

Gwen: Our last story takes us to the whiskey stills of Western Pennsylvania in the late 1700s. It's the summer of 1794, and trouble is brewing west of the Allegheny Mountains. Whiskey is virtually the only means of income in this depressed region, and distillers are up in arms over a new federal tax. When the federal marshals arrive to stamp out the protests and collect taxes, the whiskey rebels fight back, organizing 7,000 militia to defend their beloved group. More than 200 years later, a woman from New Jersey thinks she may have a bottle from this little-known chapter of American history.

Alene: My father found this bottle in the crawlspace underneath the cabin, and he maintained it was from the Whiskey Rebellion. Now, my mother said that it wasn't, that it was just some old guy's whiskey stash that he was hiding from his wife and forgot where he put it. And I want to know once and for all who's right and who's wrong.

Gwen: I'm Gwendolyn Wright, and I'm on my way to Washington, Pennsylvania to meet Alene. So let me see this bottle, if I may. Thank you. Oh, it's beautiful. Now, what makes you think it's from the time of the Whiskey Rebellion?

Alene: Well, the cabin was made at that time, the Whiskey Rebellion took place in this area, and there were also a lot of glass factories in the Pittsburgh area at that time.

Gwen: So what exactly would you like for me to find out?

Alene: I would like to know if the bottle is from the Whiskey Rebellion, and was it made in the Pittsburgh area.

Gwen: May I take it with me?

Alene: Yes, you can.

Gwen: I'll take good care of it. The Whiskey Rebellion is a defining moment in American history, when the federal government used force to collect taxes from the people. I want to take a closer look at Alene's bottle. "Union." It says "Union" on here. We usually think of the word "Union" in terms of the Civil War, but it was also a critical concept for the early federalists. Thirteen stars, they must represent the original 13 states. Clasped hands, a cannon... Here's something, "F.A. & Co.," that could be the whiskey maker or the company that made the bottle. I'll need some help deciphering these symbols, but first, I want to learn more about the conflict that sparked the uprising. In the late 18th century, Western Pennsylvania had a subsistence economy. Settlers made almost everything themselves; their own food, houses, clothing, and their own whiskey. 35 percent of this population were Scots-Irish, rugged and fiercely independent, as well as very good whiskey makers. Whiskey was the one item that always had cash value, and it could be bartered for other goods. But in 1791, the new federal government ordered its first domestic tax on whiskey production. Alexander Hamilton, the secretary of treasury, wanted the revenue to help pay debt from the Revolutionary War, but the settlers of Western Pennsylvania rightly understood the tax as a direct assault on their freedom. Many of these farmers had been foot soldiers in the American Revolution, but now they'd become disillusioned with their new government. Economic conditions were declining for many in the region, and on top of it all, "The new national excise now threatened the only viable cash product of the Western country's meager existence." Ah, you must be Bill.

Bill Hogeland: Hi, Gwen.

Gwen: I'm meeting historian William Hogeland. He takes me through the flashpoints that sparked the conflict.

Bill: This is the Miller family homestead, and this is the site where the first shots of the Whiskey Rebellion were fired.

Gwen: Bill explains that William Miller was a farmer and small-time distiller who refused to register his still with the government.

Bill: On July 15, 1794, U.S. Marshal and General John Neville, the officer in charge of collecting the tax, attempted to serve Miller a \$250 fine. Armed rebels followed Neville to the Miller homestead. He refused to take the writ, harsh words were exchanged, then shots rang out. They didn't hit anybody, but they were sharpshooters, and it was said that they could hit the left eye of a squirrel at long range if they'd wanted to, so probably it was a warning shot. Two days after the failed tax collection, the rebels burnt General Neville's mansion to the ground. By the end of July 1794, Western Pennsylvania was primed for war with the federal government. They were not just in a state of insurrection but in a state of actual secession. By the end of July, they'd mustered 7,000 men in arms.

Gwen: So Washington rightly understood this was insurrection, that the future of this young and still-fragile union was at stake.

Bill: That's right. Washington raised 13,000 eastern troops to bring against the rebels, and that's more than had beaten the British at Yorktown.

Gwen: Bill, I have a whiskey flask that may date from the time of the rebellion. Have you ever seen one like this?

Bill: I haven't. Typically, distillers would have used casks and barrels for transporting whiskey.

Gwen: Bill shows me a typical whiskey still from the period.

Bill: You take fermented grain and boil it up with water in a copper pot like this, catch the steam as it boils, send it through a coil like this in order to cool it down, and at the very end here, what drops out there will be a fluid that's highly alcoholic, far more alcoholic than what you started with.

Gwen: Bill thinks it's possible that our bottle would have been used to collect whiskey directly from such a still.

Bill: This would have been a personal flask somebody would have brought down to the tavern or to the distiller to fill up with whiskey for their own personal use, very common at the time. The maker's mark on our bottle may also be a clue.

Gwen: Bill explains that the struggle between small whiskey producers and big distilling companies was at the heart of the conflict.

Bill: Hamilton structured the tax quite carefully and deliberately to base it on a still's capacity, not on the actual volume produced. This favored large, industrial, commercial distillers who could distill in much longer cycles and penalized people who distilled occasionally and in shorter cycles, which is the way most people distilled around the country, and certainly here in Western Pennsylvania. If F.A. & Co. is the name of a whiskey maker, we may have a bottle from one of the big distilling companies, not from a rebel. But perhaps the mark is from the bottle manufacturer.

Gwen: The Corning Museum of Glass in Corning, New York, has one of the largest collections of glass in the world. Leading glassmakers also teach here. I'm meeting Bill Gudenrath, historian and expert glassblower. Hi, Bill?

