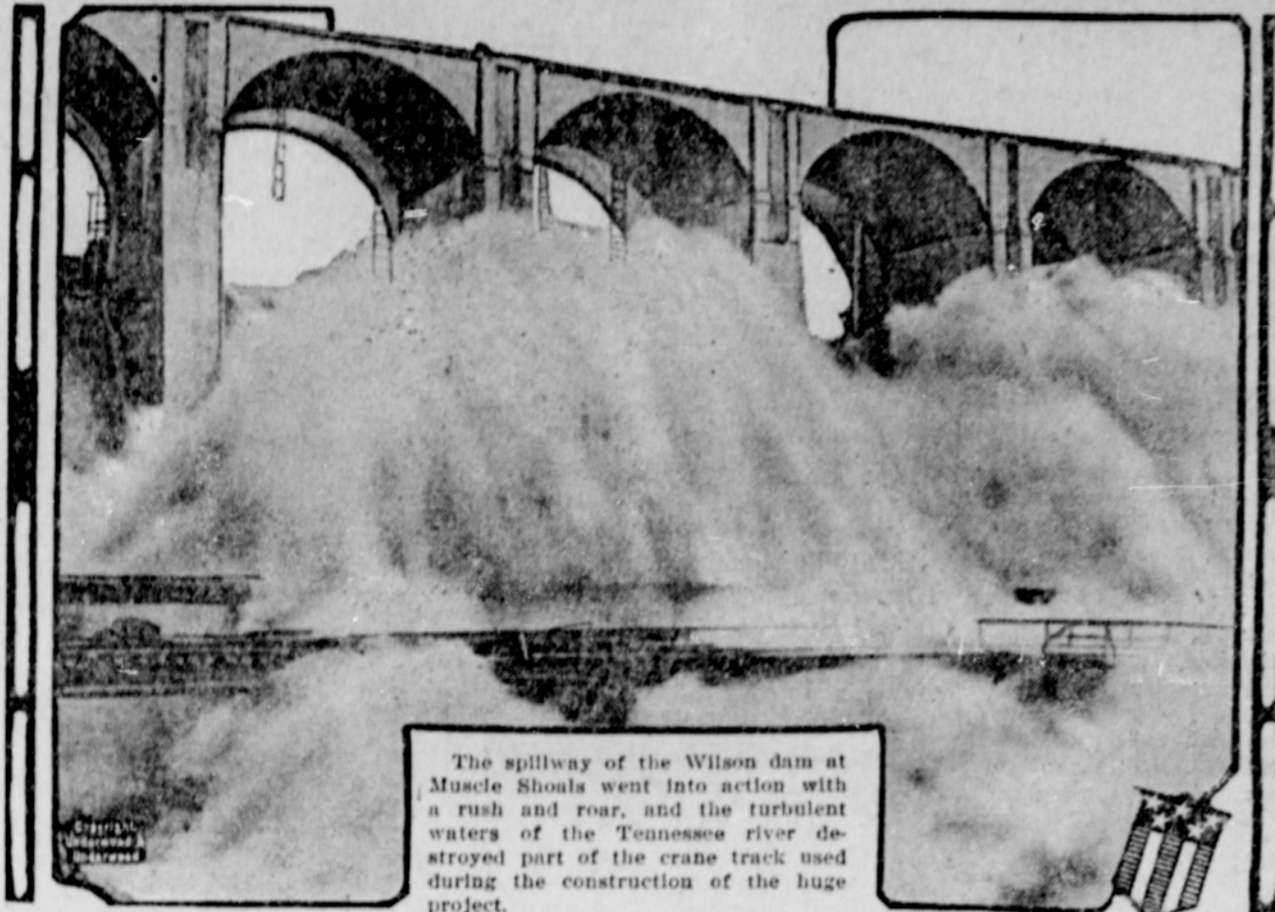


Spillway of the Great Wilson Dam Is Opened



The spillway of the Wilson dam at Muscle Shoals went into action with a rush and roar, and the turbulent waters of the Tennessee river destroyed part of the crane track used during the construction of the huge project.

Sailless Sailing Ship For Future

New Invention Relies on Air for Power.

Berlin.—The sailing vessel of the future will be without sails if the new invention of Dr. Anton Flettner, known as the Flettner rotor, proves to be all that is claimed for it.

