

7D  
**OnIzed**

**OWENS - ILLINOIS**

**GLASS**

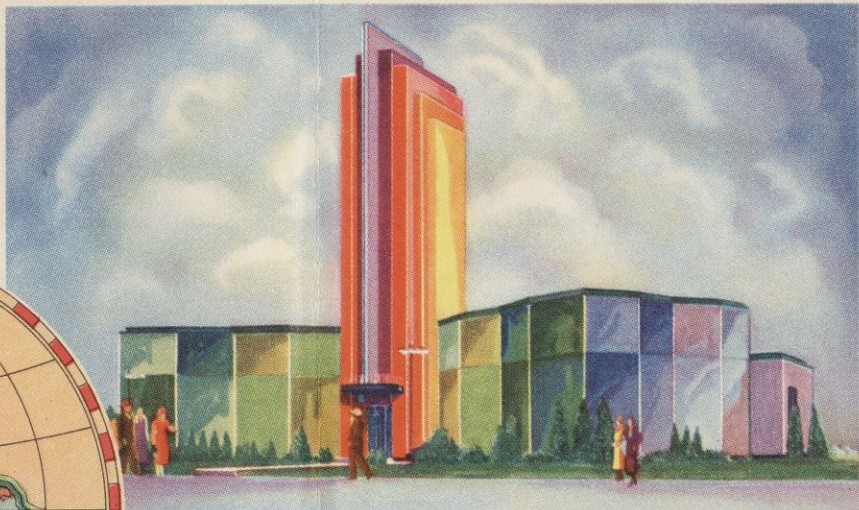
**CONTAINERS**

**1934**

**CHICAGO**

**WORLD'S**

**FAIR**



OWENS-ILLINOIS GLASS BLOCK BUILDING



## ... A SYMBOL OF HIGHEST QUALITY

*Onlzed*—a combination of the initials "O" and "I" of Owens-Illinois, is the symbol of attributes which are vital to all users of glass containers. It is representative of an organization which stands squarely behind every container or product bearing the O-I trademark.

*Onlzed* containers are made of the finest raw materials, fabricated by the most up-to-date equipment and annealed (tempered) for strength in clean and efficient electric ovens. Throughout the entire process of manufacture, accurate control of quality is maintained to the end that every *Onlzed* container measures up to rigid specification standards.

From the conception of the original design to the final inspection, a vast well trained organization is serving packer and ultimate user alike. 21 huge manufacturing plants and 30 branch sales and service offices with highly trained personnel help to make *Onlzed* products the basis for comparison in a great industry.

Look for the O-I trademark on the bottom of every bottle. It is indicative of the fact that the producer of any product contained therein recognizes his responsibility to provide you with the best obtainable.

## OWENS-ILLINOIS GLASS COMPANY

General Offices: Toledo, Ohio

### Factories

ALTON, ILL.	EVANSVILLE, IND.
BRACKENRIDGE, PA.	FAIRMONT, W. VA.
BRIDGETON, N. J.	GAS CITY, IND.
CARLYLE, ILL.	GLASSBORO, N. J.
CHARLESTON, W. VA.	HUNTINGTON, W. VA.
CHICAGO HTS., ILL.	MUNCIE, IND.
CLARION, PA.	NEWARK, OHIO
CLARKSBURG, W. VA.	OKMULGEE, OKLA.
COLUMBUS, OHIO	STREATOR, ILL.
	TERRE HAUTE, IND.

### Branch Sales Offices

ATLANTA, GA.	INDIANAPOLIS, IND.
BALTIMORE, MD.	KANSAS CITY, MO.
BOSTON, MASS.	LOUISVILLE, KY.
BUFFALO, N. Y.	MEMPHIS, TENN.
CHICAGO, ILL.	MILWAUKEE, WIS.
CINCINNATI, O.	NASHVILLE, TENN.
CLEVELAND, O.	NEW ORLEANS, LA.
COLUMBUS, O.	NEW YORK, N.Y.
DALLAS, TEXAS	PHILADELPHIA, PA.
DENVER, COLO.	PITTSBURGH, PA.
DES MOINES, IOWA	ST. LOUIS, MO.
DETROIT, MICH.	ST. PAUL, MINN.

