATERWORKS MAN tells about a superintendent who works with, in and under water.
15	CHULA VISTA MOVES INTO NEW SHOPS describes the new division workshops of California Water & Telephone Co.
16	<b>THOSE DROPS ARE IMPORTANT</b>
18-19	STRICTLY OFF THE RECORD are the pages designed to tickle your funnybone.

20 MUELLER CO. PRODUCTS



This scenic setting in Southern California shows the principal features of the Ventura River Project. The Casitas Dam, at lower left, and reservoir are being planned as a play area in addition to holding a capacity of 250,000

acre-feet of water. A total of 9,500,000 cubic yards of fill was used to build the dam for the 30 million dollar water project.

# Water Veins Refilled By Ventura Project

## Transfusion To Pump New Life Into California

A 30 million dollar river and water project undertaken by the U. S. government and local interests now is pumping new life into the Western Ventura County area of southern California.

The multiple-purpose project is designed to furnish an average of 27,800 acre-feet of water annually for irrigation, municipal and industrial use, and recreation in the area about 60 miles northwest of Los Angeles.

"Development of the additional firm water supply was urgently needed in the area to stabilize the present economy, for new irrigated lands, new industries, a rapidly expanding population and new economic opportunities," said H. P. Dugan, Regional Director of the Bureau of Reclamation of the U. S. Department of Interior.

The project will more than double the supply of water for irrigation, city and industrial use.

Because of the extreme vagaries of watersheds and streams and the uncertain uses of the water, storage was only possible during periods of high runoff. Such flood

(Photos Courtesy of U. S. Bureau of Reclamation, U. S. Department of the Interior)



storage is the basic plan of Casitas Dam.

The project was authorized by the federal government in March, 1956 and all major projects were completed in about four years, although, work still is being carried on.

Casitas Dam and reservoir are the principal storage features of the project. The contract for the construction of the dam was awarded in mid-1956 and in December, 1958 it was completed to the point where storage was begun.

A total of 9,500,000 cubic yards of earth, sand, gravel and stone was placed in the dam embankment. The crest length of the dam is 2,060 feet and the maximum height above the streambed is 285 feet. The reservoir has a storage capacity of 250,000 acre-feet with a maximum water-surface area of about 2,700 acres.

Although the country is mountainous, rugged and beautiful, the terrain presented a problem for the engineers on the river project.

The main source of water for the reservoir is the Ventura River but the reservoir is located miles from the natural flow of the stream.

The storage area is located far

MARCH • 1961

down on Coyote Creek, a tributary of Ventura River, because it is the only suitable site for a storage facility of the required size that could be utilized without extensive right-of-way and pollution problems.

Water for storage, other than the natural flow of the Coyote Creek system, comes from Ventura River through the  $5\frac{1}{2}$ -mile-long Robles-Casitas Canal.

The canal is a 500 cubic foot per second concrete-lined canal for most of its length but includes one, 78-inch-diameter, reinforced-concrete-pipe siphon about 5,000 feet long. It has a width at the top of 27 feet, sloping to a bottom width of seven feet.

Water enters the diversion canal through headworks constructed as an integral part of Robles Diversion Dam, a low rockfill structure across the Ventura River a short distance from the community of Meiners Oaks.

Although the diversion dam is but 24 feet above its foundation, it has a crest length of 598 feet. The dam's sluiceway has a capacity of 10,000 cubic feet per second.

Water from the reservoir is dis-

tributed to all subareas of the District through a main conveyance system consisting of 33 miles of pressure pipeline varying in size from 54 to 14 inches in diameter.

Water enters the conveyance system directly from Casitas Dam through an intake structure believed to be unique in Reclamation Bureau experience.

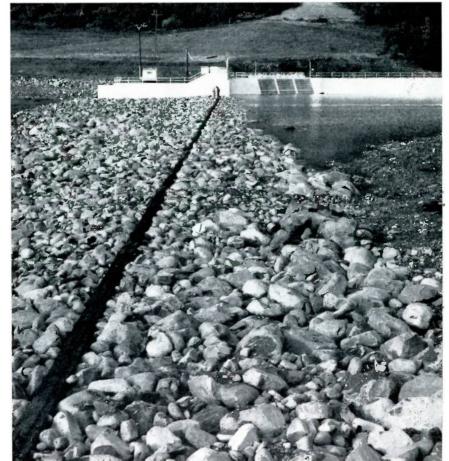
The intake is a reinforced-concrete structure which rests on the sloping upstream face of the dam and encases a 48-inch steel outlet pipe which is fitted with nine hydraulically operated slide gates at uniform intervals between minimum and maximum reservoir water levels.

