In the harvest season of the cotton States of the South a vast, fleecy snow-fall seems to have come down in the silence of the night and covered acres innumerable with its virgin emblem of plenty and prosperity. It is the regal fibre which is to set millions of looms in busy whirl and to clothe, when duly spun and woven, half the population of the earth. That "cotton is king" has long been held as a potent political axiom in the United States, yet there was a time when cotton was not king, but was an insignificant member of the agricultural community. How cotton came to the throne is the subject of our present sketch.

In those far-off days when King George of England was trying to force the rebellious Americans to buy and drink his tea and pay for his stamps, the people of Georgia and South Carolina were first beginning to try if they could do something in the way of raising cotton. After the war of independence was over, an American merchant in Liverpool received from the South a small consignment of eight bags of cotton, holding about twelve hundred pounds, the feeble pioneer of the great cotton commerce. When it was landed on the wharves in Liverpool, in 1784, the custom-house officials of that place looked at it with alarm and suspicion. What was this white-faced stranger doing here, claiming to come from a land that had never seen a cotton-plant? It must have come from somewhere else, and this was only a deep-laid plot to get itself landed on English soil without paying an entrance fee.

So the stranger was seized and locked up, and Mr. Rathbone, the merchant, had no easy time in proving to the officials that it was really a scion of the American soil, and that the ships that brought it had the right to do so. But after it was released from confinement there was still a difficulty. Nobody would buy it. The manufacturers were afraid to handle this new and unknown kind of cotton for fear it would not pay to work it up, and at last it had to be sold for a song to get a trial. Such was the state of the cotton industry at the period when the great republic was just born. It may be said that the nation and its greatest product were born together, like twin children.

The new industry grew very slowly, and the planters who were trying to raise cotton in their fields felt much like giving it up as something that would never pay. In fact, there was a great difficulty in the way that gave them no end of trouble, and made the cost of cotton so great that there was very little room for profit. For a time it looked as if they would have to go back to corn and rice and let cotton go by the board.

The trouble lay in the fact that in the midst of each little head of cotton fibres, like a young bird in its nest, lay a number of seeds, to which the fibres were closely attached. These seeds had to be got out, and this was very slow work. It had to be done by hand, and in each plantation store-house a group of old negroes might be seen, diligently at work in pulling the seeds out from the fibres. Work as hard as they could it was not easy to clean more than a pound a day, so that by the time the crop was ready for market it had cost so much that the planter had to be content with a very small rate of profit. Such was the state of the cotton industry as late as 1792, when the total product was one hundred and thirty-eight thousand pounds. In 1795 it had jumped to six million pounds, and in 1801 to twenty million pounds. This was a wonderful change, and it may well be asked how it was brought about. This question brings us to our story, which we have next to tell.
In the year 1792 a bright young Yankee came down to Georgia to begin his career by teaching in a private family. He was one of the kind who are born with a great turn for tinkering. When he was a boy he mended the fiddles of all the people round about, and after that took to making nails, canes, and hat-pins. He was so handy that the people said there was nothing Eli Whitney could not do.

But he seems to have become tired of tinkering, for he went to college after he had grown to manhood, and from college he went to Georgia to teach. But there he found himself too late, for another teacher had the place which he expected to get, so there he was, stranded far from home, with nothing to do and with little money in his purse. By good fortune he found an excellent friend. Mrs. Greene, the widow of the famous General Greene of the Revolution, lived near Savannah, and took quite a fancy to the poor young man. She urged him to stay in Georgia and to keep up his studies, saying that he could have a home in her house as long as he pleased.

This example of Southern hospitality was very grateful to the friendless young man, and he accepted the kindly invitation, trying to pay his way by teaching Mrs. Greene's children, and at the same time studying law. But he was born for an inventor, not a lawyer, and could not keep his fingers off of things. Nothing broke down about Mrs. Greene's house that he did not soon set working all right again. He fitted up embroidery frames for her, and made other things, showing himself so very handy that she fancied he could do anything.

One day Mrs. Greene heard some of the neighboring planters complaining of the trouble they had in clearing the cotton of its seeds. They could manage what was called the long-staple cotton by the use of a rough roller machine brought from England, which crushed the seeds, and then "bowed" or whipped the dirt out of the lint. But this would not work with short-staple cotton, the kind usually grown, and there was nothing to do but to pick the hard seeds out by hand, at the rate of a pound a day by the fastest workers. The planters said it would be a splendid thing if they only had a machine that would do this work. Mrs. Greene told them that this might not be so hard to do. "There is a young man at my house," she said, "who can make anything;" and to prove it, she showed them some of the things he had made. Then she introduced them to Eli Whitney, and they asked him if he thought he could make a machine to do the work they so badly wanted.