Bill Gudenrath: Hi, Gwen, good to meet you.

Gwen: Nice to meet you, too. What are you doing?

Bill: I'm free-blowing. I've just gathered glass on the end of this blowpipe, and I'm about to blow into it. You can see the bubble come out on the far end. Oh, there comes the bubble. Free-blowing is the traditional way of blowing glass, just like the Romans did it. It was also used to make the very first American bottles.

Gwen: Free-blowing seems fun.

Bill: Oh, it's very fun. Would you like to try it?

Gwen: I'd love to. Let's give it a go.

Bill: A hard blow at first, please. And stop. Very nice. Now I'm going to spin this to elongate that bubble to become a tube, and now blow a second time. Keep blowing, hard, hard, hard. That's it. A little harder, a little harder. And...you did it, thank you. Very good.

Gwen: Is this still a common method, or just for artists?

Bill: It's mostly for artists. Bottle-blowing is now highly mechanized, and it's very seldom done by hand. Now, I'll spin this once to elongate it a little bit; I'm going to put a rubber blow tube on to allow me to blow while I'm working, and I'll hold the far end with this tool and stretch it, and that's giving it the pattern.

Gwen: Oh, it's beautiful now. Well, Bill, I'm investigating this glass flask that was found near a log cabin in the Pittsburgh area that I think is from the late 1700s.

Bill: Wonderful, wonderful. Pittsburgh was certainly a glassmaking center. The aquamarine is certainly a characteristic color; it was common in the late 1700s.

Gwen: Bill says aquamarine was traditionally a simple and easy way to color glass.

Bill: Well, you get it by the addition of copper and iron in the glass, and those are naturally occurring things. Iron makes glass green, copper makes it blue; the combination of the two makes this-this green/blue aqua.

Gwen: But he notices something else about our bottle; the telltale signature indicating how the bottle was made.

Bill: This was not free-blown, this was blown into a mold. You can see the seam mark on either side.

Gwen: Bill explains that mold-blowing involved some of the skills of free-blowing.

Bill: The technique of using a shell or mold would eventually help standardize bottles for mass production.

Gwen: So Americans were using molds in the late 1700s?

Bill: Absolutely. We have a couple of different types of molds over here, you want to see?

Gwen: Oh, yeah.

Bill: Okay. This one happens to be a two-part mold, and here the glass bubble is lowered while attached to the blowpipe-is lowered into the mold, it's closed, and then the worker blows very, very hard, and as soon as the glass hardens, the mold is opened, and that determines the object's final shape and size. Our bottle has other characteristics that mark it as mold-blown. There are chill marks on the surface. This is caused by the contact of the hot glass with the cold mold, and it leaves these marks.

Gwen: It's flat in shape.

Bill: Exactly; with free-blowing, you get things that are symmetrical. Also, there's decoration-dissimilar decoration on either side. This was simply decoration that was carved into a mold.

Gwen: Bill shows me a mold that could have made a bottle such as ours.

Bill: So this is a metal mold; it's made of brass or bronze. You can see the decoration is carved inside...

Gwen: Oh, "Lafayette."

Bill: Exactly, right.

Gwen: But these molds didn't take the same skill?

Bill: They did not. These were-these were made for workers who required much less skill than for free-blowing.

Gwen: Bill suggests to date our bottle more accurately, we talk with the Corning Museum's curator of American glass, Jane Spillman. Jane shows me lots of flasks that date back to the time of the Whiskey Rebellion; greens, ambers, and our color, aquamarine. These were all used for whiskey?

Jane Spillman: Yes, whiskey and rum and other beverages to keep a gentleman warm on a cold day. They're called "pocket bottles" because you can see, they're flat in cross-section, and that was so that they would fit into a gentleman's pocket; he could always have his sips with him.

Gwen: I ask Jane if she has any flasks with pictorial designs on them like ours. Oh, look at all these.

Jane: We have more than 650 different designs of these.

Gwen: Jane says that placing symbols on bottles was an early form of mass media, commenting on events of the day such as political campaigns. Were these political themes very common for glass?

Jane: Quite a few of them, yes, are political images. One of the most popular images that you find on these flasks are portraits, usually of politicians. Now, here's George Washington. You see, that says, "The father of his country," and it has a picture of George.

Gwen: Well, I have a flask that could have been made in the 1790s in Western Pennsylvania, the time of the Whiskey Rebellion. What do you think?

Jane: Well, it's definitely a whiskey flask, but one thing makes the dating of it certain, and that's these initials which you see on it, "F.A. & Company."

Gwen: Jane recognized the initials. And that stands for "Fahnestock, Albree & Company," which was a glassmaker in Pittsburgh. What she tells me next gives me an answer for Alene. Well, Alene, I can finally resolve that long-term argument between your parents. Good. I can tell you that your bottle was made in Pittsburgh, and it was someone's personal whiskey flask.

Alene: Personal whiskey flask? Ooh, that's good. That's good. But when was it made?

Gwen: I tell Alene what I learned from Jane Spillman at the Corning Museum of Glass. Fahnestock, Albree & Company was in business in the 1860s.

Alene: So this was made during or just after the Civil War?

Gwen: Yes, and you can see that the symbolism on it is very indicative of the Civil War. If you look at the cannon, and on this side, the clasped hands and the word "Union," the two halves coming back together; the olive branches indicate "Peace." So it's from the Civil War. I tell Alene that the tradition of marking bottles with political imagery flourished in the mid-1800s and continued well after the Civil War.

Alene: My father maintained that this was from the Whiskey Rebellion from the 1790s, and my mother thought that this was from the 20th century as a replica or a commemorative piece, and then to find out that they were both wrong and that it's from the Civil War is actually kind of funny. [Laughter]

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