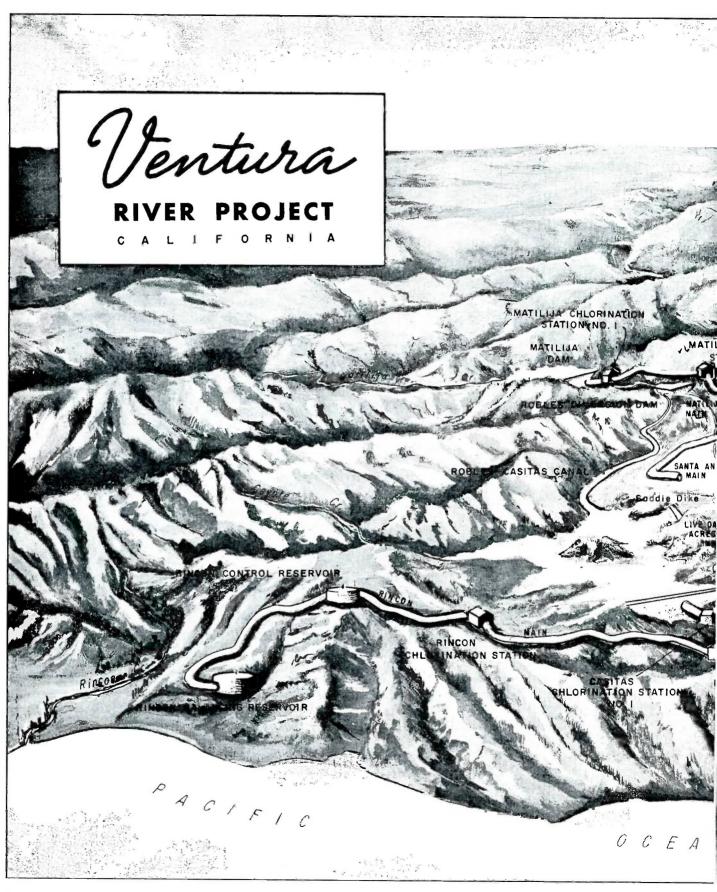
The outlet pipe joins an 1,800foot-long outlet tunnel bored through the abutment of the dam. The outlet tunnel is a seven-footdiameter circular section terminating at the main valve chamber.

From this point, the tunnel is an eight-foot horseshoe shaped section with the water flowing through a 51-inch steel pipe. Each outlet gate is fitted with a screen which can be removed and taken to a washrack above high water through the

(Story continued on Page 10)

Robles-Casitas diversion dam takes the water of the Ventūra River and sends it down a  $5\frac{1}{2}$ -mile long canal to the main reservoir.





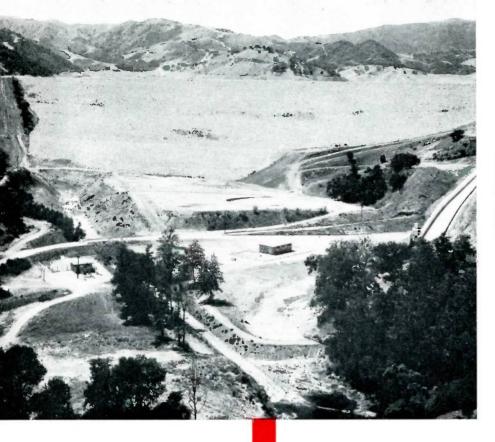




At the rate of 500 cubic feet per second the water rushes along this canal from the diversion dam to the reservoir. The trip includes travel through  $4\frac{1}{2}$  miles of canal like this and one mile through 78-inch concrete pipes. The canal is 6.8 feet deep.

The 285-foot high dam embankment, outlet works, intake structure and spillway inlet in the foreground are viewed from atop the left abutment. The crest length of the dam is 2,060 feet and goes from a base width of 1,625 feet to a crest width of 40 feet.