## Owens-Illinois Pacific Coast Company

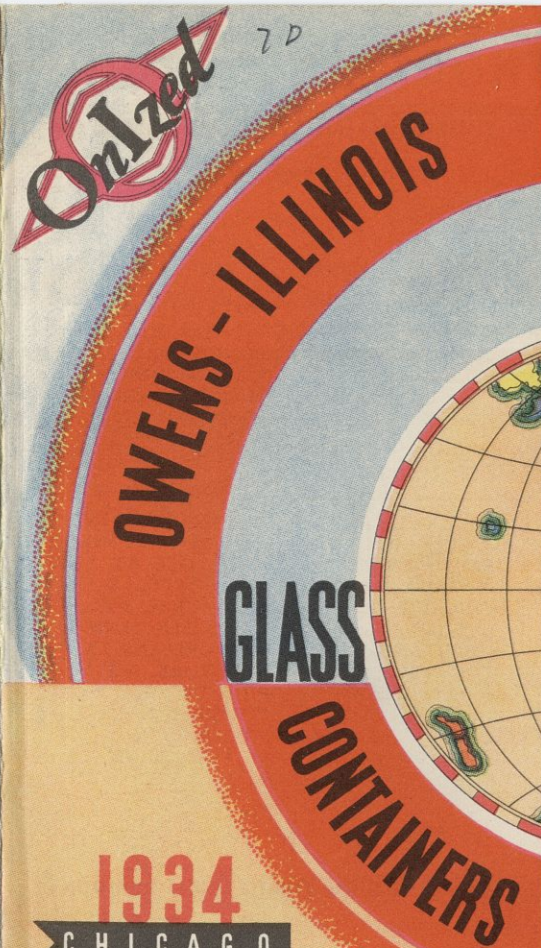
General Offices: San Francisco, Calif.

### Factories

SAN FRANCISCO, CALIF. LOS ANGELES, CALIF.

### Branch Sales Offices

LOS ANGELES, CALIF. SALT LAKE CITY, UTAH  
PORTLAND, OREGON SEATTLE, WASH.

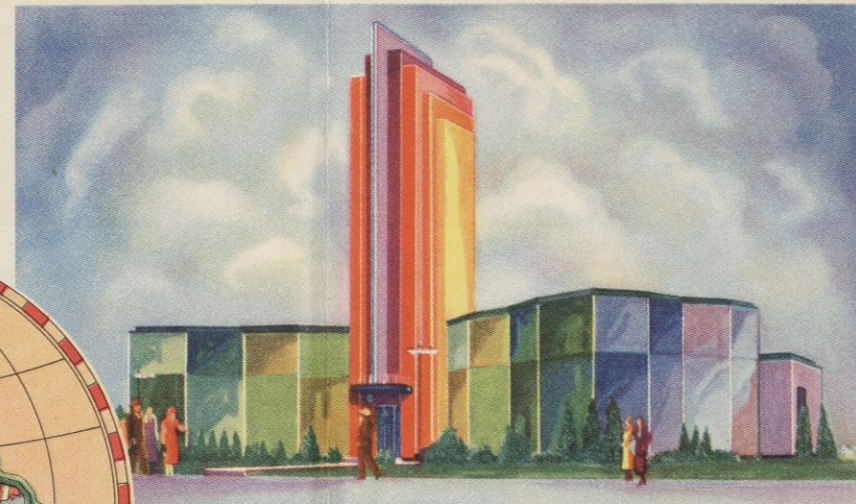


1934

CHICAGO

WORLD'S

FAIR



OWENS-ILLINOIS GLASS BLOCK BUILDING

## OWENS-ILLINOIS . . . A SYMBOL OF HIGHEST QUALITY

*Owens-Illinois*—a combination of the initials "O" and "I" of Owens-Illinois, is the symbol of attributes which are vital to all users of glass containers. It is representative of an organization which stands squarely behind every container or product bearing the O-I trademark.

*Owens-Illinois* containers are made of the finest raw materials, fabricated by the most up-to-date equipment and annealed (tempered) for strength in clean and efficient electric ovens. Throughout the entire process of manufacture, accurate control of quality is maintained to the end that every *Owens-Illinois* container measures up to rigid specification standards.

From the conception of the original design to the final inspection, a vast well trained organization is serving packer and ultimate user alike. 21 huge manufacturing plants and 30 branch sales and service offices with highly trained personnel help to make *Owens-Illinois* products the basis for comparison in a great industry.

Look for the O-I trademark on the bottom of every bottle. It is indicative of the fact that the producer of any product contained therein recognizes his responsibility to provide you with the best obtainable.

## MANY INTERESTING EXHIBITS AT THE OWENS-ILLINOIS BUILDING

### PANORAMA OF CONTAINER MANUFACTURE

This scale model clearly indicates steps involved in production of glass containers. It graphically portrays huge storage bins, stacks, melting furnace, revolving pot, automatic machine, conveyors, lehrs, selection, warehouse and shipping. With the close of the Fair, by request, the diorama will become a part of permanent exhibition at the Franklin Institute in Philadelphia.

