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The modern Gehl Cheese plant in Germantown, Wis., receives sugar and soybean oil in tank cars. *Bob Gallegos*



Creameries with bottling plants require a fleet of delivery trucks. This is a Borden truck from the early 1960s. *Jeff Wilson collection*

at the various towns along your layout. You can also model a more limited operation, perhaps having the milk traffic handled by a local passenger or freight train.

You can also model the service found in many areas of the country in which milk was simply handled in baggage-express cars. As the local train stops at a town, the morning's milk cans would be on a baggage cart ready for loading. Or, perhaps the cans aren't yet ready and a train has to be held until they're loaded. If you model a terminal, you can have an REA or creamery truck waiting to pick up the cans collected along the train's run.

Condensaries, butter plants, and cheese plants are located throughout the country and can be logically modeled on most layouts. These can handle two or three cars, or several more if you have room. Butter will go out in refrigerator cars, and loads of condensed and evaporated milk can go out in refrigerator cars or insulated or standard boxcars. Dried products, packed in barrels or sacks, can go out in boxcars.

Don't forget the inbound boxcar loads of packaging materials and containers. Larger plants might also receive inbound fuel loads (usually coal, sometimes LPG or fuel oil) for in-plant power

and boiler houses. (Smaller creameries usually received fuel by truck.)

Walthers recently released a complex of creamery structures in HO scale (Sterling Consolidated Dairy, No. 933-3799) that could easily represent a creamery with a bottling plant, a condensary, a butter plant, or a cheese factory. Laser-Art Structures has a wood creamery in HO (no. 181-680), the N Scale Architect offers one in N (10502), and many companies offer wood and brick structures that could represent creameries and related structures. Milk platforms are available in HO from Creative Model Associates (no. 1007) and JL Innovative Design (461).

If you model a creamery with a bottling plant, be sure to have several delivery trucks ready to set out on their route, **2-24**. Walthers offers a Divco milk truck in HO and Wiking has one in N. Classic Metal Works has refrigerated box trucks and semitrailers in HO and N, and Sheepscot makes kits for bulk milk tank trucks in HO.

Milk cars are available from Athearn (a 40-foot, ready-to-run wood Pfaudler car in N), Walthers (53-foot, wood-sided Pfaudler car in HO), and InterMountain (40-foot Pfaudler steel car in HO). Several milk cars have been imported in brass, and Funaro & Camerlengo has made several cast-resin kits for can cars and tank cars (including the Borden butter dish car) in HO scale.

Milk cans are a necessity for creamery scenes, and they're available from Berkshire Valley (O scale, nos. 514, 524), Creative Model Associates (HO, no. 1006), Evergreen Hill (HO, 659; O, 8059), The N Scale Architect (HO, 20042; N, 20011), Neal's N-Gauging Trains (N, 44), Scale Structures Ltd. (HO, 2277), Selley Finishing Touches (HO, 154), Sequoia (HO, 1011), and Period Miniatures (N, 2012).

# Breweries



3-1

The brewing industry has a long history with railroads. Hauling cases and kegs of beer is only part of the story, as railroads also carry incoming grain, malt, and other raw materials, as well as barrels, bottles, and cans, **3-1**.

Some beer still travels by rail, but since the 1960s, trucks have claimed most of the traffic.

A gas tractor moves a pair of Union Refrigerator Transit ice-bunker refrigerator cars into position at the Miller Brewing Co. in Milwaukee in 1934. *Courtesy Miller Brewing Co. Archives*

THREE

**U.S. breweries in operation**

Year	Number of Breweries	Barrels brewed (in millions)
1810	132	0.2
1850	431	0.8
1860	1,200	1.6
1880	2,200	13.3
1900	1,700	39.4
1916	1,300	58.6
1935	750	45.2
1940	611	54.9
1950	407	88.8
1960	229	94.5
1970	142	134.6
1980	101	188.4
1990	286	201.7
2004	380	204.3

**3-2** Excludes microbreweries

**Brewing history**

Beer has been around for thousands of years before railroads came to be. Beer crossed the Atlantic with the first settlers, and by the end of the 1600s, many commercial breweries were in operation in the colonies. When the Civil War ended, the U.S. had more than 1,200 breweries, and by 1880, that number had grown to more than 2,200, **3-2**.

The reason so many breweries had sprung up was that beer became very popular. It was also very perishable, making it difficult to transport the finished product. Most early breweries were small operations, making enough beer for local use within a town or city.