Instead of wooden masts, rigging and sails, the new equipment will consist only of metal masts, resembling smokestacks, revolved on their axis by a motor. Experiments with a 650-ton hull, fitted as above set forth, have shown that with one-fifth of the weight of the customary masts and sails the rotor ship can develop 15 times the wind power of the ordinary sailing vessel. The rotor ship does not have to be hauled out of the harbor by a tug—it starts the minute the cylinders, driven by a small Diesel motor, begin to rotate. This motor can be handled by one person on the bridge, and all the crew formerly necessary for sailing can be dispensed with. From an economic standpoint the inventor claims that from 30 to 80 per cent can be saved on fuel if the rotor device is installed.

The Hamburg-American line has ordered the construction of a 10,000-ton freighter which is to sail with rotors instead of sails, and the whole shipping world is inquiring into the adaptability of the invention to passenger ships.

The principle on which the new ship operates has been explained by Herr Freudenberg, Doctor Flettner's right-hand man, as follows:

Air Course Studied.
"Supposing a current of air strikes a smooth cylinder, such as a smokestack or the cylinder of our rotor, what will happen? The air will pass to the right and to the left of the cylinder about evenly. Now suppose one-half of the cylinder were covered with some rough surface, such as sandpaper, what would happen? The air current, following the lines of least resistance, would pass off toward the smooth side and only very little of it toward the roughened side.

"In other words, the air current will go where there is least resistance to it. Suppose next that we begin to turn the smooth cylinder by some mechanical means, such as an electric motor. As it revolves, one side of it, the disappearing side as you look at it from the front, will be moving in the same direction in which the air current is moving, while the other side will run counter to the air current. Naturally the air, following the lines of least resistance, will pass off toward the side where the cylinder turns with the wind.

"It follows that if the cylinder is turned faster than the velocity of the wind there is absolutely no friction on the one side for the air, and the whole current will be deflected to that one side with such vehemence and with such crowding together of current that suction ensues on the side revolving with the wind, while on the side coming up against the wind a pressure against the cylinder is produced.

"This combination of suction on one side of the cylinder and of pressure on the other forces the ship forward and sails can be dispensed with."

Steel Supports Cylinders.
The revolving or rotating cylinders are mounted on strong masts of steel. In the case of the experimental ship, the Buckau, the steel masts projected above the deck for a distance of 40 feet, while the cylinders which are set upon the pivotal masts, like hoods, were 25 feet higher. They revolve about the pivots on ball bearings and turn noiselessly. The motor, using only 2 per cent of the power that would be needed to drive the ship with a propeller, can turn the cylinders at the rate of about 110 revolu-

tions a minute. In the case of a sailing vessel therefore 98 per cent of the power is produced by the wind acting upon the cylinders, while only 2 per cent is contributed by the small motor that one person can attend to.

The rotor ship can be made to reverse its direction by merely reversing the motor. To turn the boat about, one cylinder is made to turn in one direction and the other in the opposite, just as in rowing one turns by pulling at one oar and pushing the other.

The fact that the changes of speed or the reversing of the motor can be done instantaneously, makes it possible for the new ship to ride a storm quite as easily as it moves in clear weather.

The Flettner people look upon the rotor ship as a mere beginning along the road of gaining energy from the air. Some day the wind may be giving us heat, light and power, Doctor Flettner observes. He is therefore at work on the construction of a windmill or wind tower which, if perfected, will mean that the American farmer can reduce his coal bill to a minimum, and take energy out of the air. It will mean, the inventor declares, that flying across the ocean will become a simple thing, for instead of running the risk of getting out of fuel the aviator will draw his energy from the wind.

Raise \$100,000 Fund for Sulgrave Manor

New York.—The ancestral home in England of George Washington, Sulgrave manor, in Northamptonshire, will henceforth be maintained and preserved by the income of a fund of \$100,000 raised in this country by the National Society of the Colonial Dames of America.

Mrs. John R. Lamar, national pres-

Meteorite Is Memorial for Heroes of War

Beatrice, Neb.—A gigantic stone, weighing many tons, said to be a fallen meteor, according to the stories told by old settlers of the vicinity, has been removed from its earthly bed, south of the city, and placed in the city park. Sixteen horses and two weeks' time were required to transport the stone half a mile to the park.

