

DATE CODES DISCOVERED ON MILK BOTTLE RIMS: A WEST COAST DATING SYSTEM

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Some embossed milk bottles in the western United States exhibit manufacture date codes that aid in the dating of historic trash deposits. Further research determined that these tiny embossed digits on the top of the finish rim represent a unique date code, indicating the month and year of production. Examination of more than 1,250 milk bottles (230 with codes) demonstrates that these codes were used by five California glass factories between 1923 and 1933. The coding system was initially developed to help dairies track bottle loss and was quickly adopted by glass factories to compete for dairy business. The practice was discontinued when one glass company dominated the market.

Manufacture date codes embossed on glass containers can be very useful to archaeologists for dating historic refuse deposits. Early on, in the 1910s, some beverage bottle makers placed a date code on the lower portion (heel) of the bottle body to track the duration of use/reuse for these types of bottles. By the mid- to late-1920s, date codes were placed on the base portion of more than beverage bottles. For a brief time, in the late 1920s/early 1930s, some soda and citrate of magnesia bottles had a date code placed on the side of the reinforcing ring of the crown finish (Figure 1). At least the Illinois-Pacific Glass Corporation and Illinois Pacific Coast Glass Company used this coding method on some western bottles (Lockhart et al. 2005:78). Glenshaw Glass Company used such “ring codes” in the early 1930s (Sweeney 1995:72).

In 2005, I looked at a half-pint P. M. Dairy milk bottle adorning an office shelf and happened to notice tiny embossed digits on the top surface consisting of a “2” on the left rim (9-o’clock position), and directly across from it, a “5” on the right rim (3-o’clock position) (Figure 2). Sharing this discovery with members of a Bottle Research Group (BRG) that I have been part of since 2004, we initially thought these must be date codes, possibly combining the 2 and 5 to equal 25 – for 1925. Coincidentally, the same week, a school construction monitoring project yielded some 20 embossed milk bottles, and 17 had these “rim codes.” In this small sample, it was obvious that the two digits combined were not a year code, since six examples had a “10” on the left rim, and five others had a “26” on the right rim. It was clear a much larger sample was needed to solve what these “mystery digits” meant.

FINDING MORE EXAMPLES

Through the modern convenience of the internet, I started searching for sources to get more examples of such milk bottles. I was able to find a few California dairy bottles being sold by a northern California collector. Upon contacting him, I got the reply that two of the bottles he was selling did have the digits on the rim. It turned out he has an extensive collection of dairy industry items and has created a very educational website (dairyantiques.com), yet he had never noticed these small digits. He provided four more examples, all with the heel marking of a triangle outline with the initials IPG inside, used by the Illinois-Pacific Glass Corporation (Figure 3).

With 24 examples, I created a database that revealed that all those with bottle maker’s logos had been made by California companies. I contacted another northern California collector and acquired 13 additional examples. Also thanks to the internet, I learned about an extensive collection of dairy items from California that is stored by our state’s Parks and Recreation Department in Sacramento. Hoping to gain access to this collection, I contacted archaeologist Peter Schulz at State Parks, who graciously made arrangements for the BRG to examine this collection in July 2006. Long-time bottle date code researcher



**31 "ring"
year code**

Figure 1. Soda bottle crown finish reinforcing ring date code example for 1931.

