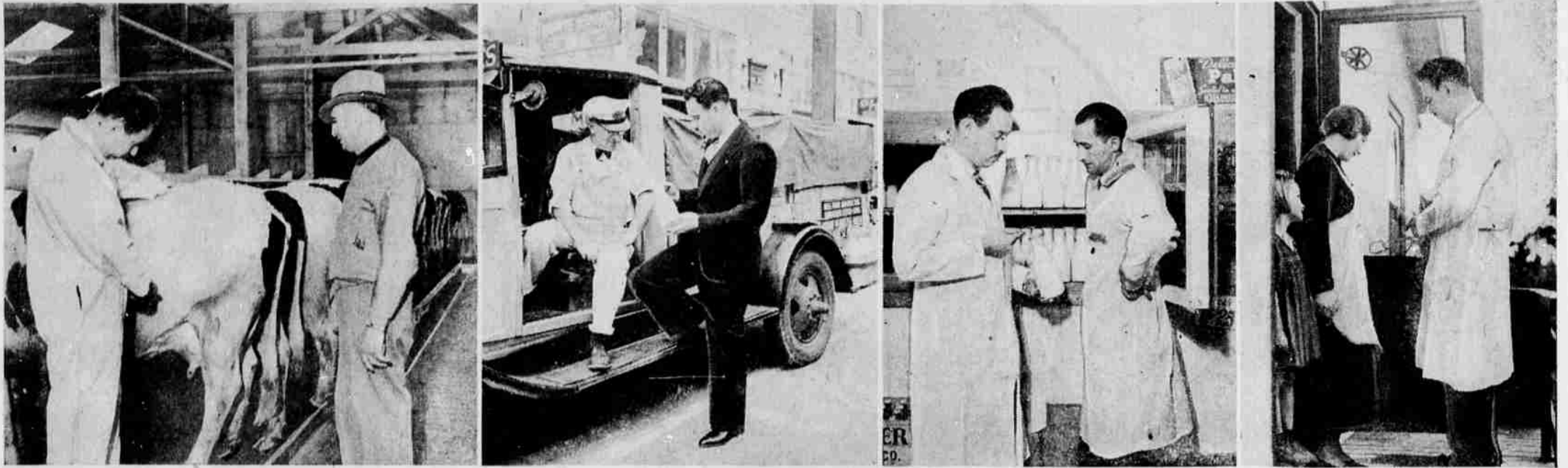


Modern Science Keeps Careful Watch Over Western Milk Supply



Successive steps in one of the most important functions of the modern city's health department—the supervision of the milk supply—are shown above. Left to right: an inspector advising a dairy farmer on the care of his cattle; inspector halting milk delivery wagon to obtain a sample bottle for testing; obtaining another sample bottle from the dealer's ice box; home inspection to warn housewives of the dangers from torn screens.

From the Cow to Coffee Cup, Constant Supervision Is Exercised By Great Corps of Inspectors and Laboratory Workers



And in spite of the extreme care with which your milk is science-guarded, the family Tabby too often is apt to take a satisfying, but unhealthy, lick or two from the bottle!

function of the inspection service. To ship milk into the city, a permit is required of the dairy farmer. Application for such a permit brings an inspector to the farm, who carefully checks the property and the herd. Cows must be tuberculin test-

ed; must be free from the ailments which transmit themselves to human beings through the milk. Raw milk, unpasteurized, must be delivered double-capped.

FROM the herd, the inspector travels to the barns. Cattle must be properly housed—and, of prime importance, properly fed.

The barn where the milking operation is carried out must have proper lighting, ventilation and drainage, with a concrete floor and side walls. The animals themselves must be kept as clean as their houses.

After the barns—the milker. He must pass a laboratory and physical examination. He must pass a test on the correct way to care for cows.

Then to other equipment: steam boiler for washing and sterilization; ice machine to allow for cold storage. This latter operation takes place directly after the milk is strained, and the liquid is kept at a temperature of 50 degrees F. in storage and in delivery trucks.

