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terms for the scientific american
 Port Eads, whence the announceament of the storm should have come, broke down early on Sunday night as the storm came up.
The principal damage was done to the region about the mouth of the Mississippi, which includes islands and marshes all of very low level. One of the affected and typical regions, the St. Bernard or Lake Borgne Marsh, is a dead level ocean marsh, with more water
than land, covering 1,200 square miles. It was in than land, covering 1,200 square miles. It was inhabited by 200 fishermen, who lived in cabins built on piling. Chandeleur Island is another place where there was great loss of life, and is also typical of much of the adjoining region. This land rose but three or fourfeet above the level of the sea, so that in the storm it was completely submerged. Such places as this represent the entire region, which is a network of islands, bayous, lakes, and swamps, whose highest point is only about 7 feet above the normal sea level. The devastated area extends along the Mississippi from a point 46 miles from its mouth and runs east and west over an extent of over 100 miles. In most places the residents were white, of the most diversified classes, Italians, Span iards, Creoles, and others. Besides these there were a Chinese and a Malay colony. The inhabitants were devoted entirely to the maritime industries, such as fishing and oystering. The Chinese were engaged in shipping shrimps to China.
The wind, blowing from the Gulf, forced the water back into the bayous and lakes, where it gradually rose and began to pour back in to the Gulf and Mississippi over the intervening territory. Rain had fallen all Sunday, with a strong wind, and shortly after midnight the storm broke in its fury, the water rapidly rose, 9 feet of water poured over the levees, the low re gions were swept by the sea and submerged many feet; houses were carried away by the wholesale and lives and property were destroyed on all sides. The inhabitants were drowned or killed by, the falling houses, so that only the more robust had a chance to escape. Some of them, it was estimated, floated from twenty to forty hours on rafts and logs. The entire region is literally almost depopulated. Several instances are already on record of islands near the mouth of the Mississippi being carried away in storms, but the present disaster outstrips in its extent anything on record. The loss to shipping is very great, many smaller boats calculated that one-half of the badly damaged. It the Gulf fisheries are lost and that nine-tenths of the vessels are destroyed. Half of the orange crop is gone and many of the trees in the orchards are blown down. Many of the bodies were washed out to sea and the im mediate burial of the remains of those left on the devastated coast became one of the sad necessities of the ase.
In Mobile and its vicinity much damage was also done; but the appalling catastrophe at the mouth of the Mississippi outstrips and overshadows it com1 pletely.

## The Saw mill is Civilization's Pioneer Machine.

Professor Tyndall says that scientific researchesfind man wandering nude along the sea shores eating the raw oyster as he went, never dreaming that the tree under which he took shelter from the rigor of the storm contained elements that would warm his shivering frame. And again we find fragments of human bones alongside those of some wild beast, and stone weapons such as prehistoric man used, where the two probably fell in single combat for the possession of a cavern for a home. Here at our centennial is no doubt a good imitation of the ancient homes of these cave dwellers. I am now near my seventieth birthday, my early home being in the forests of Maine, and at about ten years of age did part of the work in what we called the thunder shower mill. It being an old water mill and an old gate saw made of iron or material not much better, sawing a long log, it took about five minutes to gig the old carriage back; 2,500 feet of boards, plank and timber was a fair day's sawingof 12 hours run. The saw cut fully $3 / 8$ of an inch wide at every kerf. Then came the Mulay mill, dispensing with the gate and making quickerstrokes, which did a very little better. Gangs then came into use in large mills, and it was then a good day's work with a gang to saw 10,000 feet of inch lumber. I well remember that George Page, of Baltimore, took a circular saw mill to Bangor, Me., and set it up in John Webster's mill on the Penobscot River. and after some weeks of trial it was pronounced a failure, as they said that no circular sam could be a faile to as in Maine timber.