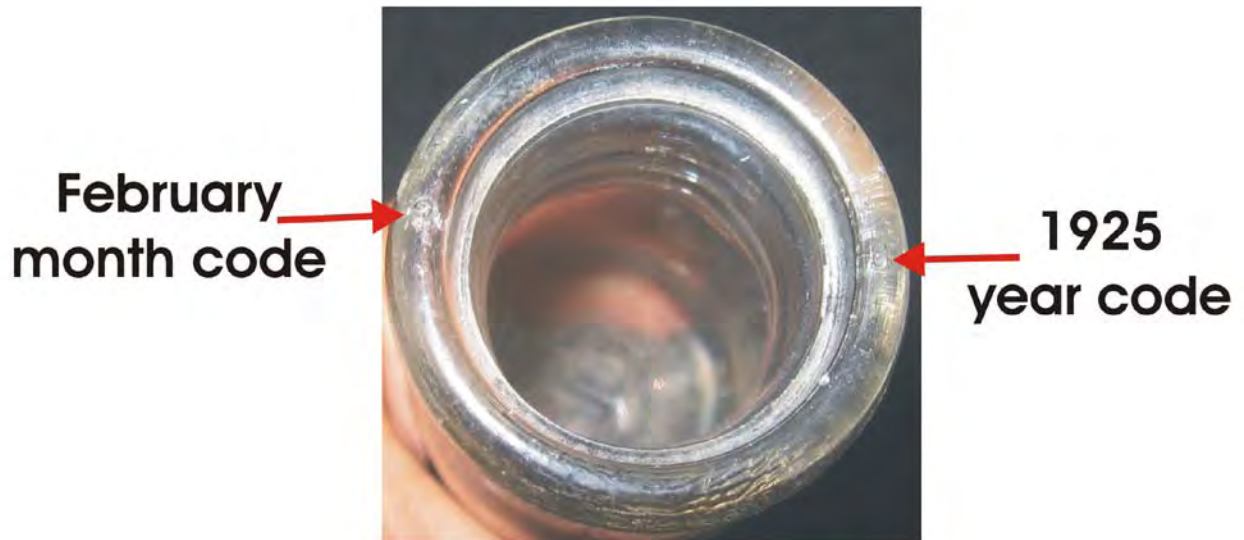


Figure 2. Image showing the most common format of milk bottle rim date codes. This example indicates a manufacture date of February (2 code) 1925 (5 code).



Figure 3. Illinois-Pacific Glass Corporation logo found on many rim-coded bottle heels.

Table 1. Summary of rim code usage, by manufacturer.

GLASS COMPANY	LOCATION	YEARS OF OPERATION	QUANTITY *	CODE USE RANGE
Southern Glass Co.	Los Angeles	1917-1931	18	? 1923 – Sept. 1930
Illinois-Pacific Glass	San Francisco and Los Angeles	1926-1930	125	Jan. 1925 – July 1933
Pacific Coast Glass	San Francisco and Los Angeles	1919-1930	46	June 1925 – July 1933
Owens-Illinois Co.	Los Angeles	1932-1937 **	1	July 1932
Latchford Glass Co.	Los Angeles	1925-1938	5	Sept. 1932 – Oct. 1932
Blake-Hart ***	Sacramento	(1925-1929)	15	Dec. 1925 – Feb. 1929
No maker mark			18	Feb. 1925 – Sept. 1930
Total sample			228	1923 – July 1933

* Does not include 13 examples of codes of 6 // 8 or 8 // 9, since orientation is not possible to determine year code.

** Los Angeles plant #21.

*** Blake-Hart bottles were made by Illinois-Pacific Glass and Pacific Coast Glass; only those lacking company marks are listed under this “company” name. Ira Blake and Harry Hart were the patent holders for a square milk bottle, not bottle makers.

Bill Lockhart, Peter, their spouses, and I convened in Sacramento and looked through over 100 boxes of old dairy bottles, recording an additional 113 rim codes and their associated maker attributes.

SUMMARIZING THE DATA

With additional examples accumulating from more monitoring projects and checking local museum and private collections, the database continued to grow. Through analyses of at least 230 bottle rims, the following results were concluded. The numbers on the left rim range from 1 to 12, while numbers on the right rim are usually single digits – 0 through 9 – but sometimes a double digit of either 25 or 26 (observed so far). The left rim numbers, limited to 12 numbers and lacking the use of a zero, represent an annual month code; and the right rim digits are the year code. These small, $\frac{1}{8}$ in. high (or less) digits were used by at least five West Coast glass companies (Table 1); and these dated bottles were requested by dairies located in at least California, Oregon, Nevada, Utah, and Hawaii. These bottles all have embossed (or sometimes etched) labels, indicating the rim code practice was employed prior to the mid-1930s, when use of applied color lettering (or pyroglazing) labels became widespread (Owens-Illinois Glass Company 1935).

WHY CODES WERE USED

In the early 1920s, prompted by competition with other dairy bottle makers and as a means to gain customers, some West Coast glass companies placed date codes on the flat rim of machine-made milk bottles with embossed body labels. A date of manufacture would help the bottle user to track the lifespan of a given bottle. Bottles were an expensive investment, and bottle loss/breakage was of great concern to dairy companies (Smith 1921; Walker 1917). Milk bottles are the only type of bottle on which date codes could be embossed on the rim, due to their Common Sense cap-seat closure type, with an inset cap that sat below the rim top.

Evidence to support that these digit codes are actually the date of manufacture was discovered in trade journal ads placed by the Illinois-Pacific Glass Company. One 1925 *Pacific Dairy Review* ad (Figure 4) asked, “How do you know a bottle has earned its cost unless it is dated?” continuing with “Look at the top of the finish for date of manufacture” – what the Illinois-Pacific Glass Company called a “date stamp.” A 1926 Illinois-Pacific Glass Company ad (Figure 5) in the *Western Milk Dealer and Dairy*

KEEPING BOOKS ON MILK BOTTLES



How do you know a bottle has earned its cost unless it is dated? Look at the top of the finish for date of manufacture. If it is there the maker believes in his own bottle.

THERE ARE FIVE POINTS OF SUPERIORITY

- | | |
|----------------|-----------------|
| 1—COLOR | 3—EASY CLEANING |
| 2—CAP-SEAT | 4—DURABLE GLASS |
| 5—A DATE STAMP | |

I. P. B. BOTTLES LEAD IN ALL FIVE

Only use Bottles whose Color does Justice to your Milk.