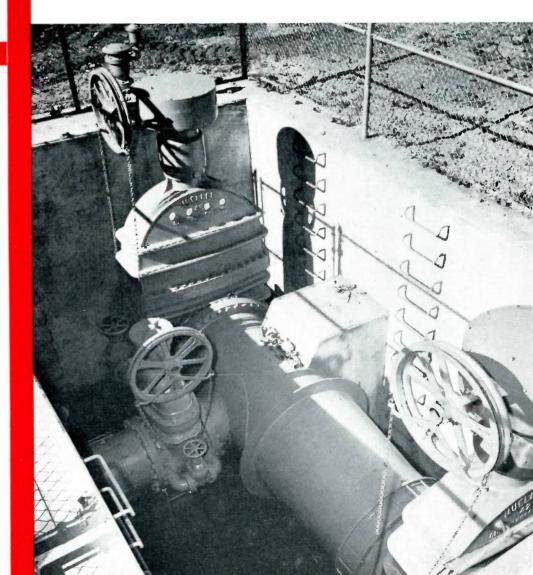




The time expected to be necessary to fill the reservoir runs from a minimum of five years to a maximum of 20 years. Approximately 21,200 acres within the area will be used under full development. More than one-half is now dry-farmed, grazed or underdeveloped land.

Mueller Co. 48-inch and 42-inch gate valves are located on the Casitas Gravity Main at the head of Canada Larga main. The Canada Larga main feeds the City of Ventura Reservoir.





operation of an ingenious system of tracks, cables and pickup carriage. The hydraulic slide gates are operated by means of controls installed in a control house at the top of the dam.

Since a large portion of the service area of the project is at a higher elevation than the main reservoir, five pumping stations were constructed along the pipelines to lift water from the elevation of the storage level in the reservoir to elevations of points of delivery.

The main pipeline moves southeasterly from the dam, and then after crossing the Ventura River one branch goes south to the city of Ventura and another branch goes northeast to serve the cities of Oakview and Ojai.

The Rincon pipeline serves the west coastal region of the area. It starts at the dam where a pumping station lifts the water 900 feet over Casitas Pass to a balancing reservoir near the coast 10 miles away.

The main pipeline has an initial flow capacity of 135 cubic feet per second.

Five balancing reservoirs, all of which are covered steel tanks, along the mains provide effective operation of the project by storing water to meet peak demands and for emergency supply in case of pump failure. The balancing reservoirs range in capacity from 1,000,-000 to 6,500,000 gallons.

Disinfection of the water is done through the operation of five clorination stations along the mains.

To extend the conveyance system farther into certain areas of

The Rincon pipeline serves the western coastal area of the project and was laid for 9.7 miles through rugged terrain such as this. It starts at the dam where a pumping Six months later the District contracted with the government for a project investigation and from there the project advanced to its present proportions.

Officers of the Ventura River Municipal Water District are George M. Purvis, President; Charles W. Petit, Secretary-Treasurer; Leland G. Bennett, General Manager and Chief Engineer, and Robert R. Willard, Attorney.

plant lifts the water 900 feet over Casitas Pass to the Rincon balancing reservoir.



the District, some 15 miles of main

extensions are being constructed.

The district is also financing and

constructing about 25 miles of 4-

inch to 12-inch lateral distribution

area had thought about this sort

of project for years, the first defi-

nite step was taken in October.

1952 when the Ventura River Muni-

cipal Water District was formed.

Although persons in the Ventura

facilities.



# Two New Directors Elected To Mueller Co. Board

Two new members were elected to the Board of Directors of Mueller Co. at the annual two-day shareholders and board meeting which opened in Decatur December 1.

Elected to the Board were John A. Schluter and Jackson Kemper. All other company officers and board members were re-elected.

Mr. Schluter succeeds his mother, Mrs. Charlotte Mueller Schluter, who resigned from the board.

Mr. Kemper, Executive Vice-President of Mueller Co., was elected to fill the vacancy created by the resignation of W. H. Hipsher.

Mr. Kemper, formerly Vice President and General Manager of the Forge and Fittings Division of the H. K. Porter Co., Inc., joined Mueller Co. July 18 after Mr. Hipsher resigned due to ill health.

Mr. Schluter lives in New York City, is married and has one son. He is a 1951 graduate of Williams in Williamstown, Mass., and served three years in the U.S. Navy as an officer.

He is a member of the Sales Division of International Business Machines, Inc., in New York.

