KING COTTON IN EGYPT

(Special Correspondence of the Deseret News by Frank G. Carpenter.) (Copyright, 1907, by Frank G. Carpen- | bales annually. East India has had the ter.)

LEXANDRIA .-- I have spent the whole of today wandering about the cotton wharves of Alexandria. They extend for a mile or so up and down the Mahmudiych canal, which joins this city to the Nile, and are flanked on the other side by railroads filled with cotton trains from every part of Egypt. These wharves lie under the shadow of Pompey's Pillar, and they extend all Pompey's Plant, and they extend all along the canal almost to the harbor. Upon them are great warehouses filled with bales and bags. There are cotton presses nearby, and in the city itself is a great cotton exchange where the people buy and sell just as they do at Liverpool-from the samples of lint which represent the bales brought in from the plantations.

THE ALEXANDRIA COTTON MAR-KET.

Indeed, cotton is as big a factor here as it is in New Orleans and the banks of this canal make one think of the great cotton market of that city. The warehouses are of vast extent and the road between them and this water way is covered with bales of lint and great bags of cotton seed. Skd Skallcapped, note gowned Egyptians sid high upon the bales — long-bedded wagons hauled by mules. Other Egyptians are unloading the cars and boats and others are carrying the cotton to the warehouses. They tote the bales and bars on their backs, and now and then a man may be seen carrying a bag of loose cotton weigning a couple of hundred pounds upon his head. The cotton seed is taken from the oats in the same way, seed to the imount or 300 pounds often forming a ad for one man.

Late in the afternoon I went down to the harbor to see the cotton steamers, They were taking on cargoes for Great Britain, Russia, France Germany and the United States. Cotton forms three-fourths of the exports of this country, and something like \$700,000 worth of it is anually shipped to the United States. This is so notwithstanding we raise more than two-thirds of all the cotton of the world. The total product in 1905 was almost 18,000,000 bales, of 1905 was almost 18,000,000 bales, of which we raised over 13,000,000. Egypt then produced a little less than 1,100,-000, and its product brought more per bale by far than ours. There is al-ways a big demand for Egyptian cot-ton. It is worth more on the average than that of any other country, and it is in fact, the chief money-maker of the Nile yalley the Nile valley.

COTTON IS KING ...

Cotton is the great white Pharaoh which the Egyptians worship. He has the majority of the Nile farmers in his employ and he pays them royally. He has rolled up a wave of prosperity which is now encul^a the Nile val-ley from the Mediterranean to the Ca-teracts, and the prospects are that he will make his country "row richer will make his country "row richer

teracts, and the prospects are that he will make his country "row richer from year to year. Cotton is now pourin" about \$80,-000,000 of new clean money into the laps of the Egyptians every 12 months, and this means an average of about \$40 per family. In addition about \$10,-000,000 are annually realized from the sale of cotton seed and cotton cake, so that every man, woman and child in the valle" of the Nile has, on an av-erage, \$9 worth of new money from this crop alone. Not only this, but the cotton yield is steadily increasing, and, with the new irrigation works now under way it will soon be greater than ever. From 1895 to 1900 its average annual value was only 45,000,000. After the Assouan dam was completed it jumped to \$70,-000,000, and it is now, as I have said, over \$80,000,000. A GREAT FUTURE.

A GREAT FUTURE.

In the past few months the British In the past few months the British government has decided to raise that dam. This will almost double the amount of water which can be used for the colton error and the metal to a skin from dust or corrosive li-

second place, her annual product rang-ing from \$00,000 to 2,900,000 bales, with Egypt far in the rear. Since the building of the Assouan dam the crop of Egypt has been steadily increasing, until last year it was six and three-fourths million kantars, which, at 100 fourths million kantars, which, at 100 pounds to the kantar for easy figur-ing, make 675 million pounds, or over 1,300,000 500-pound bales. Egypt pro-duces more cotton for its size and the area planted than any other country of the world. Its average crop is 450 pounds per arre, which is far in ex-cess of ours. Dr. Webber, of our de-partment of agriculture, says that our average is only 190 pounds per arre, al-though we have, of course, many acres which produce 500 pounds and more.

BRINGS BIG PRICES.