It will be used as a memorial to those who gave their lives in the World War. Their names, engraved in a bronze tablet, will be set in the stone.

dent of the society, explained that the organization was directed, under the terms of its constitution, to preserve and restore buildings connected with the early history of the United States. Before the World War it sent \$3,000 to England to restore the manor.

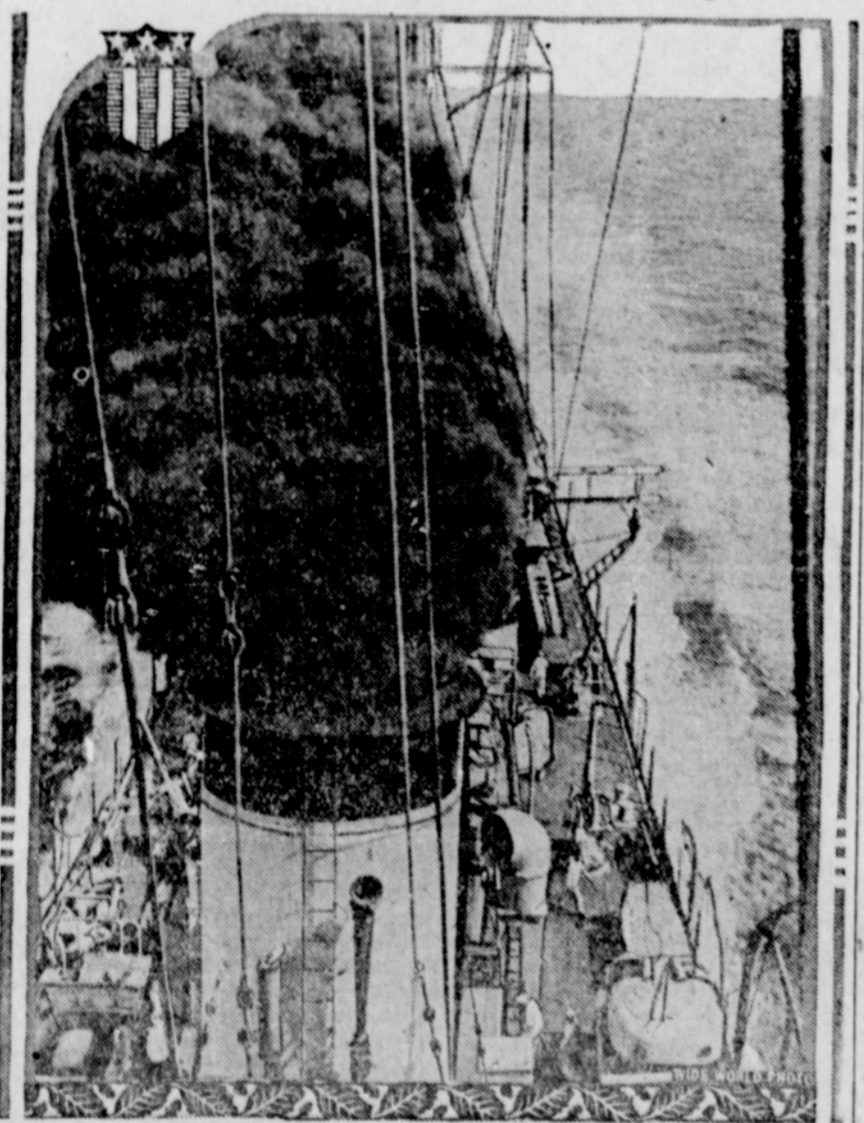
The greater part of the \$100,000 was given by the dames themselves, but generous aid was also received from the public. Not a dollar has been deducted from the subscriptions on account of collection expenses, all of which were paid by the societies or by individual dames.

Snow Worms Bore Into Glaciers Like Hot Wire

Seattle, Wash.—Snow worms have been found in the Cascade mountains of Washington and on glaciers and mountains in Alaska, Trevor Kincaid, professor of zoology in the University of Washington, declared after an investigation.

"The snow or ice worm is not really pink as many assert, but is more of a brownish hue," said Professor Kincaid. "The brown pigment in its skin is a source of heat which enables the worm to bore its way through glacier ice like a heated wire. It grows to a length of about an inch, feeding on debris in the ice."

Trenton Showing Her Great Speed



The newest and fastest scout cruiser in the United States navy, the U. S. S. Trenton, shown on speed trials in mid-Atlantic making a speed of 34.7 knots per hour. The Trenton is the ship that recently brought back to the United States the body of Captain Imbrie who was slain by fanatics in Persia.

