



GINNING BY HAND IN 1792

COTTON



COTTON

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A SHORT STORY OF THE DEVELOPMENT OF THE
SOUTH'S GREATEST CROP AND OF THE
COTTON GINNING INDUSTRY.

THE cotton plant is one of the most wonderful products of nature. It has clothed mankind for many centuries, and has ever kept pace with the march of civilization. In latter years the food value of the products from the seed has been developed to such an extent that the cotton plant has become second only to wheat in its indispensability to mankind. New uses, both for the lint and seed products, are constantly being discovered, and the demand for cotton would seem to be



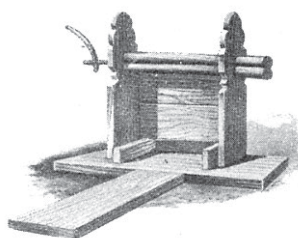
Negroes Picking Seed from Cotton Before the Invention of the Cotton Gin.

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limited only by the possibilities of the human race itself. As civilization penetrates into the hidden nooks and crannies of the earth, and as standards of living are elevated throughout the world, there will be a greater and greater demand for cotton. The world's needs for cotton are multiplying much faster now than they did even ten years ago, and the ratio is increasing with every decade.

It would appear that the great plant is indigenous to both hemispheres, and its cultivation today, literally



The Churka, the First Known Cotton Gin.

circles the globe. The Southern States of the United States, India, Egypt and Russia, however, are the principal producers, according to Lamb's History of the Textile Industry, and the United States contributes 65 per cent of the world supply

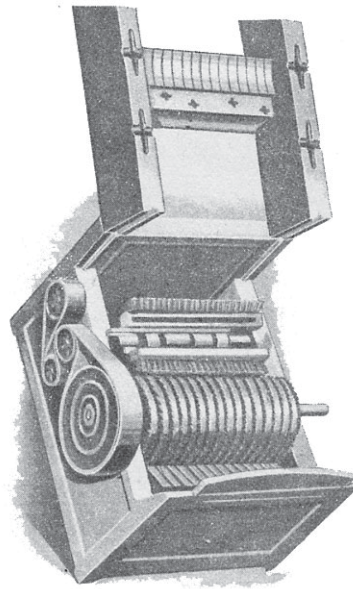
of cotton for mill consumption; British Indies, 19 per cent; Egypt, 7 per cent; Russia, 3 per cent, and the other countries of the world, the remaining 6 per cent.

There is historical evidence to the effect that cotton was grown in India for the making of clothing at a very early period, and gradually found its way to China, Persia and Egypt. Herodotus, the Greek historian, who lived in the fifth century, B. C., makes specific reference to the growth of cotton in India, and Pliny referred to its cultivation in the upper part of Egypt, while Christopher

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Columbus found cotton plants wild in America, and Cortez, on the occasion of his visit to the Aztec Emperor, Montezuma, in the City of Mexico, in 1519, was presented with princely gifts of finely wrought cotton fabrics.

The history of the practical cultivation of cotton in America dates from 1621, when it was introduced into what is now the State of Virginia with seed from the East Indies. The effort was merely experimental, and was extended to Maryland, Delaware, Pennsylvania and New Jersey without any very encouraging results. The real impetus to its cultivation in the Southern belt of the United States was received when it was introduced into South Carolina and Georgia in 1733-34. Its cultivation had extended to Louisiana as early as 1741, but production in what are now the Southern States of the United States was seriously impeded by the difficulty of separating the seed from the lint. The gin used during that period was a modification of the primitive "Churka," or India Roller gin, and,



Model of Whitney's First
Saw Gin.

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while some decided improvements had been made upon the original type, which facilitated the ginning of sea island, or long staple cotton, the roller gin was comparatively useless when applied to short staple cotton; and the separation of the seed from the lint was commonly done by the hands of slaves at night-fall, after the day's work in the fields had been completed.