Once a permit is issued, inspectors make regular visits to obtain specimens of milk for the city laboratory, where a chemist

and bacteriologist are constantly watching. Samples are labeled with an identifying number, and all receive the same treatment.

The requirements are that milk must—

Arrive at the distribution plant at 55 degrees F., or less.

Be free from physical sediment.

Contain not less than 3.4 per cent butterfat.

Contain not less than 8.5 per cent solids not fat.

Be free from objectionable feed flavors and odors.

Have a bacteria count not over 100,000 per c.c. before pasteurization.

Strict, indeed. And rigorous the task faced by the farmer, who must supervise the diet of his herd almost as carefully as that of a young mother! Here is where the inspector must have a complete knowledge of his subject—to advise the farmer and to prove his contentions with the laboratory analysis.

After these extensive safeguards, it isn't infrequent that Mr. and Mrs. Public jeopardize their health through improper handling of delivered milk.

SUPPOSE an inspector visited your home some morning. Hm! A bottle of milk on top of the stove! He'll tell you that warm milk is the perfect breed-

ing place for bacteria which may cause serious illness; that milk should be kept in the refrigerator at all times.

And there—a ragged patch of broken screen on the back door.

YES—the perfect inlet for germs laden flies, which, lighting on your milk and other uncovered foods, might bring you any one of a dozen illnesses. George just doesn't seem to be able to get around to fixing it? Well, perhaps he will if he reads this.

That inspector might well feel sarcastic about the whole thing.

Oakland, and most cities, conduct "surprise" milk scoring contests. Milk is taken off delivery wagons, at farms and pasteurizing plants. No one knows when or where these bottles will be picked up for analysis. In Oakland, Dr. Ashley relates, an average score of 96.6 per cent is made. And this purity and richness is more than apt to be carelessly handled by the housewives!

MILK is not the only thing subject to inspection, of course. Ice cream and other by-products must be kept up to the high standard.

But milk, on which countless lives depend, serves to illustrate the modern trend. Prevention—that's the watchword. Literally hundreds of inspectors, chemists, health officers, scientists of all sorts labor daily toward that very end.

In 1935, Oakland's department collected 13,091 samples for analysis—a matter of 65,455 analyses. Multiply that by the many health departments in the West and you'll see the scope of this great safety measure.

Next time you gather in the morning milk—handle with respect. It's science-guarded!

THERE doesn't seem to be anything unusual about that bottle of milk you pick off the doorstep of a morning—but, nevertheless, it's one of the most highly guarded of your foods! So thorough is the supervision of milk these days, in fact, that anything resembling a milk-borne epidemic in the West has become a rarity to be classed with the extinct Great Auk and the non-existent sea serpent!

Routine work, this inspection has become through the years, yet there's plenty of drama back of the milk wagon if you want to look for it—the drama of men and women working ceaselessly to maintain public health.

True enough, they seldom get their names in newspaper headlines, and none has yet created the stir of, say, a trans-oceanic flier. Yet even a casual look at the situation convinces that what they lack in publicity, they make up for in value!

This story of milk inspection, typical of the care exercised

in Western centers, comes from Dr. N. N. Ashley, city health officer of Oakland, California. Let's call it "From Cow to Coffee Cup!"

Oakland's long record of maintaining an up-to-date, modern and scientific milk inspection service is well known throughout the West. In fact, Oakland is permanent convention headquarters for the Western Regional Dairy congress, which covers the 11 Western States.

Under the direction of Dr. Ashley, the Dairy and Milk Inspection service, which employs 15 persons, is responsible for the purity of every drop of milk entering the city. Some of it is delivered from 300 miles away in trucks kept at a constant temperature.

AN AVERAGE of 57,040 gallons of milk arrive in the Oakland territory daily from 319 dairy farms.

Farmers and milk dealers pay fees on all milk entering the city. A city ordinance requires that any plant handling two or more grades of milk must provide for the services of an inspector. License fees are additional.

In this way Oakland provides for complete inspection—and there is no cost to the public. As a matter of fact, receipts last year left a surplus of nearly \$300.