San Juan Memorial to Roosevelt Is Dedicated



Major General Harbord (in front of flag) speaking at the dedication of the Roosevelt Memorial on the battlefield at San Juan Hill, Cuba, just after it had been unveiled by Mrs. Theodore Roosevelt, Sr.

Driving Your Own Motor in Europe

Washington Man Tells of Novel Adventures.

Washington, D. C.—Seeing England by paddling a Canadian canoe, touring Holland in a canal boat, and, more recently, viewing the continent from the air afford new thrills—and so did the novel adventure of a Washington man who drove his own automobile through London and continental cities.

David Fairchild, famous plant explorer, writes to the National Geographic society of his experiences amid new traffic conditions, ranging from horse dray and pushcart obstructions to a congestion of bicycle riders, as follows:

"Well, I should say the way to have experiences in Europe is to come in your own hand-driven car, leaving every vestige of a professional chauffeur behind, and poke around through the narrow streets and the beautiful highways of these remarkable countries.

"It was something of an accident which landed us in Europe with the one hundred and fortieth automobile to cross the Atlantic this year. It was my stubborn disbelief in the information I got, which varied from the statement that it was just as expensive to travel in Europe as it is in America, to the discouraging one that it would be difficult to drive in London because they drive to the left there, and the streets are so congested that a man cannot drive for himself at all.

"The misinformation about motoring in Europe which exists on your side is colossal. If you can interview people and speak a little of the languages of the land you visit, motoring in Europe is the only way by which you can compare it with America on the same plane. If you have a car at home and run about everywhere and come here and depend on taxis, you will not learn any more about the country than you would with taxis in America.

"I have found the garages small and dark affairs, but they cost only from 25 cents to 50 cents a night. I have left tools in the car continually and nothing has disappeared. I have been arrested in London and have a letter from Scotland Yard excusing me—for really, the reasons for the arrest were technical ones, pure and simple.

A "System" for Driving.
"I can find my way all over that town, and my 'system' is as simple as A B C. I get the best map possible and place my son on the front seat and he calls out the streets, and unless we get started wrong, we go right through the narrowest streets and alleys of that great jumbled-up thing called London.

"I wandered in and out of the tiny little streets and got an idea of London which it is impossible to get without a car of your own. London has a terrible traffic problem to face. She must either give up the idea of speeding her commerce and get it up on tires, or broaden scores of streets and run through broad avenues somewhere.

"In Holland there are still so few automobiles that there is not yet any problem of traffic. You travel solitary

Gigantic Bust Found in Old African Tomb

Tripoli.—While Count Giuseppe Volpi, governor of Tripoli, was visiting the excavations at Sabra, the most important of the Phoenician tombs, recently, there was unearthed a gigantic bust which is believed to represent the African Jove. In addition to the bust, a number of funeral urns and vases of great value were discovered in the ruins of a neighboring temple. The excavators also found a statue of a Roman emperor and a quantity of decorative marbles of the highest artistic quality.

and alone over roads which have cost more than the thoroughfares in America and which were built centuries ago and come after a while to discount every derogatory remark of the inhabitant as regards to the bad roads of his country.

"Years ago a Dutch friend of mine who was in Johns Hopkins as professor predicted that the bicycle would disappear because it was only a fad. Imagine my surprise to find bicycles in his country in such quantities that, like locust swarms, they blocked the wheels of traffic. I never saw so many. Every family must have one for each member of it. And they never try to get out of your way at all, but take up as much room as they want and crowd you off into the ditch, so to speak. But the streets are so narrow and so crooked that it is impossible to go fast, and consequently it is quite as safe driving about as it is to run a machine through a crowded garage.

Frontiers Easy to Pass.
"Before I came I heard that at each boundary I would have difficulties of

African Antelope Hardest to Catch

Their Horns Easily Harmed, Says Hunter.

New York.—The most difficult animal to catch alive is not the ferocious lion, the tiger, the elephant, the hippopotamus or the bear, but the African antelope, according to Ellis S. Joseph, who has spent a lifetime, nearly, studying the habits and the haunts of wild animals of the jungle and the forest. He has captured alive nearly every kind of animal known. His catches are always in great demand by zoological gardens and circuses.