Southern planters realized the vast possibilities in the growth of cotton, provided some quick method of seed separation could be devised, and were almost in despair when the man of the hour, Eli Whitney, a native of Massachusetts, and a graduate of Yale College, who, in journeying to Savannah, Georgia, by boat, in 1792, became acquainted with Mrs. Nathaniel Green, widow of the American Revolutionary general, who invited him to visit her at her residence, Mulberry Grove, near that city. While a guest in this hospitable home, Whitney frequently heard conversations among planters deploring the lack of method of rapid and effective seed separation. Inspired and encouraged by Mrs. Green, who had noted his inventive talent, Whitney set to work, and a year later filed a petition for a patent. The gin was described as having a wooden cylinder, into which were driven spikes or teeth of iron wire, for the purpose of separating the lint from the seed. It is noteworthy that in the drawings which accompanied the documents a saw is shown, and the conclusion is logical that Whitney intended to supercede the spikes with the saw. The patent was issued

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to Whitney on March 14, 1794, signed by George Washington, President; Edmond Randolph, Secretary of State; and William Bradford, Attorney General. The manufacture of the gins under Whitney's supervision began soon after the receipt of the patent, and its effect upon the production of cotton is shown in the fact that the amount marketed in 1792 was 63,000 bales of 500 pounds each., while in 1796, when Whitney's gin had been in use for barely two years, the amount had in-



Modern Field Scene in Cotton Picking Time.

creased to 200,000 bales. It was in this latter year that patents were issued to H. Ogden Holmes, for an improved gin having circular saws fixed at regular intervals upon a cylinder which passed through spaces between ribs. Since that date the saw gin has been used almost exclusively in the ginning of cotton. The bitter controversy which arose as to which inventor should be given the credit for the modern gin is now ancient history, and Eli Whitney, by virtue of his priority in the field, has become generally accepted as the father of the saw gin.

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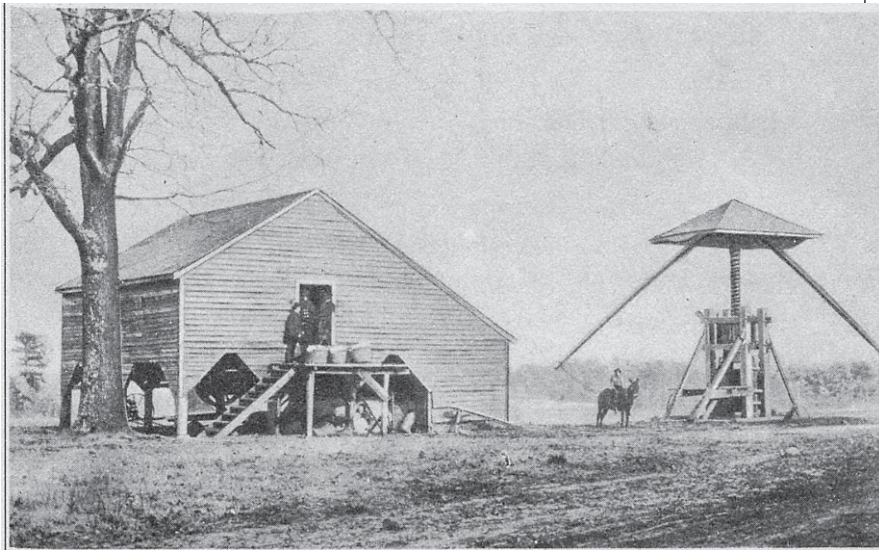
Whitney's invention marked the first epoch in the history of cotton growing as a profitable branch of agriculture, and while his invention unquestionably solved the problem, many improvements were necessary before the gin could attain its full measure of usefulness. Systematic manufacture of gins was lacking for many years, as Whitney's establishment could not supply a tithe of the demand, and his plan of charging the states royalties for the manufacture of gins not only kept him involved in lawsuits with state authorities and planters who undertook to make gins on their own account, but retarded the development of the manufacture of gins as an industry. There was a succession of gin factories of small proportions until 1832, which is the second epoch in the history of the manufacture of cotton gins, and marks the beginning of a period of notable improvements in the gins themselves and in the output, both of which had a most important bearing on the development of cotton grown in the Southern States and in other points of the world.