### **RE-ELECTED COMPANY OFFICERS WERE:**

A. G. WEBBER, JR President and Chairman	of the Board
JACKSON KEMPERExecutive V	Vice-President
LEO WIANTAdministrative V	Vice-President
FRANK H. MUELLERVice-President and Director o	f Engineering
DAN R. GANNONVice-President and General S	ales Manager
LEROY J. EVANSVice-President in Charge of	Eastern Sales
LYLE R. HUFFSecret	ary-Treasurer

### **RE-ELECTED TO THE BOARD WERE:**

JOE H. GARDNER EBERT B. MUELLER

> FRANK H. MUELLER MRS. PAULINE V. MUELLER MRS. LENORE MUELLER SCHMICK FRANKLIN B. SCHMICK HAROLD M. SHERMAN, JR. ALBERT G. WEBBER, JR. LEO WIANT



JACKSON KEMPER Executive Vice-President

LEO WIANT Administrative Vice-President



ALBERT G. WEBBER, JR. President and Chairman of the Board



FRANK H. MUELLER Vice-President and Director of Engineering

> LYLE R. HUFF Secretary-Treasurer



DAN R. GANNON Vice-President and General Sales Manager

LEROY J. EVANS Vice-President in Charge of Eastern Sales





## Wettest Waterworks Man

If you are looking for a man immersed in his work, you might consider L. D. (Les) Working, Superintendent of Utilities in Port Huron, Mich.

He is one of the most saturated men in the water business because he not only works with water, but in it, on it and under it.

The city of Port Huron is at the extreme south end of Lake Huron where the lake and St. Clair River join. The city extends about seven miles from north to south, along the western shore of Lake Huron and the St. Clair River.

With this extensive shoreline, the city has many underwater structures such as intakes, outlets, river crossing syphons, bridges, and docks, none of which can be inspected without some form of diving gear.

In order to make the inspections of facilities first-hand Mr. Working undertook underwater diving.

In the summer of 1959 Mr. Working became interested in Self-Contained-Underwater, Breathing-Apparatus (SCUBA). He bought the basic equipment consisting of an air tank, pressure regulator, hose and mouthpiece, mask, fins, depth gauge, compass, and weight belt.

Using typical waterworks ingenuity, he tailored his own "wet suit." This is a close-fitting garment, styled somewhat like old-fashioned long underwear, made of foam rubber sheeting one-eighth of an inch thick, with hood and boots. The suit allows just a little water to get inside with the wearer, whose body heat then transforms him into a sort of animated underwater hot water bottle.

The suit also protects the diver against the cold waters, bumps and cuts.

Dressed for diving, the wearer carries about 80 pounds of equipment, including weights worn in his belt. The weights give an equalizing bouyancy which allows him to move to various levels in the water with a minimum of effort.

Mr. Working has gone to depths of 60 feet in his outfit and could go deeper.

The current in the vicinity of Port Huron flows at a rate of 8 to



This Is Les Working

10 miles an hour, giving it a flow volume of about 175,000 cubic feet per second. The water at Port Huron is pure and clear enough that the only treatment necessary is two parts of chlorine to a million of water.

Port Huron is located just across the river from Sarnia, Ontario which is the home of Mueller, Limited. Through this strait pass great boats and ocean-going vessels which travel the St. Lawrence Seaway.

Mr. Working said, "From my first dive in the river, my enjoyment exceeded my wildest expectations and I get into the water every chance I get. The possibility of being able to inspect the submerged structures plus a long desire and fascination to explore the hidden, prompted the venture," he added.

He went on to say that there were some hazards in the sport, however, adequate training and practice and an understanding of the hazards, make it a sport with a good safety record. The "Buddy System," which provides that a diver doesn't go down alone, is invariably followed.