"I don't know about that," he replied. "I know no more about cotton than a child knows about the moon."

"You can easily learn all there is to know about it," they urged. "We would be glad to show you our fields and our picker-houses and give you all the chance you need to study the subject."

Mr. Whitney made other objections. He was interested in his law studies, and did not wish to break them off. But a chance to work at machinery was too great an attraction for him to withstand, and at length he consented to look over the matter and see if he could do anything with it.

The young inventor lost no time. This was something much more to his liking than poring over the dry books of the law, and he went to work with enthusiasm. He went into the fields and studied the growing cotton. Then he watched the seed-pickers at their work. Taking specimens of the ripe cotton-boll to his room, he studied the seeds as they lay cradled in the fibre, and saw how they were fastened to it. To get them out there must be some way of dragging them apart, pulling the fibres from the seed and keeping them separate.

The inventor studied and thought and dreamed, and in a very short time his quick genius saw how the work could be done. And he no sooner saw it than he set to work to do it. The idea of the cotton-gin was fully formed in his mind before he had lifted his hand towards making one.

It was not easy, in fact. It is often a long road between an inventor's first idea and a machine that will do all he wants it to. And he had nothing to work with, but had to make his own tools and manufacture his own wire, and work upward from the very bottom of things.

In a few months, however, he had a model ready. Mrs. Greene was so interested in his work and so proud of his success that she induced him to show the model and explain its working to some of her planter friends, especially those who
had induced him to engage in the work. When they saw what he had done, and were convinced of the truth of what he told them,—that they could clean more cotton in a day by his machine than in many months by the old hand-picking way,—their excitement was great, and the report of the wonderful invention spread far and wide.

Shall we say here what this machine was like? The principle was simple enough, and from that day to this, though the machine has been greatly improved, Whitney's first idea still holds good. It was a saw-gin then, and it is a saw-gin still. "Gin," we may say here, is short for "engine."

This is the plan. There is a grid, or row of wires, set upright and so close together that the seeds will not go through the openings. Behind these is a set of circular saws, so placed that their teeth pass through the openings between the wires. When the machine is set in motion the cotton is put into a hopper, which feeds it to the grid, and the revolving saws catch the fibre or lint with their teeth and drag it through the wires. The seeds are too large to follow, so the cotton is torn loose from them and they slide down and out of the way. As the wheel turns round with its teeth full of cotton lint, a revolving brush sweeps it away so that the teeth are cleaned and ready to take up more lint. A simple principle, you may say, but it took a good head to think it out, and to it we owe the famous cotton industry of the South.

But poor Whitney did not get the good from his invention that he deserved, for a terrible misfortune happened to him. Many people came to see the invention, but he kept the workshop locked, for he did not want strangers to see it till he had it finished and his patent granted. The end was, that one night some thieves broke into the shop and stole the model, and there were some machines made and in operation before the poor inventor could make another model and secure his patent.

This is only one of the instances in which an inventor has been robbed of the work of his brain, and others have grown rich by it, while he has had trouble to make a living. A Mr. Miller, who afterward married Mrs. Greene, went into partnership with Whitney, and supplied him with funds, and he got out a patent in 1794. But the demand for the machines was so great that he could not begin to supply them, and the pirated machines, though they were much inferior to his perfected ones, were eagerly bought. Then his shop burned with all its contents, and that made him a bankrupt.

For years after that Whitney sought to obtain justice. In some of the States he was fairly treated and in others he was not, and in 1812 Congress refused to renew the patent, and the field was thrown open for everybody to make the machines. Nearly all he ever got for his invention was fifty thousand dollars paid him by the Legislature of South Carolina.

In later years Whitney began to make fire-arms for the government, and he was so successful in this that he grew rich, while he greatly improved the machinery and methods. It was he who first began to make each part separately, so it would fit in any gun, a system now used in all branches of manufacture. As for the cotton industry, to which Eli Whitney gave the first great start, it will suffice to say that its product has grown from less than one thousand bales, when he began his work, to over ten million bales a year.

(The end)

Charles Morris's short story: Eli Whitney, The Inventor Of The Cotton-Gin

By Charles Morris