In the year 1832, Daniel Pratt, a native of New Hampshire, came to Alabama and built a blacksmith and gin shop on what is now Albert Elmore's farm, near Elmore station in the county of that name. He had been previously associated with Samuel Griswold, at Clinton, Ga., in the manufacture of gins, and the success of the firm induced Mr. Pratt to attempt to establish the industry in Alabama. Dissatisfied with his location, he made several efforts to secure one better adapted to his

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purpose, and in 1838, acquired a large tract of land, with fine water power, on Autauga Creek, about four miles from Washington, and there he founded the town of Prattville, which has become famous, not only in the cotton belt of the South, but in many of the countries where cotton is grown. The Pratt gin has become popular in the cotton growing world, and the industry at Prattville continued to develop, until at the time of its sale to the Continental Gin Company it was the largest producer of gins in the United States.

Almost simultaneously with the advent of Daniel Pratt into Alabama, or to be exact, in the year 1833, the Eagle cotton gin was first manufactured at Bridge-



The Ante-Bellum Cotton Gin House and Cotton Press.

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water, Mass., by Bates, Hyde & Company, a co-partnership consisting of nine members, four of whom had worked in the cotton gin factories of Carver-Washburn & Company, which had been established in Bridgewater about 1816, and is believed to have been the first cotton gin factory in the Northern States. The Eagle cotton gin embodied several improvements on the original saw gin, and the company developed a large export business in foreign cotton growing countries, especially during the period of 1860-1866, the high price of cotton during the war stimulating the production in countries other than the United States, which has been maintained ever since. The company was incorporated in 1877 and continued to do a successful business until it was bought by the Continental Gin Company in 1899.

Eleazer Carver in 1842 established the E. Carver Co., and later changed to The Carver Cotton Gin Co.

David Benjamin Gullet and Joseph Winship also belong to the ante-bellum period of the gin manufacturing industry. The former established the Gullett Gin Company at Aberdeen, Miss., in 1849. Twenty years later it was removed to its present site at Gulletts, La., and is still active.

Joseph Winship established in 1853 in Atlanta, a shop for the manufacture of cotton gins, under the firm name of Joseph Winship. A few years later he sold to his two sons, Robert and George Winship, and the style of the firm was changed to Winship Brothers. The business

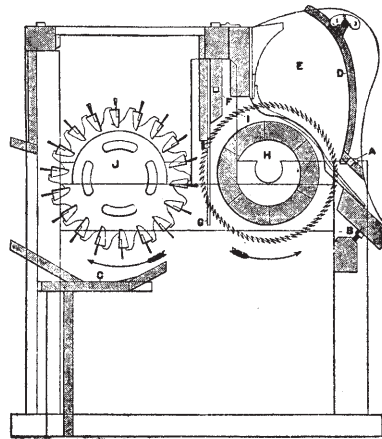
Twelve

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continued under this organization until December 23, 1884, when the Winship Machine Company was incorporated under the laws of the state of Georgia, with a capital stock of \$200,000, and continued in business without further change until 1899, when the plant was sold to the Continental Gin Company.

Each of the companies mentioned manufactured gins that were modifications of the original saw gin, with improvements of a minor nature. One of the notable inventions of that period was the huller gin, which separates hulls or dried bolls from the cotton and is especially intended for handling cotton grown

in the low land of the Mississippi delta and on other lands where the plant grows large and thick and ripens fast. The first "huller," patented by D. G. Olmstead, in 1858, was an attachment placed on the regular gin, the cotton being fed into an outer roll box. This did not prove practical, but a gin with a special projection of the rib and using a similar outer roll box, was invented by George W. Payne, in 1858, and the single rib huller gin of today is practically



Sectional View of a Saw Gin.