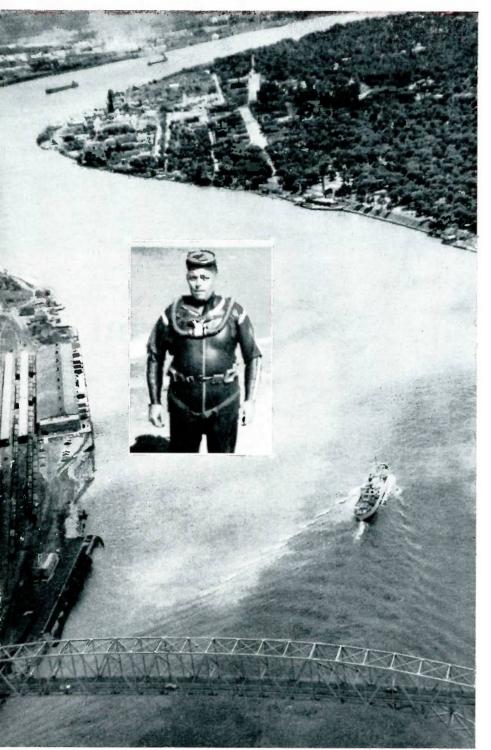
Mr. Working does not lack "buddies." He is a member of the board of directors of the Port Huron Channel Cats—a recently formed diving group of about 50 persons. There are more than 200 active skin divers in the Port Huron area.

One trophy that Mr. Working discovered on the bottom of the St. Clair was a four-cylinder Star automobile—a 1923 model.

He said there was no indication as to how the auto got to the river bottom, but it was removed because of its threat to navigation.

Les Working's working hobby has been an asset in his business but also provides him with a means of excitement and pleasure, and certainly qualifies him as one of the wettest waterworks men in the business.

This is Les - Working



## Chula Vista Moves Into New Shops

New division shops in Chula Vista are in use by the San Diego Bay Division of the California Water and Telephone Co., according to A. F. Poulter, Division Manager.

The new shop building replaces division shops located for many years in National City. Division headquarters offices are also in Chula Vista.

The new facility houses the company's superintendant of construction, meter readers and dispatcher in 1,600 square feet of office space. Eight thousand square feet will be devoted to warehouse space, and meter and welding shops.

The remaining 1,600 square feet will be utilized as a repair shop for the division's construction and transportation equipment.

The division shops will serve both the Sweetwater and Coronado Districts of the water and telephone company.

### Sea Water Fills Holes Under City

Pumping millions of gallons of sea water per day into the ground beneath the city, Long Beach, Calif., is winning the battle against land subsidence. This problem has cost the city and its industries millions of dollars during the past 30 years for the construction of harbor dikes, replacement of disrupted pipelines and repair of damaged buildings. The subsidence, caused by the pumping of oil and gas from shallow unconsolidated deposits, has been slowed to half the prevous rate of one foot per year in the harbor area and virtually eliminated in the downtown area, where one building dropped 27 feet since the early 1930's.

### MARCH • 1961



**De-Salting the Sea** 

## **Those Drops Are Important**

That "drop in the bucket" you hear people scoff at may soon become precious stuff . . if it's water. Few Americans realize how the consumption of fresh water has soared and how ingenious some scientists have been in seeking ways to maintain an adequate supply in the face of the exploding demand.

One idea—closer to reality than most of us think and far more practical than it may sound—is to de-salt the sea.

At the root of the supply problem is the fact that our future needs cannot be met by water from our lakes, rivers and streams. The advent of air conditioning, automatic washers and a host of other new products, not to mention the effects of improved plumbing and health standards, have upped our individual daily water requirements from 40 gallons in 1900 to 150 gallons or more today.

Although great in themselves, individual requirements pale before

the burgeoning demands of industry. The American industrial complex now uses an estimated 110 billion gallons of water a day to slake its ravenous thirst and it will need more than twice that much by 1980. It takes nearly 1,000 gallons of water to make just one automobile tire, 65,000 gallons to produce a ton of steel, and 200,000 gallons to process a ton of viscose rayon.

In testimony filed with a U. S. Senate Committee, Charles A. Robinson, Jr., staff engineer for the National Rural Electric Cooperative Association, warned that "our nation will dry up" unless appropriate action is taken.

Dr. Leroy E. Burney, Surgeon General, U. S. Public Health Service, has predicted that in 20 years, "the United States will be short 85 billion gallons of fresh water every day."

You needn't wait 20 years to see the shortage, however. In 1957, water supplies plummeted to dangerously low levels in 47 states, necessitating emergency measures in more than a thousand communities.

Dr. A. L. Miller, director of the Office of Saline Water, has this to say: "It is my personal opinion that should a severe drought occur, similar to those we endured in the early thirties and in the years 1953 and 1957, a real emergency would occur in thousands of cities and towns in the United States."

