Who really invented the cotton gin?

Who really invented the cotton gin? The debate continues to perplex many two centuries after the historical event.

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Bill Mayfield warned his audience they still might not know who really invented the cotton gin when he completed his presentation on that topic at this year's Beltwide Cotton Conferences in Dallas, Texas.

But his audience at the Beltwide's Cotton Ginning Conference had a much better understanding of what happened more than 200 years ago when the cotton gin – and the cotton industry – was in its infancy, following his presentation.

"Who really invented the cotton gin? When I get through here today, you're still not going to know," said Mayfield, a retired engineer with the USDA's Agricultural Research Service, to considerable laughter.

Henry Ogden Holmes, a blacksmith who worked on a South Carolina plantation, and Eli Whitney, a Yale graduate who served as a private tutor for the children of Gen. Nathaniel Green in Savannah, Ga., were both instrumental in the development of the cotton gin, according to Mayfield.

Holmes filed for a caveat for a mechanical cotton gin in 1787. There was no U.S. Patent Office then and the caveat, which was good for five years, was aimed at protecting the rudimentary machine designed by Holmes. The caveat, signed by George Washington and Thomas Jefferson, was granted on March 24, 1789.

Purely a coincidence?

"Five years to the day after Holmes filed for his caveat, Eli Whitney received a patent for his version of a machine that could gin cotton," said Mayfield. "In 1796, Holmes came back and got a patent on a continuous flow cotton gin. The difference in Whitney's and Holmes' designs was that Whitney's was a batch operation.

"You rake the cotton in, turn it by hand and dig the seeds out with what wasn't ginned," he said. Holmes' design, on the other hand, moved the ribs out and used a roll box "similar to what we have to day – not just like it because there's been a thousand patents since then – but where the seed would fall out the bottom."

The continuous flow operation "was very simple engineering and much easier to automate than anything that's a batch operation," said Mayfield.

In 1802, a judge nullified Holmes' patent, saying that his was "merely an adaptation of Whitney's patent. The judge did not recognize that continuous flow was so much more important than a batch-type operation," said Mayfield. "In 1806, another judge decreed a permanent injunction against Holmes' estate for the same reason."

From 1788 to 1796, the Kincaid Plantation where Holmes worked ginned 240 pounds of lint per day, said Mayfield. "Remember a person can only hand gin about a pound a day. Obviously, the Kincaid Plantation had something going for them because it would have taken 240 people working every day to gin that much cotton.

Circumstantial evidence

"It's pretty obvious what may have happened there," said Mayfield. "It's all circumstantial evidence; there's nothing we presented here that would hold up in court. But it's pretty clear what the conclusion is."

The information Mayfield presented is contained in a new book titled "Who Really Invented the Cotton Gin?: Unraveling the Mystery and Folklore of a Critical Agricultural Innovation," which was co-authored by Wesley F. Buchele and Mayfield.

Mayfield says some of the background for the book comes from a publication about the early development of the ginning industry, compiled by Charles Bennett and published by the Texas Cotton Ginners Association in the early 1960s. Mr. Bennett, who died in 1964, established the Ginning Laboratory in Stoneville, Miss., in 1929 and was probably the first gin engineer.

"In the 1990s, I was on the National Historic Commemoration Committee of the American Society of Agricultural Engineers, and the committee recognized the cotton gin as one of the major developments in the history of the world," said Mayfield.

"But no one else had any background in cotton so I did a little research and went back to Mr. Bennett's references, pulled them up and tried to dig a little deeper. So I was able to pull together a little more information than Mr. Bennett did, but not a lot more."

Iowa State University professor

A few years later, Dr. Buchele, a retired professor from Iowa State University, became interested in the cotton gin and began working on a book.

"Wes is now 95 or 96 years old, and he's published a number of books and holds 15 or 20 patents of his own, including those dealing with the rotary grain combine and the round hay baler," says Mayfield. "So he went down to Georgia and South Carolina, went to court houses and dug up lawsuits. Then he brought me in to help finish the book."

Mayfield is not receiving any remuneration for his work on the book. "I told them on the front end I didn't want any money, but Dr. Buchele has the expenses of professional proof readers and printing costs."

So what can you take away from the book?

"There is a lot of circumstantial evidence that Whitney and his investors may not have come up with the original idea, but the fact is that Holmes' patent is state of the art technology and is basically the cotton gin we see today with lots of improvements."

 $For more about the book visit \ \ https://www.amazon.com/Who-Really-Invented-Cotton-Gin/dp/1530311780.$