Egypt cotton brings big prices. There are some kinds which sell for double the amount of our cotton. It is, in fact, the best cotton of the world with the exception of the Sea Island cotton, which grows on the islands off the coasts of Georgia and South Carolina. The Sea Island cotton has a little long-er fiber than the Egyptian. The jutter is for the most part brown in color and is noted for its silkiness, which makes it valuable for manufacturing mercerized is noted for its silkiness, which makes it valuable for manufacturing mercerized cotton. We import an enormous quan-tity of Egyptian cotton to mix with our cotton. I hear of cotton here selling for 20 and 25 cents a pound, and am told that there is a great difference in the varieties raised, and also as to the parts of the Nile valley in which each wind the miced kind is raised.

The very best cotton grows in the del-ta, and that region is now producing more than four-fifths of the crop. Less nore than rour-attas of the crop. Less than a quarter of a million acres are now in cotton in the valley of the Nile above Cairo, and the yield is neither so large nor so good as that of the del-ta.

EGYPT'S COTTON PLANTATIONS

EGYPT'S COTTON PLANTATIONS. I wish I could take you with me on a trip through the cotton fields of the Nile valley. The scenes there are noth-ing like those of our southern states. Much of the cotton is raised on small farms, and every field is marked out with little canals into which the water is introduced from time to time. There are no great farmhouses scattered over the landscape, and no barns. The peo-ple all live in mud villages and go out to work in the field. They use animals for plowing and harrowing, and the crop is handled in a different way. Let made them while the traveling through the country. Take a look over the Delta. It is a wide expanse of green spotted here and there with white patches. The green consists of alfalfa. Indian corn, or

wide expanse of green spotted here and there with white patches. The green consists of alfalfa, Indian corn, or beans. The white is the cotton. I can see it stretching out before me as far as roofs!

see it stretching out before me as far as my eye can reach. Here is a field where the lint has been gathered. The land is black, and it has windrows of cotton stalks running across it. Every stalk has been pulled out by the roots and piled up. Further on we see another field in which the WONDERS

Last year, in passing an act making

employers responsible for diseases in

workmen resulting from the special

work, the British parliament recognized

work, the British parliament recognized six "industrial diseases," viz.: Anthrax, lead poisoning, mercury poisoning, phosphorus poisoning, arsenic poison-ing, and ankylostomiasis or miner's worm. The home seeretary was given power to extend the list, and a commit-tee of inquiry has recommended these additions: Poisoning by nitro-and amido-derivatives of benzene (dinitro-benzol, anilin, and others); poisoning by carbon bisulphide; poisoning by ni-trous fumes, poisoning by nickel car-

How it is Grown and Marketed-Cotton Plantations and Their irragation -Scenes in the Fields-The Boll Weevil Which is Fought by Forced Labor-What the Cairo Agricultural Department is Doing-Improved Seed and Artificial Fertilizers.



THE COTTON WAREHOUSES ARE OF VAST EXTENT. Frank G. Carpenter, Taking a Sam ple-Photographed for the "News."

up beside them, the leaves of the fod-der having been torn off for stock feed. Is not this a queer country where the people keep their wood piles on their

COTTON PICKING.

OF

Here is a field where they are picking cotton. There are scores of little Egyp-tian boys and girls working away among the white balls. They have dark

out the aid of any musical instrument,

out the aid of any musical instrument, while, on the other hand, the appara-tus of Dr. M. Dupont, a French elec-frician, converts music into electric currents. To a phonograph Dr. Du-pont fits a microphone in circuit with the primary of an induction coil with-out its interrupter. The musical scale or a piece of music is recorded in the phonograph and on sengeduction this

brown faces. The boys wear blue gowns and dirty white skull caps. The girls have cloths over their heads. All are barefooted, and some ure paid so much per hundred pounds. A boy will gather 30 or 40 pounds in a day, and he does well if he earns as much as 10 cents.

well if he earns as much as 10 cents. The first picking begins in Septem-Are that the land is watered, and a second picking takes place in October. There is a third in November, the land being again irrigated between times. The first and second pickings yield the best fiber. They are kept apart from the third and sold separate-ly.

CAMELS AND COTTON BALES.

THE

After the cotton is picked it is put into great bags and loaded upon camels. They are londing four such beasts in that field at the side of the road. The camels lie flat on the ground, with their long necks stretched out. Two bags are

olcated a mile and a half away.

