

Modern Milking Machines

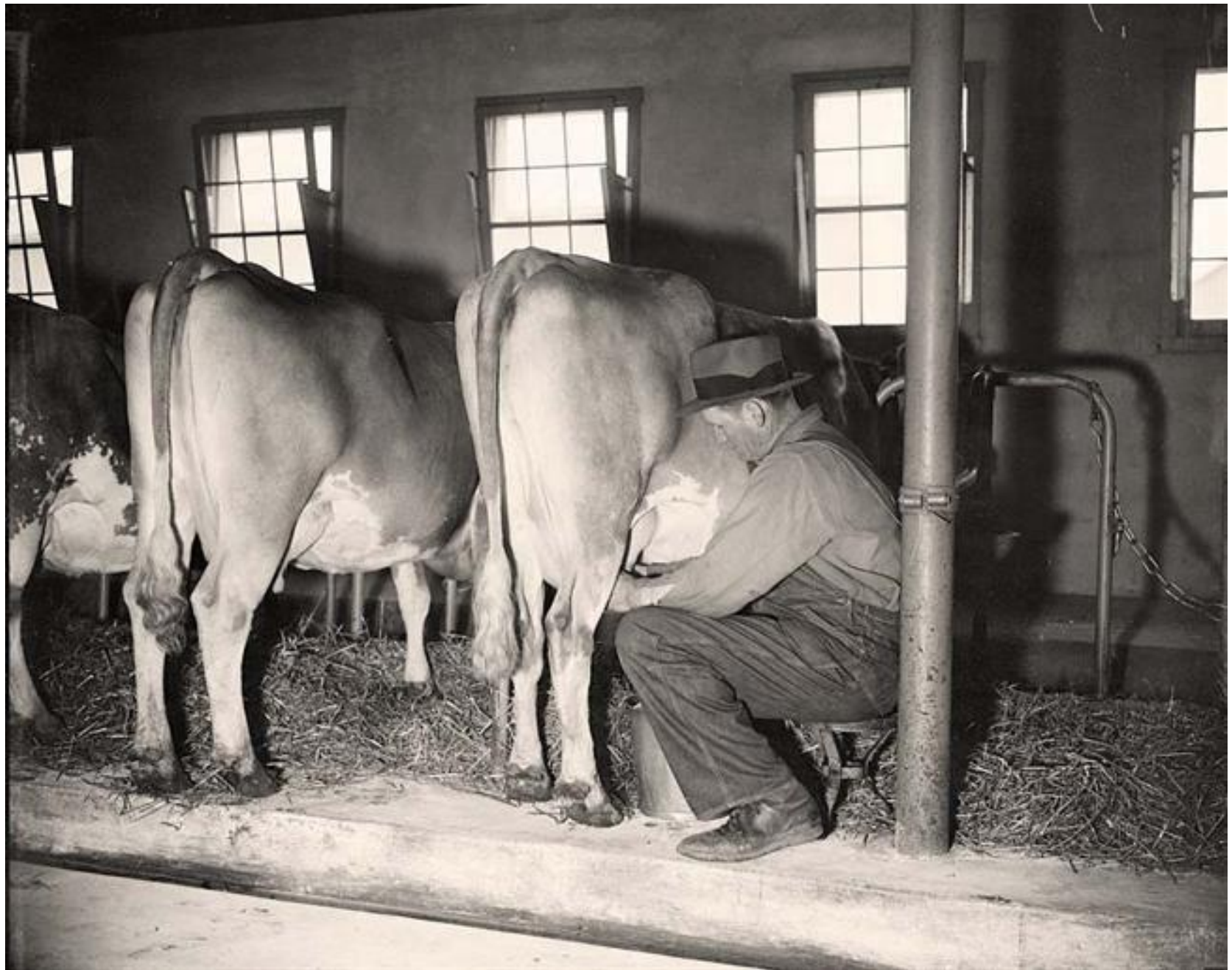
This shows a rotary milking machine.

The cows go for a 10-minute ride and are milked by machines.

Can have 50-90 cows on a carousel at a time.

Can milk multiple cows in the same amount of time it would take to milk 1 by hand.

DISADVANTAGE: rotary moves quickly so there is only about 14 seconds to dry and clean teats on the cows. Some dairies have installed robots to apply iodine dip to provide support for employee who has to complete the tasks so quickly.



Hand Milking a Cow

This could take up to 30-minutes per animal



The Surge Milker

In the 1800s many patents came in for milking machines. But non stuck as they created problems with sanitization for cows and milk.

In the 1920s the surge milker was developed and patented. By 1955 78% of dairies were milking with this machine. Great, but required farmer to clean. Over the years materials changed to make cleaning last only 5 minutes.