Let's start at the beginning and trace, with Dr. Ashley the

Scientific Discoveries Enable Man to Manufacture Gold

By Anne Bibb

YESTERDAY'S magic has become the reality of today and man is making gold.

To make gold—alchemists of the Dark Ages pored over boiling cauldrons in dusky monasteries, Hoping to win wealth and everlasting fame, men gambled away fortunes in trying new processes for the manufacture of gold. Then with the passing of the Middle Ages, alchemy became a matter for ridicule. Scientists laughed at the ancients and their dreams of a magic formula with which anyone could make as much gold as he wished.

But now, in the twentieth century, man is making gold without any more hocus pocus than he uses in making cheese.

THE first gold has been made in a laboratory at Berkeley. It was made in the cyclotron, a great machine which was designed by Prof. E. O. Lawrence, professor of physics at the university.

The cyclotron operates like a vast machine gun which discharges one hundred thousand billion bullets per second at a velocity of approximately twelve thousand four hundred miles per

second. The machine weighs 85 tons.

Its bullets are invisible fragments of double-weight hydrogen atoms obtained from heavy water and called deuterons. The object of shooting these fragments at such a speed is to bombard whole atoms and to transmute one element into another.

Gold was made by firing the deuterons at platinum.

THE successful creation of one form of radium, called Radium E, has recently been announced by Dr. J. J. Livingood, research associate in the Radiation Laboratory of the university. This form of radium is one of the naturally



Here's the 85-ton cyclotron which produces a shower of particles that on striking atoms blast them apart and transmute one substance into another. Right is Dr. E. O. Lawrence, and left, Dr. M. Stanley Livingston, his assistant.

occurring disintegration products of ordinary radium in the process of its decay into lead.

Dr. Livingood, working with the cyclotron, has succeeded in producing Radium E by bombarding ordinary bismuth with bullets made from the nuclei or hearts of double-weight hydrogen atoms. The amount of Radium E thus far created is almost infinitesimal but careful checks leave no doubt as to its identity.

While Radium E is the first

radio-active substance found in nature to be duplicated in the laboratory, many short-lived radio-active substances never found in nature have already been manufactured and more than one-third of all elements known to man have been successfully transmuted by this means.

Among the most interesting of these are radio-active sodium, made from a constituent of common table salt, and radio-active phosphorus.

THE production of radium E from bismuth, the heaviest of all non-radio-active substances, indicates that every element



Here's the 85-ton cyclotron which produces a shower of particles that on striking atoms blast them apart and transmute one substance into another. Right is Dr. E. O. Lawrence, and left, Dr. M. Stanley Livingston, his assistant.

known to man can be transmuted by the giant cyclotron.

In the present experiment the apparatus produced a barrage of double-weight hydrogen or deuterium bullets endowed with some five and a half million volts of energy.

The cyclotron will produce experimental intensities of a new, very powerful ray, known as the neutron ray, which is more penetrating and more highly endowed with energy than the X-ray.

Old Chinese Is Police Mascot Cooked in Philippines; Canned Salmon in Alaska

Ho Set 'On Duty' At Walla Walla Station Daily

SOLDIER of fortune, wartime cook in the Philippines, gold hunter and Alaskan cannery foreman—these are just a few of the jobs 69-year-old Ho Set, Chinese mascot of the Walla Walla, Wash., police department, has handled.

Now he's a wrinkled, toothless old fellow with a cackling laugh, who takes up his post at police headquarters at 8 o'clock in the morning and stays on duty faithfully until 9 or 10 at night.

Perhaps the oldest police mascot on the Coast, Ho Set is a pet of the officers, who provide him with clothing and tobacco and give him enough simple odd jobs to do in the summer time to earn money for his few wants.

Ho is a philosophical Chinese who sees little reason for all the hustle of the average person and still less reason for worry about the hereafter.

"Meehan people hurry too fast," he says through withered gums, out of which the last tooth dropped recently. "Allee same wear out heap quick. Worry help wear out, too. No need worry 'bout die. Man only die one time. After that heap long sleep. Me not hurry. Me not worry. Me happy."