The fact was that they did not know then how to make a clrcular saw of any size large enough to saw mill logs.
At the centennial I saw one of the band sawmills, on the judges' day, saw of inch lumber, one log at the rate of ten thousand feet of lumber in one hour, and I saw it drop a board sixteen feet long every three seconds, and the saw cutting only a $1 / 2$ inch kerf. I was told, however, that in regular work in the West 100,000 feet was often sawn inside of ten hours with a band sawmill. Whether this is to be excelled, we must leave the future to determine. J. E. Emerson.
om the sea
Dr. C. V. Riley, of the Department of Agriculture, to whom we referred the above subject for information, writes as follows:
I received a note from you requesting an answer to question asked by one of your subscribers, as to what process should be used to get rid of the salt in land that has been reclaimed from the sea and dried, and what plants can be set therein to the greatest advan tage. The question cannot be intelligently answered without more detailed information as to the nature of the soil and the latitude. If the land is sandy, there is no better way than by leaching through irrigation, and the natural rains in time will do this, if there is good drainage. If the soil is tenacious, it will, however be very difficult to get rid of the salt. The plants that would be recommended for a northern latitude would be different from those which might succeed in a more outhern climate. There are certain grasses which thrive in salt lands, especially sandy lands; for example, the so-called black grasses, which make fairly good hay and are used for various other purposes. These are Spartina juncea and Juncus gerardi. Another grass which thrives in sandy soils and helps to prevent the sand from drifting is Ammophila arundinacea
These will all grow in northern latitudes, and the salt marsh grasses, when they once get a good foothold will thrive in such soil. The b arberries and the species of euonymus, especially Euonymus japonica, are known to thrive in salty lands. Of cultivated crops, the experience of the Mormons in Utah, near the Great Salt Lake, would indicate that beets, followed by po tatoes, are among the most profitable crops in saline lands. It is questionable whether much salt long re mains to be of any injury to ordinary plants in re claimed lands that are not periodically overflowed again by salt water.
C. V. Riley.

Quebracho Wood for Rallway sleepers.
The Quebracho Colorado wood is described by Georges Poulet as being of a blood red color, very bright when freshly cut. It is found in great abundance in large forests in North Argentina. The wood o far has only been appreciated in Europe by tanners, as it contains a large proportion (said to vary from 15 to 20 per cent) of its weight in tannin, to the presence of which the author ascribes its extraordinary dura bility. It is stated that when, for the purpose of ex tending railways in the province of Santa Fe , posts which had surrounded grazing inclosures were taken up, the wood, though having been for 150 years, and sometimes longer, in ground alternately parched by great heat or sodden by tropical rains, appeared to be in as good condition as though recently cut. The wood is specially suitable for railway sleepers, on ac count of the stability it gives, from its durability and weight, and by its freedom from attack by insects.
It weighs about 78 pounds per cubic foot, does not decay, and is not compressible, so that holes must be bored clear through the wood, and equal to the diame er of the bolts, etc., used.
It is calculated by the author that a sawn sleeper, . o. b. at the port of shipment, would cost with freight o Europe (reckoning eight sleepers to the ton) about $\$ 1.65$.

Peroxide of Hydrogen as a Water Purifier.
Peroxide of hydrogen has long been recognized as a powerful disinfectant, and has been recommended and used with advantage as a gargle in cases of diphtheria. and in this respect has recently been again brought foward as a most useful means of protection against his disease during an epidemic. But it has also been used as a handy method of removing bacteria rom drinking water for household purposes during outbreakg ff: cholera or other zymotic diseases. It is stated on $\boldsymbol{E}_{1}$, that an addition of one part of this material to 1,000 parts of the water, when allowed to stand for twenty-four hours, will effectually destroy any cholera or typhoid germs which may be present. The taste of the water does not suffer any alteration, and it is perfectly harm less. But in case this expedient should be tried it must be borne in mind, first, that the particular perox ide of hydrogen employed must be the purest purchas able, as it may contain minute traces of the poisonous barium chloride; and, secondly, that to insure its cting efficiently on the microbes, the samples used must be freshly prepared