After the 1880s, the number of breweries began to shrink, while the amount of beer brewed grew tremendously into the 1900s. This was largely due to railroads and the coming of trucks and improved roads. As with other industries, breweries grew larger as processes became mechanized and automated, making it cost-effective to brew in volume.

Louis Pasteur also deserves a



**3-3** Miller and other brewers began shipping beer by rail in the mid-1800s. This 15-ton wood car was built in 1889. *David P. Morgan Library collection*



**3-4** The Crescent Brewing Co., in Nampa, Idaho, was typical of small breweries in the early 1900s, featuring a multistory brick structure, tall smokestack, and rail siding. This view is from 1915. *Jeff Wilson collection*

great deal of credit. His discovery that heat would kill microbes in canned and bottled food led to pasteurization. For breweries, this meant that by pasteurizing bottled beer, it would stay fresh for months instead of days.

This led to the growth of regional brewing companies. The Miller Brewing Co. began shipping beer by rail before the Civil War, **3-3**. Anheuser-Busch (the E. Anheuser Co. until 1879) was the first company to pasteurize

bottled beer, and in the late 1870s, Busch began a national-scale advertising campaign for its new brand, Budweiser. Shipping the beer required a fleet of refrigerator cars, and in 1878, the St. Louis Refrigerator Car Co. became Anheuser-Busch's first subsidiary.

Other brewers that began pushing their product nationally were Milwaukee's Pabst and Schlitz. These larger companies became known as shipping breweries, or shippers.

More than a thousand local brewers still operated into the 1910s, **3-4**. By 1900, the average brewery in the U.S. turned out 23,000 barrels of beer a year, but by then, the larger shippers were making more than a million: Pabst was the first to top the million mark, in 1893, followed by Anheuser-Busch in 1901, then Schlitz.

A significant change was coming, in the form of the 18th Amendment: Prohibition. It prohibited the manufacture and consumption of beverages containing more than one-half of one percent alcohol. The amendment was ratified in 1919 and took effect January 16, 1920.

Many breweries – especially small ones – simply shut their doors. Others, including the large shippers, managed to stay in business selling products such as non-alcoholic beer, soft drinks, rubbing alcohol, candy, and dairy products. Some made malt syrup, which – although used in baking – was a key ingredient for home-brewed beer, **3-5**.

In April 1933, beer with a 3.2 percent alcohol content became legal again, and the 21st Amendment (repealing the 18th) took effect in December. About 300 breweries survived Prohibition, with about 700 operating by 1934.



**3-5** During Prohibition, many brewing companies made soft drinks and malt syrup, products highlighted on this early 1930s Miller billboard reefer. *Courtesy Miller Brewing Co. Archives*



**3-6** The Coors brewery in Golden, Colo., was served by multiple tracks from a curved spur off the main line at the top of the photo. In this early 1930s scene, several Coors billboard reefers are visible along with Pacific Fruit Express cars. *Hol Wagner collection*

The trend toward larger breweries continued, and the large shippers now had less competition from the hundreds of smaller breweries that had gone out of business. For example, the Coors

brewery in Golden, Colo., became a large regional brewer in the 1930s, **3-6**. Improved highways and rail service also made it easier for large breweries to get their products into more local areas.

**Top 10 brewing companies (millions of barrels)**

Rank	1940	1960	1980	2004
1	Anheuser-Busch (2.5)	Anheuser-Busch (8.4)	Anheuser-Busch (50.2)	Anheuser-Busch (103.0)
2	Pabst (1.6)	Schlitz (5.7)	Miller (37.3)	Miller (38.6)
3	Schlitz (1.5)	Falstaff (4.9)	Pabst (15.1)	Coors (22.4)
4	Schaefer (1.4)	Carling (4.8)	Schlitz (14.9)	Pabst (7.3)
5	Ballantine (1.3)	Pabst (4.7)	Coors (13.8)	Yuengling (1.4)
6	Ruppert (1.2)	Ballantine (4.4)	Heileman (13.2)	City Brewery (1.3)
7	Falstaff (0.7)	Hamm's (3.9)	Stroh (6.2)	Boston Beer Co. (1.3)
8	Liebmann (0.7)	Schaefer (3.2)	Olympia (6.1)	Latrobe (1.1)
9	Hamm's (0.6)	Liebmann (2.9)	Falstaff (3.9)	High Falls (0.7)
10	Blatz (0.6)	Miller (2.3)	Schmidt (3.6)	Sierra Nevada (0.6)

**3-7**