Interestingly, the problem isn't new. Ancient writings indicate that even before the Greek philosopher Aristotle tried his hand at it 2,300 years ago, efforts were made to obtain sweet water from salty seas. This is why converting sea water to fresh has been called "the ancient dream of man."

In the 16th century, when sailing ships began to roam the seven seas, one of the most critical problems faced by their crews was an adequate supply of fresh water. In an effort to help her Navy, England's Queen Elizabeth I offered the equiv-



The churning and swirling waters of a turbulent ocean . . . do they hold the solution to America's steadilyworsening water supply problems?

alent of \$50,000 (a vast fortune at that time) to anyone who could devise a commercially useful method of conversion.

About 200 years later, Thomas Jefferson conducted some successful distillation experiments, reporting to Congress in 1791: "From 16 pints of sea water he drew off 15 pints of fresh water in 2 hours and 55 minutes, with 3 pounds of dry hickory and 8 pounds of seasoned pine."

Today, most major ocean-going vessels carry their own conversion equipment. Our aircraft carriers of the Forrestal Class, for example, have four 50,000-gallon-per-day evaporators to supply the water needs of these huge ships and their large crews. Land-based plants have been erected in several arid locations and many more are planned as the cost of conversion is reduced.

Since World War II, scientists around the world have been diligently searching for more efficient and less costly processes.

New on the horizon, but capturing the attention and imagination

of the world, are the efforts now underway to produce fresh water from the sea by freezing.

Scientists have known for a long time that ice crystals consist of pure water. Unfortunately, when sea water freezes, salt or brine is trapped between the crystals. Thus, desalting the sea by freezing gives rise to two major problems: first, to develop an economical method of freezing individual ice crystals, and second, to develop a practical method of separating these crystals from the salty brine.

Recently, Struthers Wells Corporation of Warren, Pa., and Scientific Design Company of New York City succeeded in developing a freezing process that features the formation and growth of large ice crystals. The result: a marked reduction in surface area makes it far easier to separate and wash the crystals free of brine.

Working under a contract awarded by the U. S. Department of the Interior's Office of Saline Water, the two companies completed an engineering evaluation of their process in a laboratory model of the plant. The next step will be the construction of a large size pilot plant to provide a full scale test of this exciting new approach to the freezing method.

The system operates this way: by bubbling a refrigerant through sea water under controlled conditions, large pure water ice crystals are produced and then washed free of salt in a centrifuge, leaving the ice free of brine.

If the system works, and laboratory tests give every promise of success, it will be a real step forward in the urgent search for a new, low-cost source of fresh water that can banish forever the specter of water shortage that now hangs heavy over our heads—for it will tap the world's biggest supply of raw material... the estimated 320 million cubic miles of sea water!

A technician adjusts dials on a sea water conversion apparatus which is part of a process that freezes sea water in order to obtain fresh water in the form of ice crystals.





The senior girl sniffed disdainfully as the pink-cheeked freshman boy cut in. "Why did you have to cut in when I was dancing?"

"Sorry," the freshman answered, hanging his head in humility. "I'm working my way through college, and your partner was waving a \$5 bill at me.

Office Manager (to new employe): "You should have been here at nine o'clock."

New employe: "Why, what happened?"

Little Bobby ran to his mother

sobbing as though his heart would break.

"What's the matter, Bobby?" she asked.

"Daddy was hanging up a picture and dropped it on his toe."

"Why, that's nothing to cry about; you should laugh at that."

"I did," sobbed Bobby.

A woman who ran a boarding house would get her knives sharpened several times a week. When the knife sharpener asked why she had her knives sharpened so often, the woman whispered, "Well, it's cheaper than buying tender meat."



QUITE FRANKLY, I'VE NEVER. GIVEN MUCH THOUGHT TO PUBLIC OFFICE. "How did you make your neighbor keep his hens in his own yard? "One night I hid half a dozen

eggs under a bush in my garden, and next day I let him see me gather them."

Somebody told us about a little boy and an old man who had lost ten dollars. After listening to the oldsters's story, the kid, who had found the money, decided it must be his, and handed it over.

"Hey," says the old gent, "you're an honest boy, but what I lost was a \$10 bill, and you've given me ten ones."

"That's right," says the boy. "Last time I found one, the man didn't have any change."

Warden: "I've been in charge of this prison for 20 years and that calls for a celebration. What kind of party would you boys suggest?" Drisonara: "Open house!"