The fact that we have nerve stimu-

a load for each camel, and together they will weigh about 600 pounds. Each bag is as long and wide as a single bed mattress, and about four feet thick. Listen to the camels groan as they load them. There is one which is actually weeping. You can see the salt tears run down his cheeks.

Now watch the camels get up. Each rises back end first, the bags swaying to and fro as he does so. How angry he is. He goes off with his lower lip he is, He goes on with his lower hp hanging grumbiling and groaning like a spoiled child. How odd the camels look as they travel. The bags on their accas reach almost to the ground, and each ungainly beast seems to be walk-

ing on six less. Looking down the road, we can see long caravans of camels loaded with bales, and on the other side of that lit-tle canal is a small drove of donkeys bringing in cotton. Each donkey is hidden by a bag which covers its back

and all but its little legs. It looks like a bedtick walking off upon legs. In this way the cotton is brought to the railroad station and to the boats. The latter go out of one little waterway into another until they get into the Mabmudiyeh canal, and thence to Al-exandria. The railroads are filled with cotton trains during the harvesting sca-son, and just now there are long strings of cars loaded with cotton coming in-this city. Some of this cotton has the railroad station and to the boats. The latter go out of one little waterway into another until they get into the Mahmudiyeh canal, and thence to Al-exandria. The railroads are filled with cotton trains during the harvesting sea-son, and just now there are long strings of cars loaded with cotton coming in-to this city. Some of this cotton has been ginned and baled upon the plan-tations: other is sent In in the seed and gined here. There are also gin-ning establishments at the larger cot-ton markets of the interior, many of ton markets of the interior, many of which are run by steam and which have as up-to-date machinery as we have, At these gins the seed is curvfully saved and shipped to Alexandria by rallroad or by boat.

HOW THEY PLANT COTTON IN EGYPT.

HOW THEY PLANT COTTON IN EGYPT. These Egyptians spend more work on their crops than our southern farmers. In the first place, the land has to be plowed with camels or buffaloes and prepared for the planting. It must be divided into basins, each walled around so that it will hold water, and have little canals inside each basin so ar-ranged that the water will run in and out through every row. The whole field is cut up into beds of this de-scription, ranging in size from 24 feet to 75 feet square. The cotton is planted in rows 35 inch-es apart, the plants being from 14 to 20 inches apart in the rows. It takes a little more than a bushel of seed to the acre. The seeds are soaked in wa-ter before planting, and any which rise to the surface are thrown away. The planting is done by men and boys, and the cost is something like a dollar an acre. The seeds soon sprout, and in 10 or 12 days the plants appear. The are now thinned by hand, then water is let in upon them, the farmers being careful not to give them too much. The plants are frequently hoed. They have water every week or so, and this is kept up almost to the time of pick-ing the month of March, and, as I have said, the first ploking begins along in September. in September.

THE WHITE NILE MAKES THE COTTON.

It will surprise many to know that

It will surprise many to know that the cotton crop of Egypt is not fed by the rich mud of Abyssinia, which comes down in the waters of the Nile at the time of the floods. That mud is brought to Egypt by the Atbara and the Blue Niles and is poured over the land dur-ing the seasons when the cotton needs it least. The most of the water used for cotton raising comes down during the summer. This is from the White Nile, which is a lmost as clear and pure as the water you drink on your tables. The fertilizing properties must hence come from the still deposited dur-ing the flood or from manure and other fertilization. I am told that cotton, as it is grown here, exhausts the soil and that the

distributed last senson. With our knowledge of the Nile lands it seems a queer thing to talk of their artificial fertilization, but there is no soll on earth where manur-ing pays better. On the grain lands, where this stuff has been used to the extent of about \$5 per acre, the crops have increased from \$15 to \$20 per acre, and the probability is that the demand here for fertilizers will stead-ly grow. During the past year the government has lent to the agricultur-al department \$500,000 at 2 per cent per annum, with the understanding that the money is to be used in buy-ing and distributing manures. In another letter I will describe the Ing and distributing manures. In another letter I will describe the wonderful fertility of the Nile valley and teil you something of the Abys-simian mud of which it is made. It has been farmed for ages with almost no manure whatever, and the condi-tions are such that if manure at all is to be employed it must be brought.