I. P. G. MILK BOTTLES

Are Stronger and Give Longer Service.
That is why each one bears its own date.

IDENTIFY THEM



BY THE TRIANGLE

ILLINOIS-PACIFIC GLASS COMPANY
SAN FRANCISCO, CAL.

PORTLAND, 816-817 Broadway Bldg.
LOS ANGELES, 1717 Industrial St.

SEATTLE, 1315 Alaska Bldg.
OAKLAND, 1744 Broadway

Figure 4. Illinois-Pacific Glass Company 1925 Pacific Dairy Review advertisement for their dated milk bottles.

Counselor promoted the claim that their “electrically annealed milk bottles live practically twice as long” as the ordinary bottle that was good for an average of 17 round-trip uses. The ad emphasized how their bottles are more durable and that “they are dated on the top of the finish so you can figure for yourself” how long the bottle lasts, compared to other makers’ bottles. So, obviously, the date codes were put on the rim so that dairies could track how long each bottle was in service.

Excitingly, what must be the earliest versions of this coding practice have been discovered in the last two years. It appears that Southern Glass Company (Vernon, California) was the first company to place codes on the upper portion of milk bottles. Apparently, this process began in 1923, with a single digit year code positioned on the underside, or “roll,” of the Common Sense cap-seat finish (Figure 6). A backwards “3” is located here on a P. M. Dairy pint bottle, while no codes are present on the rim. This code most likely equals the year 1923. But codes in this location are not easy to see (for tracking purposes), so by at least August 1923, Southern Glass moved the year code to the rim top, yet retained a “roll code” for at least one year (Figure 7). It is assumed the “roll code” represents the month of manufacture – allowing the bottle user even more precise tracking of a bottle’s lifespan.

The coding system apparently evolved over the next year, with the redesign of the code arrangement so that the month code (1-12) was placed on the left side of the rim top, while the year code was positioned directly across the rim, on the right side. Year codes are typically single digits (0-9). By 1925, this format became the standard (although digit size varies), and Illinois-Pacific and Pacific Coast glass companies adopted the use of such codes to compete for buyers (Table 2). For some reason, Pacific Coast Glass Company used double-digit year codes from December 1925 through June 1926.

This Is Station I. P. G.

BROADCASTING

Life Insurance for Milk Bottles

The ordinary milk bottle lives 17 round trips—some more and some less—but seventeen trips on an average.

ELECTRICALLY ANNEALED MILK BOTTLES live practically twice as long. They are dated on the top of the finish so you can figure for yourself.

WHY NOT BUY EXCLUSIVELY The Longer-Lived bottles that bring up the average of all the others?

One kind of insurance is payable on death—the other kind is that which insures a longer life.

Electrically Annealed Bottles are brighter, tougher and more durable.

Ask the Certified Dairies what bottles they demand to avoid spalling.

**Identify Them By
The Triangle**



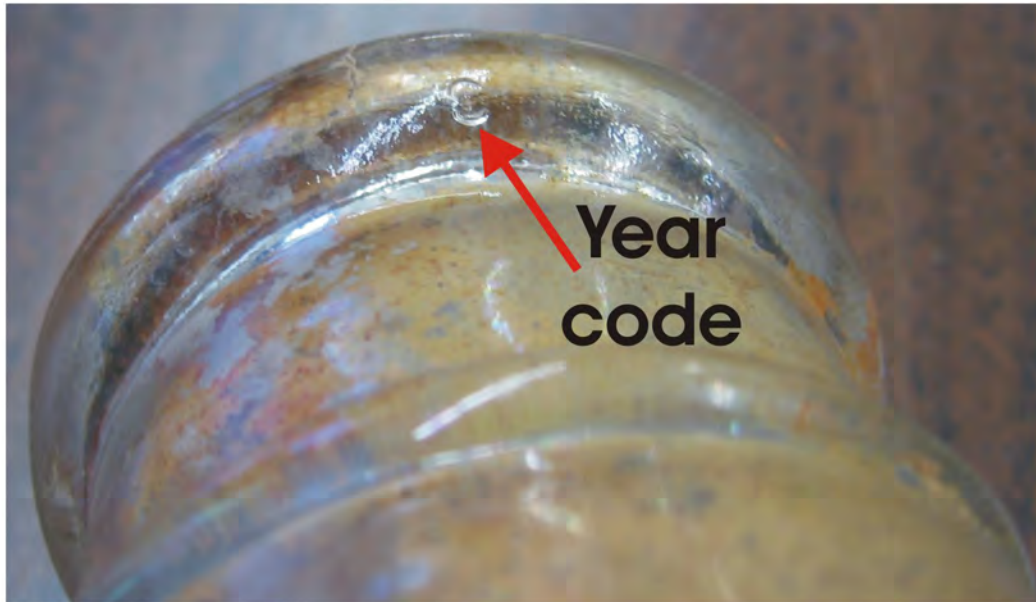
ILLINOIS-PACIFIC GLASS COMPANY
SAN FRANCISCO, CAL.