BORN in Montana in 1867, Ho was taken to Canton by his parents when only three years old. He stayed with them until he was 17, when the United States called him. For several years he lived in San Francisco, but life got humdrum.

When one of the periodic Chi-



Meet Ho Set, who has been places and done things and now, at the young old age of 69, is settled down in Walla Walla, Wash., as mascot of the police department. "Me no worry"—that's his motto.

nese revolutions broke out in 1887, he hurriedly booked passage for Peking, where he enlisted in the revolutionary army. After two months of fighting, his side was victorious, and the war was over.

He then returned to San Fran-

cisco and from there went to Portland, where he opened a store. Storekeeping was monotonous for the energetic ex-soldier, however, so he pulled stakes for the Philippines with the beginning of the Spanish-American war.

Army officers were in need of cooks, so Ho promptly became a cook and stayed through the entire campaign, learning to dish up savory concoctions for his employers.

With the close of the war, Ho returned to Oregon and became a restaurant cook, finally getting a cafe of his own in the eastern part of the state.

GOLD was found shortly thereafter, so he became a miner with indifferent success. The money came in so slowly that he opened another cafe in Pendleton, later selling it to go to Alaska as the foreman of a Chinese cannery crew. He liked it there, except that the weather wasn't right for him.

"Heap freeze allee time," he says. "Too cold for China boy, so me come home quick."

For a time following his return he cooked for Sheriff Tom Gurdane of Pendleton, Umatilla county, Oregon, and then worked for George Kanz, who later became chief of police at Walla Walla.

It was then that he began to work in as the station mascot, a post he holds even though Kanz is no longer connected with the department.

Ho takes a lot of good-natured kidding from the officers, who accuse him of having an Indian wife and of being a hatchet man. He doesn't let any of the jests bother him, however. "Me allee same cop, too," he declares. "Me got plenty flat feet."

That's usually sufficient to hold any of them!

DIZZY SPELLS

Here's a fair offer—get a jar of Kruschen Salts—take as much as will lie on a dime every day in your morning cup of tea or coffee or in hot water.

After the jar is empty if you are not satisfied with improvement in health get your money back.

No drastic cathartics—no constipation—but blissful little bowel action when you take your little daily dose of Kruschen.—Adv

A Baby For You?

If you are denied the blessing of a baby all your own and yearn for a baby's smile, write in confidence to Mrs. Mildred Owens, Dept. M, 580 Huron Bldg., Kansas City, Mo., and she will tell you about a simple home method that helped her after being denied 13 years. Many others say this has helped bless their lives. Write now and try for this wonderful happiness.—Adv

KONNOR'S NASAL JELLY

He Won't Be BALD!

He uses Glover's Mange Medicine followed by Glover's Medicated Soap for the shampoo. If YOU are afflicted with Baldness, Dandruff or Excessive Falling Hair, stop worrying about it. Start using Glover's today and keep at it. Sold at all Drugstores. Or have your Barber give you Glover's treatment regularly.

GLOVER'S MANGE MEDICINE
FREE Booklet on the Hair and Scalp—write GLOVER'S, 444 Fourth Avenue, N. Y. City

CATARRH AND SINUS CHART—FREE

Guaranteed Relief or No Pay. Stop hawking—stuffed-up nose—bad breath—sinus irritation—phlegm-filled throat. Send Post Card or Letter for New Treatment Chart and Money-Back Offer. 30,000 Druggists sell Hall's Catarrh Medicine.

Write today! F. J. CHENEY & CO. Dept. 231 TOLEDO, O.

Old Leg Trouble

HEALED WHILE WORKING. Consultation from VARIOUS VETERANS, JEWELLING, MILK UREI, or Injuries from climbing, by radio and mail old leg trouble. Various Home Methods relieve pain, heal many scars or wounds for good. Mention your trouble for a FREE BOOK. Dr. F. S. Claude Vianna Co., 1038 S. Alvarado St., Los Angeles, Calif.