Modern Day Cotton Gin

Today's cotton gin (250,000 pounds of cotton a day)



Eli Whitney Cotton Gin

Eli Whitney invented cotton gin (50 pounds a day)



Hand Ginning Cotton

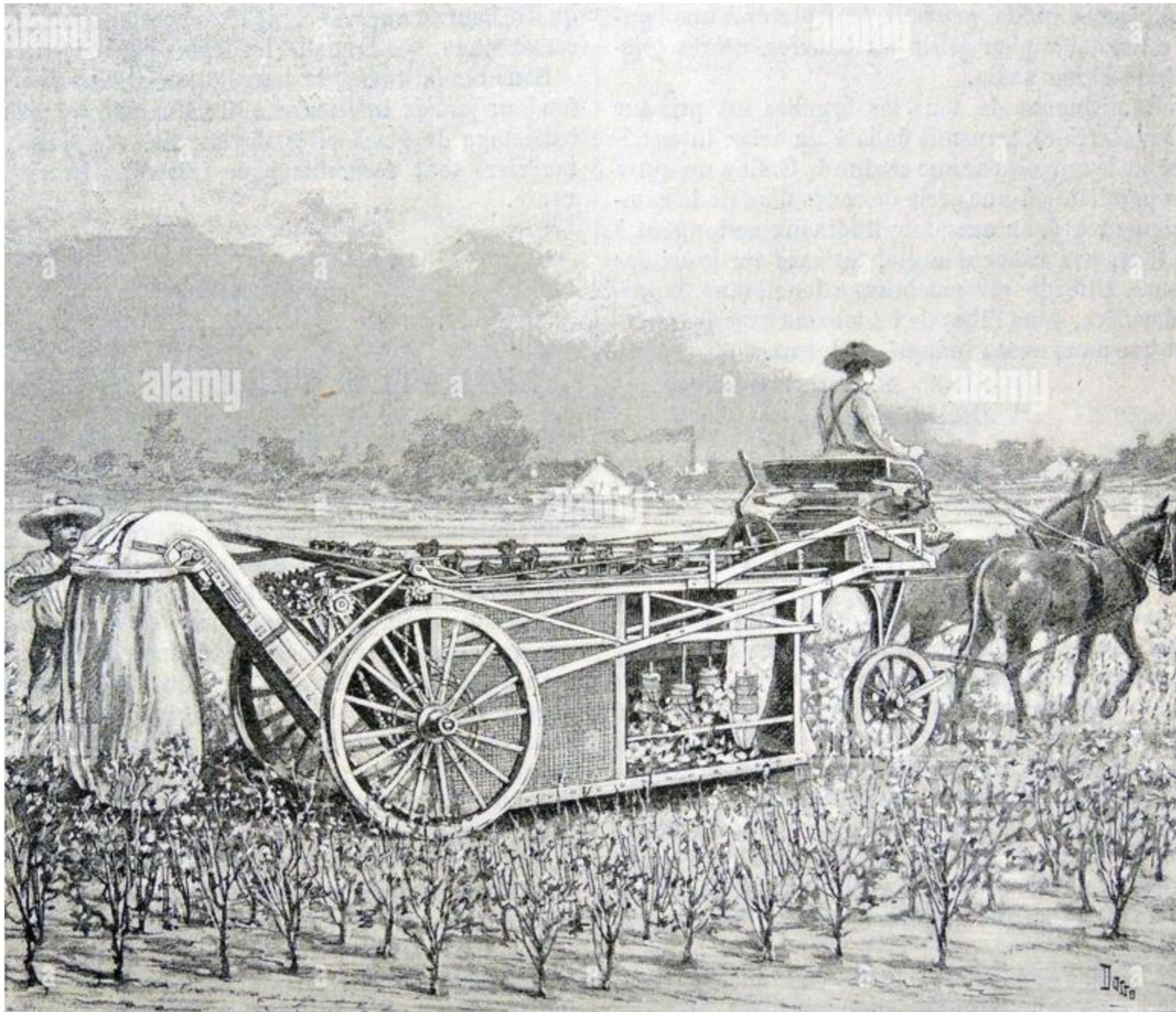
A person hand ginning cotton could clean a pound a day



Hand Picking Cotton

Picking cotton by hand was a sunup to sundown job, and a good picker could harvest about **250 to 275 pounds** of cotton a day.

About 1,200 pounds of hand-picked cotton is needed to produce a 500-pound bale of cleaned, dried lint ready for market.



Cotton picker pulled by Mule (1893)

Could harvest 3,000 pounds of cotton a day



Single Row Picker pulled by Tractor



Single Row Cotton Picker

Could harvest 6,000 pounds of cotton a day



Multiple Row Picker

Can harvest 190,000 pounds of cotton a day



Multiple Row Picker and Module Builder

Can harvest 190,000 pounds a day and create the modules at the same time
eliminating the need for a separate module builder and the extra steps.



The Cotton Boll Weevil

1895 cotton boll weevil made its way to US from Mexico.

It was very bad for cotton farmers as it fed on the cotton plant affecting yields and quality.

Trial of 1 million sterile males released. Was unsuccessful.

Used insecticides to kill the insect.

1960 scientist discovered by using synthetic pheromones (naturally produced by insects to communicate) they could trap the boll weevils. This along with insecticides increased control to 98%.

Great news, but lots of insecticide was being used to combat the boll weevil. A new scientific breakthrough, GMOs, allowed the plant itself to be harmful to the insect.

The boll weevil is now eradicated and no longer a problem. GMOs and other preventative measures (cotton must be harvested by certain time and turned under by a certain time...to disrupt life cycle of weevil if it were present)