PORTLAND SEATTLE OAKLAND LOS ANGELES
816-817 Broadway Bldg., 1315 Alaska Bldg. 1744 Broadway 1717 Industrial St.



Figure 5. Illinois-Pacific Glass Company 1926 Western Milk Dealer and Dairy Counselor advertisement for their electrically annealed, longer-lived milk bottles “dated on the top.”

Earliest milk bottle date code; “3” for 1923



(the backwards 3 was a mold engraver's error)

Figure 6. Image showing earliest dating code (3) format used by Southern Glass Company in 1923 on “roll” portion of milk bottle Common Sense finish.

From 1926 through at least 1928, there apparently was not a concern about how round-shaped digits like 6, 8 and 9, when used in combination with a similar shaped digit, were not readily oriented to read the codes as intended. Seven examples of either 6 // 8 or 8 // 9 codes and six examples of either 8 // 6 or 9 // 8 codes have been recorded, but cannot be dated. Of course, bottle users were only concerned with the year they were using a bottle, and would not be looking back in time (at discarded bottles), as an archaeologist would. The Pacific Coast Glass Company appears to be the only company that thought to use an underline below a 9 code to indicate it was the month code for September.

CONCLUSION

After the initial use in 1923, by at least August if not earlier, five West Coast glass companies employed this date code system, with the Owens-Illinois Pacific Glass Company and Latchford Glass Company jumping on the band wagon late in the game in 1932. These codes are only found on bottles used by western U. S. dairies, with examples from Oregon, Nevada, Utah, and Hawaii, besides California. Bottles made for West Coast dairies by East Coast factories do not exhibit rim codes. Use of rim codes slacked off in popularity by 1928, but a few were still used as late as 1933. By 1929, Illinois-Pacific had moved its codes to the heel, and by 1930, few companies continued to use rim codes or month codes. By mid-1932, most bottles in the region were being made by Owens-Illinois Glass Company, which already had its own coding system (on the bottle base).

3 year code



**8 month code
on "roll"**

Figure 7. Image showing 8 roll code for August and 3 rim code for 1923.

Table 2. Summary of rim code frequency by company and year code.

GLASS COMPANY (YEARS IN BUSINESS)	MANUFACTURE YEAR (LAST TWO DIGITS)											TOTAL	PERCENT
	23	24	25	26	27	28	29	30	31	32	33		
Southern (1917-1931)	2	4	5	--	--	1	2	3	--	--	--	17	7.9
Illinois-Pacific (1926-1930)	--	--	14	15	17	24	18	22	2	--	3	115	53.5
Pacific Coast (1919-1930)	--	--	4	11	6	8	10	2	--	2	1	44	20.5
Latchford (1925-1938)	--	--	--	--	--	--	--	--	--	5	--	5	2.3
Owens-Illinois (1932-1937) **	--	--	--	--	--	--	--	--	--	1	--	1	0.5
Blake-Hart (1925-1929) ***	--	--	1	10	2	1	1	--	--	--	--	15	7.0
Unknown (no mark)	--	--	2	3	1	1	5	5	--	1	--	18	8.4
Total *	2	4	26	39	26	35	36	32	2	9	4	215	
Percent	0.9	1.9	12.1	18.1	12.1	16.3	16.7	14.9	0.9	4.2	1.9		

* Does not include 13 examples of codes of 6 // 8 or 8 // 9, since orientation is not possible to determine year code.

** Los Angeles plant #21.

*** Blake-Hart bottles: only those lacking company marks are listed here.



Figure 8. Glass company logos found on the heel or base of the most commonly found milk bottles with rim codes.

FURTHER RESEARCH

However, the story has not ended yet, so more data are needed. If anyone reading this should come across additional examples of rim or roll codes, please share your data with me (Carol@LagunaEnv.com). The common company logos found on “rim code” milk bottles are shown in Figure 8. The first four logos were used by Southern Glass during their years in business; some of their bottle bases also display a logo advertising their “extra tough” glass formula written as TRAXTUF. The Illinois-Pacific Glass Corp. logo can be faint on the heel, but if you see a triangle it has the three initials inside even if you cannot make them out. Pacific Coast Glass used two different heel marks during this time period. And the Blake-Hart logo is found on the side of their patented square-shaped milk bottle, sometimes accompanied by the logo for the two companies that made these bottles: Illinois-Pacific Glass and Pacific Coast Glass.

ACKNOWLEDGEMENTS

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