is to be employed it must be brought in from abroad. As it is now, the droppings of cattle are gathered up by the women in their bare hands and patted into cakes to be dried for fuel, and about the only manure that is saved, is that of pigeons, which are raised by the millions throughout the valley of the Nile. is to be employed it must be brought in from abroad. As it is now, the

crop from year to year. FIGHTING THE BOLL WEEVIL. Egypt has had a lot of trouble with the boll weevil. This pestificrous cot-ton worm is to be found all along the valley of the Nile, and I am told that it is doing great damage on the plan-tations of the Sudan, 1,000 miles above Alexandria. It is said that more than \$10,000,000 worth of cotton was de-stroyed by it in 1904, and that hun-dreds of the smaller farmers were ruined. In the meantime the gov-ruined In the meantime the gov-tran Mohammedans are fatalists, and they look upon such things as the boll weevil as a judgment of God and think they can do nothing to avert them. The government has had to inaugurate a system of forced labor in conse-quence. If has made the boys and men of the cotton region turn out by the thousands to kill the worms un-der the superintendence of the offici-als. The results have been excellent and as those who have been forced to work have been well paid the farm-ers are beginning to approciate what has been done for them. The government has been helping the farmers in other ways. It has an spricultural department which is working much as ours. Last year it sould buy his seed at a price above that of the market. The seed, which has come in from that venture is enough to piant 75,000 acres this year, and this is to be distributed at cost price to such farmers as want it. FERTILIZING EGYPT.

ost price to such farmers as want it. FERTILIZING EGYPT.

The government is trying to induce the farmers to use artificial fertilizers. It began this six years ago, when it was able to distribute \$30,000 worth of chemical manure. The demand had so increased for such fertilizers that more than 10 times as much was distributed last season.

FIGHTING THE BOLL WEEVIL.

Another fertilizer is that afforded by the ruins of the ancient towns, which were built of unbaked clay, and which now are mere mounds of earth. Out of these mounds, made of the rubbish of 1,000 years, comes a kind of earth containing a large per-centage of soda, ammonis and other salts. This staff is carried by the peasants out to the cotton fields and sprinkled over the ground, and the result is an extraordinary increase in the yield. FRANK G. CARPENTER. Another fertilizer is that afforded

SCIENTIFIC WORLD. showed tremors due to a gas engine | until the quartz melts around the wire. vowels when a current of air is forc The resulting instrument, recording temperatures as high as 900 degrees C., s handy and compact, resembling the

the vowels when a current of air is fore-dathrough it, the intensity of the sound varying with the air pressure. A sensi-tive manometer gages the pressure and indicates the condition of the ear. A pressure of one millimeter gives a sound that can be perceived by normal hearing, and other pressures show different stages of deafness, a patient who hears only when 200 millimeters is reached requiring an ear trumpet. The acoustic sense is stated at 1-40 for 40 millimeters and so on, this scale furnishing a very accurate indication of the hearing power. The size is useful not only for diagnosis but as a means of curing the trouble, a systematic course of sounding the ap-paratus in the ear serving as a very efficient massage. This nearly always ef-fects improvement, sometimes completely restoring the normal hearing, and has even taught deaf-mutes to hear. ordinary thermometer in shape and ap-

A CROP THAT IS MAKING RICH THE FARMERS OF THE NILE.

as the present cotton of the world. Sir William Garstin, one of the greatest irrigation envineers of modern times, and the man who had much to do in building the Assouan dam, says that 2,000,000 bales is one of the possithat 2,000,000 bates is one of the possi-bilities of Egypt's future, and that it will be 10 or 15 -ears before the crop reaches that amount. In addition to this, there may be further increase by putting water into some - the cases which lie in the valley of the Nile out-side the river bottom, and also by draining the great lakes about Alexan-dria and in other parts of the lower delta delta

EGYPT'S COTTON CROP.

As it is now, Egypt is fast taking a high place among the cotton countries of the world. The United States stands first. She produces about 12,000,000

crop, and that means more | quids, or ulceration of nose or mouth from dust; cancer or ulceration of skin, or of the corneal surface of the eye, from tar or pitch; compressed air illness.

> An extraordinary reptile habit is de-scribed in a new book by R. L. Dit-mars, of the New York Zoological park. mars, of the New York Zoological park. A large Mexican horned lizard, excited by an attempt to measure it, emitted a rasping sound, and expelled a jet of blood, which struck a wall four feet away and formed a trail of 103 large spots along the floor. The blood came from the eyelid, momentarily much swollen. Shooting blood from the eye has been long attributed to this crea-ture, but it seems so rare that natural-ists have doubted its reality.