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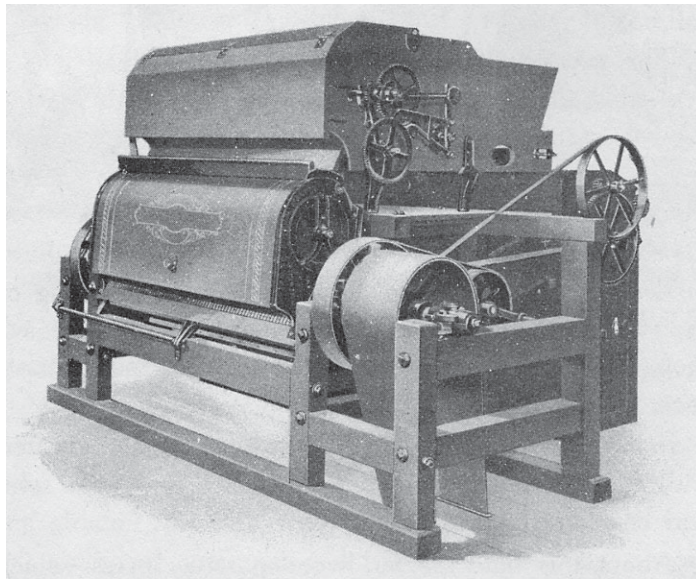
the same as that made by Payne. A double rib gin is an invention of a later period, and was patented in 1881, being the invention of F. E. Smith, at that time associated with the Pratt Gin Company. This gin used two ribs; one for ginning cotton and the other for removing the hulls as the cotton passed from the outer into the inner roll box.

The necessity for the saving of labor, which was a negligible consideration during the period of slavery, became a matter of paramount importance after the war. Inventive genius arose to the demand, and the Daniel Pratt Gin Company brought out two highly important improvements. The first of these was the mechanical feeder, which practically dispensed with the feeding of the gins by hand, and did as much work as several laborers performed under the old system. The other improvement was the condenser, which deposited the cotton in a continuous bat on the floor beside the gin and eliminated the old plan of blowing it into a large lint room from where it was carried to the press.

About this time the old wooden screw press, which had been in general use on the plantations, gave way to the compact, iron screw press, located conveniently near the condensers. H. Dudley Coleman, of New Orleans, and the Liddell Company, of North Carolina, were pioneers in introducing the single box with iron screw; and later A. D. Thomas, of Little Rock, used a steam cylinder in place of the iron screw. With the application of steam as the motive power for the operation of gin outfits,

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the development of cotton ginning as a distinct industry began and has continued to grow in importance until today there are thousands of these plants scattered throughout the cotton belt of the United States, and the town or community in which a ginning outfit is not to be seen, is the exception rather than the rule.



Single Modern Gin With Feeder and Condenser.

Continuing the history of the formation and operation of gin manufacturing companies, it should be stated that the Daniel Pratt Company established a branch at Memphis for manufacturing the huller gins about 1880. This plant was sold to the Continental Gin Company in 1899, and it is now operated by that company as a repair

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Old Style Single Gin House Before the Advent of Modern Ginning System.

shop, being one of the largest shops of its kind in existence.

In 1886 Mr. F. E. Smith, who had been connected with the Daniel Pratt Gin Co. for many years, and who had been the inventor of some of the most notable improvements brought out by that company, including the revolving head in the roll box and the adjustable seed board, organized the Smith Sons Gin & Machine Company for the manufacture of cotton ginning machinery, his associates being his sons, A. W. and D. T. Smith. Avondale, a section of Birmingham, Ala., was selected as the site for the plant. The company prospered from the beginning and built up a very large business; in 1899 it was sold to the Continental Gin Company.