Prisoners: "Open house!"

The boy looked at the prices of the menu at the drive-in, then turned to his date and said, "What will you have, my plump little doll?"

Customer: "Hey, waiter, this steak is burnt black."

Waiter: "Yes, sir; it's a mark of respect. Our head waiter died this morning."

Jim: "Why did you break your engagement?"

John: "She wanted to get married."

The Smiths were on the balcony and could hear the young couple in the garden below. Mrs. Smith nudged her husband and whispered, "I think he wants to propose. We ought not to listen, Whistle at him."

"Why should I?" her husband asked. "Nobody whistled at me."

He: "Please, darling, whisper those three little words that will make me walk on air." She: "Go hang yourself."

Hank: "You used to say there was something about me you couldn't help loving." Claire: "But it's all spent now."

MUELLER RECORD

### Strange Game

In Sacramento it is required that hunters who shoot other hunters file a report with the Fish and Game Department within 48 hours.

A local business man had hired a new messenger.

Instructing him on picking up certain items, the boss said, "And if they can't give you these things, be sure to phone me. Just dial CApital 7-5526."

The boy stood thoughtfully, making no move to get started.

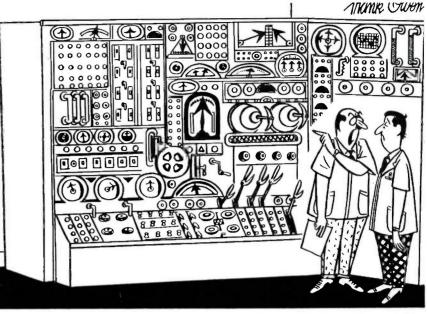
"What's wrong?" asked the boss. "Oh, nothing's wrong. But I just don't know how to dial a capital seven."

-::--

The hillbilly signed the hotel register with an X. Then he drew a circle around the X. The clerk, watching him, said, "A lot of people sign with an X, but that's the first time I've ever seen it circled."

"Tain't nothing so dad-burned odd about it," retorted the hillbilly. "When I'm out for a wild time, I just don't use my right name."

### small shots



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"I'm going to explain all this to you only once, so listen carefully...!"



MARCH • 1961

Tommy looked up from his book and asked, "Pop, is it true that a man is known by the company he keeps?"

"Yes, son, and always remember that."

"Well, Pop," asked Tommy, "what I still can't understand is this: If a good man keeps company with a bad man, is the good man bad because he keeps company with a bad man, or is the bad man good because he keeps company with the good man?" - :: -

The salesman was getting disgusted with his relations with the front office, so he sent the following wire to the boss: "Must have raise at office or count me out."

He received the following reply: "one, two, three, four, five, six, seven, eight, nine, ten." \_\_\_\_\_:\_\_\_

"Nope," argued Uncle Ezry, "I don't like this improvin' of our livin' standards."

"But why, Uncle Ezry? Hasn't everyone a right to a decent living?"

"Well, now, mebbe they has, but where we gonna git our great men with humble beginnins?" If for any reason delivery is impossible please return promptly to sender. If forwarded to a new address, notify sender on FORM 3547. Postage for notice or return guaranteed. MUELLER CO., DECATUR, ILLINOIS



MRS.WILLIAM E. MUFLLER 380 SELBY LANE ATHERTON, CALIF.

MF

AFTER 12 YEARS OF RESEARCH AND 45,000 OPEN-CLOSE TESTS, THE MUELLER ORISEAL CURB VALVE HAS GONE TO WORK. AND ON THE JOB, AS IN THE TESTS, THE ORISEAL HAS PROVEN LEAKPROOF IN SPITE OF REPEATED USE OR PROLONGED IDLENESS. THE TEFLON"\* COATED PLUG ORETAINS ALL ITS LUBRICATING QUALITIES IN ALL CONDITIONS. EVEN THE 2" ORISEAL VALVE IS OPERATED WITH JUST A 12", WRENCH-UNDER 125 P.S.I. ONCE INSTALLED, THE ORISEAL SELDOM NEEDS ATTENTION-THE LINE WILL PROBABLY BE REPLACED BEFORE THE ORISEAL WILL REQUIRE SERVICING !

WRITE FOR MORE FACTS ON THE ORISEAL CURB VALVE OR ASK YOUR MUELLER REPRESENTATIVE.