### GLASS CONTAINERS TO FIT EVERY NEED

Packaging has come to be an important adjunct in the merchandising and sale of practically all products. Because of its unique characteristics, from the angle of visibility and cleanliness, glass is the ideal packaging material. It lends itself to pleasing and practical design and affords an opportunity to see what you are buying. Glass challenges the producer to use only the best of ingredients.

### VACUUM PACKED COFFEE IN GLASS

Fresher coffee because it is vacuum packed in glass! This newest development in packaging coffee is sweeping the country because the housewife gets fresher coffee in a handsome glass jar that of itself has great utility. Already scores of roasters have changed to the superior glass package, and samples of their individual brands comprise an impressive group.

### MOTOR OIL SEALED IN GLASS

Properly packaged lubricating oil is the motorist's insurance against substitution. Oil in glass with its tamper proof seal is the one means of securing full protection. Empty bottles are thoroughly washed, refilled and resealed, making them economical. The motorist not only sees what he buys, but knows he gets what he pays for.

### PRESTO PRESERVING JARS

Presto mason and wide mouth fruit jars of *Owens-Illinois* glass are ideal for home preserving. Presto has earned Good Housekeeping Institute's seal of approval. Its new cap with glass lid seals without metal contact, offering utmost protection for its contents. Presto jars of a variety of styles, both narrow and wide mouth, are available everywhere.

### THE GLASS BLOCK BUILDING

Glass blocks of which this building is constructed constitute a practical construction material which insulates against heat and cold while transmitting light effectively. Applied color affords permanent decorative effects. Within the building in miniature form, are uses to which the material can be put—industrial plants, service stations, garages, dairies, air ports, offices and homes.

### DUSTOP AIR FILTERS for Domestic Use

"Dustop", another *Owens-Illinois* product, is the original replacement type of air filter. It consists of finely drawn glass strands, coated with a viscous substance which catches and holds dust and dirt. Dustop filters are standard equipment on practically all types of gravity and mechanical warm air furnaces. They can be installed at little expense on existing heating equipment.

### For Commercial and Industrial Use

Multiple banks in suitable frames, two filters in tandem, remove dirt and impurities from the air. Such installations can be had at as little as 1c per c.f.m. for original installation, and only a fraction of a cent per c.f.m. per year for maintenance. Replacement is very simple. Wherever air is mechanically circulated, Dustop does the most efficient job at lowest cost.

## HOW *Owens-Illinois* GLASS CONTAINERS ARE MADE IN THE LARGEST PLANT OF ITS KIND IN THE WORLD • SEE PANORAMA

**1-2-3-4** Silica Sand, Soda Ash, Lime and Cullet (crushed glass) are the chief ingredients of glass. Sand is the base, Soda Ash a flux, and lime a hardener. Cullet is added to hasten melting because it melts more quickly than raw materials.

**5** Great concrete bins are used for the storage of huge quantities of raw materials.

**6-7-8** A traveling weigher and mixer gathers the raw materials in exact proportions, mixes the "batch" thoroughly, and delivers it to hoppers above the melting furnaces. From here it is fed periodically into the "dog house" (receiving end) in quantities proportionate to those being withdrawn by the blowing machines.

**9-10** The melting of glass is unique in that it is done from above. Under terrific heat (2400°F) the raw materials melt and slowly sink to the bottom of the furnace. The purified portion then flows through a throat into the refining chamber. Here at lesser heat (2000°F) the molten glass awaits withdrawal for blowing.

**11** The revolving pot (its major portion under cover in the interest of temperature control) is the contact point between furnace and blowing machine.

**12-13** The blank or measuring mold dips into the revolving pot and through vacuum extracts the required weight of glass for a given bottle.

**14** The finishing or forming mold surrounds the parison (or slug) of glass released by the blank mold and employing compressed air, swells the glass out into the mold form. When the finishing mold parts, the bottle is released to be conveyed to the lehr for tempering.

**15** Simplified top view of the intricate Owens automatic machine showing relative location of revolving pot and bottle delivery. The machine makes one and a quarter revolutions in completing a bottle, has 15 arms and rotates from 3 to 6 turns per minute, depending upon size of bottle being blown.

**16** So-called "knock-out arms" remove the bottles from the finishing mold and direct them to a setting-up device which properly aligns them on a conveyor for delivery to the lehr.

**17** Bottles are lifted from the conveyor at frequent intervals and inspected by experts to guard against the slightest imperfection.

**18-19-20** With human-like acumen, the setting-up device up-ends bottles and places them on flight conveyors upon which they travel in soldier-like formation to the lehr (tempering oven). The receiving end of the lehr is 1150°F, the temperature gradually decreasing while bottles travel more than a hundred feet of length until they are thoroughly annealed. Proper annealing or tempering removes strains and imparts strength. Electric lehrs do the work cleanly and more accurately because they can be readily controlled.