Mr. Joseph claims Australia as his home, though it is apparent that he spends the greater part of his time in wild, out-of-the-way places, where wild animals and savages abide and where the face of a white man is still a strange and terrifying object. While in New York, Mr. Joseph makes his home at the Hotel Pennsylvania.

"The African antelope is extremely difficult to catch alive and unharmed," said Mr. Joseph, "because of its extreme delicacy, particularly of its horns. Unlike the horns of the elk or deer, the horns of an antelope are permanent. They do not shed them in certain seasons, and if these horns are broken or injured the damage is irreparable.

"The traps set for antelopes must be watched day and night. As soon as an antelope is captured the guards must rush forward! Immediately to prevent the high-strung animal from smashing his horns.

Lions Easily Caught.

"Lions, on the other hand, are the easiest animals to capture. A cage is made in the jungle by setting tall, strong stakes firmly in the ground, upon which a roof is fastened. A sliding door that drops from the top is then arranged with ropes, pulleys and weights in such a manner that the slightest touch of a rope will cause the door to drop. The rope is placed in such a position before the opening of the cage that the lion is sure to touch it as he bounds in to get at the bait—usually a live animal—which is used to lure him within.

"Once the door is slid into position Mr. Lion is securely captured. Then a cage with steel bars is rolled up to the trap, with its door just opposite the trap door. The door is then opened and, just when the lion thinks he is making a dash for freedom, he finds himself securely fastened in the steel cage.

"Monkeys are captured by gulle-

all sorts to go through with. This is a mistake. It is about as easy to pass a frontier now in a car as it is to back up to a gas tank and take in ten gallons of gas. You show your carnet de voyage, the officer writes out a leaflet and the stub and detaches it and bows you through. Not one ugly word or sign of impoliteness have I had shown me either by customs officials, immigration officials, or policemen. Even when I was arrested on Piccadilly by two policemen because my car had a bumper and the bumper concealed the license tag and the policeman didn't understand what the bumper was for. Anyway, I parted with a laugh on their faces when I told them that we had in Washington 104,000 cars with bumpers, and that if I had done what they directed me to do—viz., turn right around in a crowded street—they would have arrested me for that act. The only real quarrel I have with London is that they will not allow you to park cars on the deserted side streets unless you tip someone to watch the car. I think the idea comes down from the days of horse traffic when the horse might run away. There are a few widely separated parking places designated by the police, but utterly useless to one who wants to do any business. And this, mind you, where there are but a small fraction of the cars which we have in our American cities."

They are very fond of a certain variety of tuber that grows in profusion in Africa. Therefore snares are baited with this luscious food, and in that way they are easily captured. Once caught in the snare, the guards rush forward and throw nets over the heads of the monkeys, thus preventing them from escaping.

"I had a pet chimpanzee which I took with me on one of my journeys into the interior of West Africa. In the jungle I took the chain off my pet and let him roam at large in his native haunts. No, he did not run away and return to his natural element. He disappeared into the wilderness, but he returned after a few days, glad to see me again.

Home for a Visit.
"It was as though he had simply gone home to visit his relatives and told them that he was prospering in civilization and intended to remain among men. Thereafter the chimpanzee came and went at will. Sometimes he would be gone two or three days, but he always came back.

"Chimpanzees grow to be very large. It is not unusual for them to reach the weight of 300 pounds when full grown. It is not known just what the average length of their lives is. Eighteen years is the longest any have been known to live in captivity, but, on the other hand, the age when captured was not known.

"The chimpanzee is extremely intelligent, and there seems to be no limit to the things they can be taught. They become very attached to humans and are very affectionate and demonstrative—too much so at times. I had a big chimpanzee at one time in Australia. Once when going on a journey I left him in the zoo at Sydney until I should return. It was gone about eight months that trip.

"When I came back I went to see my pet. As I entered the cage he simply went crazy with delight at seeing me again. He threw his arms about me and began to bite my face, which is one of their ways of expressing affection. But this time his joy overcame his judgment, and instead of biting gently, as he meant to do, he just about tore my face to pieces. It took 43 stitches to close the wounds.

"The chimpanzee is about the nearest approach to man in the scale of animal life. I have been much interested in experimenting with finger-prints of these monkeys. So far I have finger-printed about fifty chimpanzees, and I find that there is as much difference in the prints as there is in the finger-prints of men."