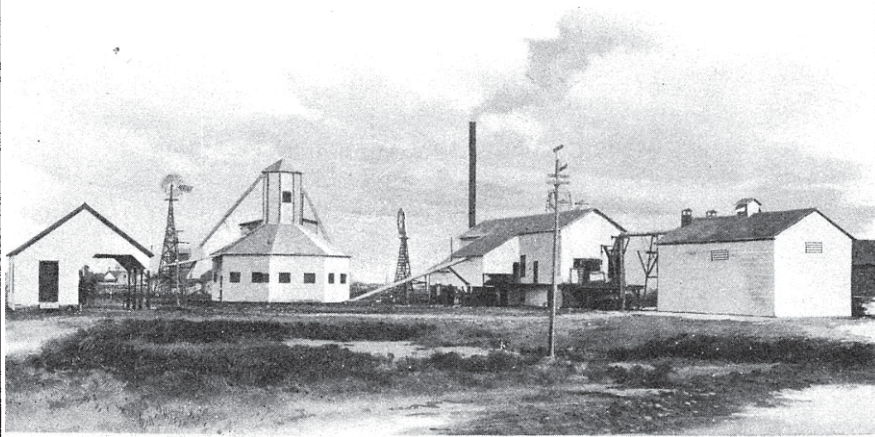
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The Brown Cotton Gin Co. was established in 1846 at Columbus, Ga., by Israel Brown, and in 1865 removed to New London, Conn.

The Lummus Gin Company was organized in 1871 at Juniper, Ga., and from thence in 1898 it removed to Columbus, Ga.

Among the latter day inventors of cotton ginning machinery may be included Stephen Murray, who perfected a cotton elevator in the early '90's, and subsequently organized the Murray Gin Company, located at Dallas, Texas.

The year 1883 marks another epoch in the history of cotton and cotton ginning when the Munger System was invented by R. S. Munger, then a citizen of Mexia, Texas. This invention revolutionized the ginning of cotton and did

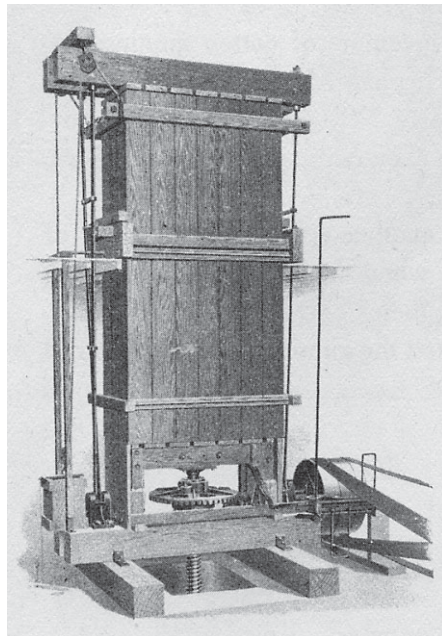


Outside View of a Modern Cotton Ginning Plant.

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more to place the industry upon a stable basis than all the inventions which had preceded, for it not only affected a great saving in labor, thereby giving the ginner a wider margin of profit, but it also improved the quality of the sample of the cotton to a marked degree, and thus reached



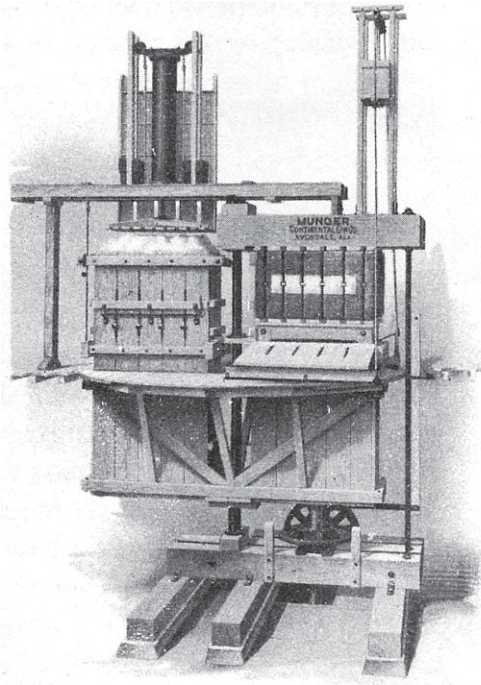
Single Box Screw Cotton Press.

beyond the ginner and extended its benefits to the great body of cotton growers.

Briefly described, it consists of a pneumatic elevator which takes the cotton out of the wagon or bin, lifts it above the gin, cleans and delivers it upon a spiked belt which distributes it into a battery of feeders, where it is thoroughly cleaned again before entering the gins from which it is delivered into a common lint flue attached to a battery condenser; thence it is delivered in a continuous bat and fed automatically into a double press box. In other words, the cotton passes from the wagon to the press in one continuous operation, in the course of which it is thoroughly cleaned.