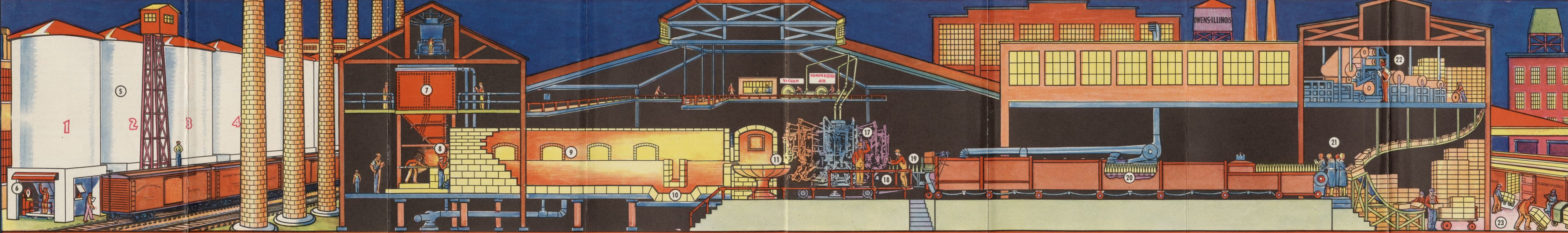
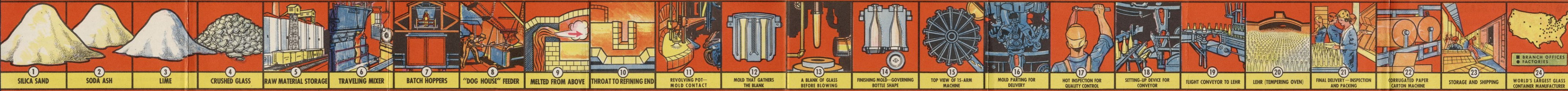
**21** Bottles at the cool end of the lehr are carefully selected and reselected for the slightest imperfections. Girls do most of Owens-Illinois selecting because they are more deft and possess a keener eye than the average male.

**22** In the interest of providing customers with a complete packaging service, corrugated carton and wood box factories are adjoining Owens-Illinois plants. Thus customers are assured of packages which deliver their products to retail outlets efficiently and safely.

**23** Storage and shipping facilities commensurate with the tremendous volume of bottle production are maintained at each plant. Every known device to speed service is available.

**24** Owens-Illinois 21 Plants and 30 Branch Sales and Service Offices are strategically located throughout the country.

**A PANORAMA OF THE GLASS CONTAINER MANUFACTURING PROCESS BY THE OWENS-ILLINOIS COMPANY... MOST MODERN METHODS AND EQUIPMENT IN THE WORLD**



# OWENS-ILLINOIS GLASS COMPANY

*General Offices: Toledo, Ohio*

## *Factories*

ALTON, ILL.	EVANSVILLE, IND.
BRACKENRIDGE, PA.	FAIRMONT, W. VA.
BRIDGETON, N. J.	GAS CITY, IND.
CARLYLE, ILL.	GLASSBORO, N. J.
CHARLESTON, W.VA.	HUNTINGTON, W. VA.
CHICAGO HTS., ILL.	MUNCIE, IND.
CLARION, PA.	NEWARK, OHIO
CLARKSBURG, W.VA.	OKMULGEE, OKLA.
COLUMBUS, OHIO	STREATOR, ILL.
	TERRE HAUTE, IND.

## *Branch Sales Offices*

ATLANTA, GA.	INDIANAPOLIS, IND.
BALTIMORE, MD.	KANSAS CITY, MO.
BOSTON, MASS.	LOUISVILLE, KY.
BUFFALO, N. Y.	MEMPHIS, TENN.
CHICAGO, ILL.	MILWAUKEE, WIS.
CINCINNATI, O.	NASHVILLE, TENN.
CLEVELAND, O.	NEW ORLEANS, LA.
COLUMBUS, O.	NEW YORK, N.Y.
DALLAS, TEXAS	PHILADELPHIA, PA.
DENVER, COLO.	PITTSBURGH, PA.
DES MOINES, IOWA	ST. LOUIS, MO.
DETROIT, MICH.	ST. PAUL, MINN.

# Owens-Illinois Pacific Coast Company

*General Offices: San Francisco, Calif.*

## *Factories*

SAN FRANCISCO, CALIF. LOS ANGELES, CALIF.

## *Branch Sales Offices*

LOS ANGELES, CALIF. SALT LAKE CITY, UTAH  
PORTLAND, OREGON SEATTLE, WASH.