> The best gear wheels have been shown by the tests of a British firm to be those made from a high grade Ma-nila paper. They are formed in 1,000-ton hydraulic presses, are stronger and more elastic than cast iron, lighter than rawhide, noiseless, almost frictionless, and work without vibration.

The telharmonium of Dr. Cahill produces music from electricity with-

trician, convers music into electric currents. To a phonograph Dr. Du-pont fits a microphone in circuit with the primary of an induction coil with-out its interrupter. The musical scale or a piece of music is recorded in the phonograph, and on reproduction this transforms the microphone current into an alternating current with peri-ods changing to correspond to the vi-brations of the musical notes. The alternating current gives the physi-ological effects of hearing music. Practise will probably enable a per-son to recognize, the musical pieces by the currents, and deaf mutes may be given a means of hearing, while it is expected that the varying action on the mind of exciting and calming pieces may prove of value in treating nervous patients. Copper very closely resembles silver in may respects but bitherto no

ment by more than so chests per morth. Further tests will be necessary to prove that the Combretum teals as month. Further tests will be necessary to prove that the Combretum teals as effective and harmless as supposed, and whether it will desiroy the craving for alcohol as well as that for oplum.
Fleas are not recommended as an article of diet, as it has been shown that when they happen to be taken into the store of potassium hydroxide. Some mirrors made in this way have been shown to the London Roval Society by Dr. F. D. Chattaway, and have a coherent metallic film as brilliant and uniform as that of the silver-on-glass reflectors used in teles.
The ordinary seismograph, or earthquake recorder, registers the motion

The ordinary seismograph, or earth, quake recorder, registers the motion of the earth under a "stationary" pen-dulum of 100 or 200 pounds. A new instrument by Dr. Wiechert, made at Gottingen, has a suspended pendulum weighing nearly 17 tons, and a series of levers causes its indicator to mag-nify the earth motion 2,200 times. So sensitive is the apparatus that it

Fireless locomotives in seven sizes from seven to 31 tons are built by A. Borsig, in Berlin. Tegel, Germany. The bolier is specially protected against radiation of heat, and is charged in 20 to 30 minutes with steam from a sta-tionary steam-generator. One charge runs the locomotive on **its** ordinary fin-termittent work about six hours, the maximum pressure of steam being 180 pounds, while five to seven pounds will return the engine to the generating station. About 53 pounds of steam per horse-power hour is the ordinary con-sumption. One of the machines exhib-ted last year at Milan weighed 17.6 tons, and was of 28 horse-power, its boller capacity being 159 orbit feet. These locomotives are specially design-ed for large factories and mines, to avoid smoke and lessen fire-risk.

The new experimental railway near Berlin is laid in the form of an oval, with a straight double track 820 feet long and a total length 5.761 feet. Mo-tor-cars using steam, electricity and benzine will be tried. Tests will be made with different materials for bed-ding various rails sheares of oak pine ding, various rails, sleepers of oak, pine, beech and iron, automatic block-signals, and, in fact, everything promising to add efficiency to the German railways.

and the fract, everything promising to add efficiency to the German railways. Eananas are now ripened by elec-tricity with grant precision for any required date. An air-tight case fitted bunches, and ripening is hastened un-der the combined influence of the artificial light and heat. The pro-cess varies according to the number of lamps turned on, experience enabling the fruiterer to fill his orders at any specified time. The talking siren of Dr. Marage of Paris, designed to measure the hearing, has a series of molds or moutpleces, each of which gives the sound of one of

The latest estimate of the erosion of Niagara Falls-based on determinations of the crest in 1842, 1875, 1886, 1890 and 1905-gives a mean wear of 3.3 feet per year for Horseshoe Fall and .62 to 0.5 foot for the American Fall. The Horseshoe Fall has retreated 2500 feet since it parted from the American Fall, the separation having probably occurred five centuries ago. Much of the water is now diverted through the Erie. Welland and Chicago drainage canals, as well as for power generation, and this must affect future erosion. WARNING If you have kidney and bladder trouble and do not use Foley's Kidney Cure, you will have only yourself to blame for re-sults, as it positively cures all forms of kidney and bladder dieases. For sale by F. J. Hill Drug Co., "The never substi-tutors" tutors.

VIA NIAGARA FALLS AND LEHIGH VALLEY R. R.

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