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Undaunted by unsuccessful efforts to sell his invention to gin manufacturers, Mr. Munger, in 1884 established a small plant at Dallas, Texas, and began to make Munger System outfits. The value of the new invention was immediately recognized in the ginning world, and the demand for it grew by leaps and bounds. Three years later, in 1887, the Munger Improved Cotton Gin Manufacturing Company was organized at Dallas, Texas, for the manufacture of Munger System outfits on a large scale. In 1892 the demand had increased to such an extent that the Northington - Munger-Pratt Gin Company was organized to supply the territory east of the Mississippi River, and a large plant was erected at Birmingham, Ala. Also about this time Mr. Munger invented the Ginners' Compress and developed the idea of compression at the gin.



A Modern Revolving Double Box
Cotton Press.

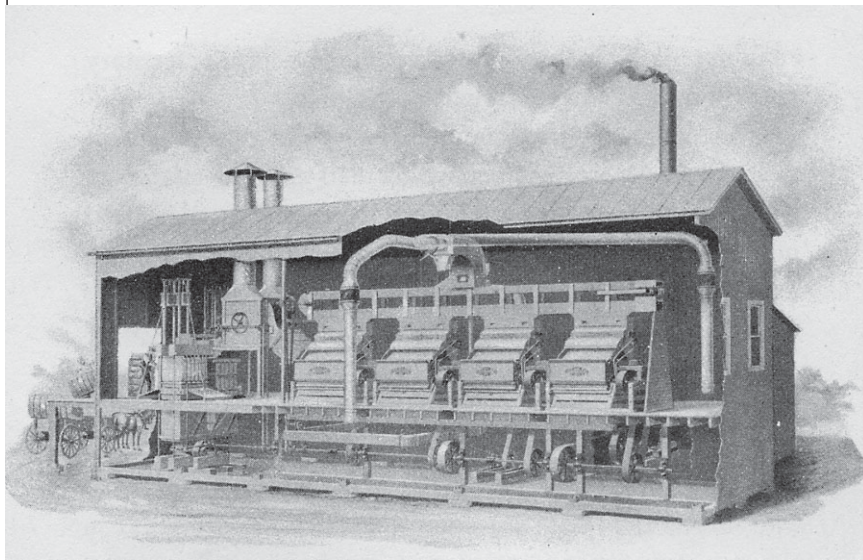
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It would be difficult to exaggerate the importance or the popularity of the Munger System outfit, and the inventor ranks with Whitney as a benefactor of mankind.

The wonderful impetus given to cotton growing and cotton ginning by the Munger System also gave a wider vision to the master minds in the gin manufacturing world, and they foresaw the necessity for increased facilities for manufacture and distribution of cotton ginning machinery. Accordingly, in 1899, the Continental Gin Company was organized, and that year marks the fourth and probably the greatest epoch in the history of the plant and its preparation for the market. The Continental Gin Company acquired by purchase the plants and patents of the Daniel Pratt Company at Prattville, Ala.; the Munger Improved Cotton Gin Manufacturing Co., of Dallas, Tex.; the Northington-Munger-Pratt Co., of Birmingham, Ala.; the Smith Sons Gin & Machine Co., of Birmingham, Ala.; the Winship Machine Co., of Atlanta, and the Eagle Cotton Gin Company, of Bridgewater, Mass. In addition to the physical properties acquired, the Continental Gin Company also fell heir to all the technical knowledge and experience which had accrued to the constituent companies in the many years in which they had been engaged in the manufacture and sale of cotton ginning machinery.

The enormous facilities thus concentrated under one management have resulted in a notable reduction in the cost of manufacturing, with the ability to supply the gin-

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A Modern System Outfit Cotton Gin.

ner with all the equipment he requires, from engine and boiler to press.

With central offices at Birmingham, Ala., the company's operations extend over the cotton belt of the United States out to Mexico, Central and South America, Haiti, the Dominican Republic, east and west coasts of Africa, India, Russia, Turkey, Persia, the Philippines, Australia, China, Hawaii, and even to the Imperial Valley of Southern California, which has recently begun to raise cotton.

Some idea of the extent of the facilities and resources of the Continental Gin Company may be had from the statement that it operates six factories, located at the most convenient points in subdivisions of the cotton belt,

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enabling each factory to serve ginners in its territory quickly and at lowest freight cost.

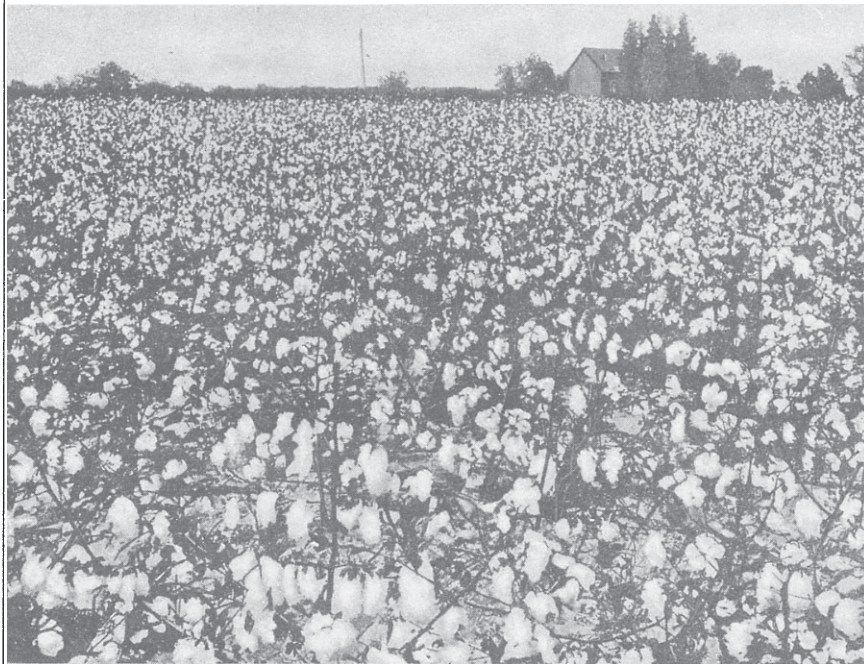
The company also maintains six sales offices, supervised by a general sales manager and each in charge of a district sales manager of long experience, with expert mechanical engineers, draftsmen and an office force organized for the purposes of serving the ginner. A corps of sixty to seventy salesmen travel for the company from Virginia to Arizona, and a small army of erectors and inspectors is constantly at work in this long stretch of territory.

As the machinery of the company virtually encircles the globe, its foreign sales organization is well versed in the demands made upon it, and its foreign mail is necessarily heavy.

In concluding this article it is important to note that all the great improvements in the manufacture of cotton ginning machinery have been followed by large increase in the production of cotton. Beginning with Whitney's invention the American crop rose from a few thousand bales into the hundreds of thousands, and had reached the four million mark at the outbreak of the war. At the conclusion of peace and with the readjustment of the growing of the crop to new conditions, the production has steadily increased, attaining its maximum in 1914, with a crop of sixteen million bales. Taking these figures into account it is not at all improbable that the world will be calling for a crop of twenty million bales within the next five or ten years, and an ultimate annual production

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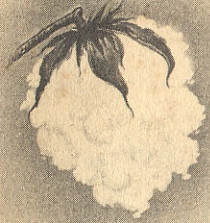
of 50,000,000, American, is not impossible. In any event, Southern lands will continue to furnish the world with the bulk of the cotton it needs, and the inventive genius which has always been equal to every emergency that has risen in the manufacture of cotton ginning machinery will never fail to meet future demands upon it, no matter how great and exacting these may be; and this inventive genius, which has advanced the ginning of cotton to the status of a standard industry, will continue to protect and foster it.



**Growing Two Bales of Cotton Per Acre—Made Possible by the
Development of Cotton Ginning Machinery.**

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GINNING IN 1916

