

HARD WORK UNDER WATER

Dangers and Difficulties of the Diver's Occupation.

THE EQUIPMENT THAT IS USED

Captain Everett's Thirty-One Years' Experience Without an Accident—No Electric Lights or Telephones for Him.

It is a common saying that dangers which have become familiar through long custom cease to be reckoned as dangers. In a great measure this is true of the risks attendant upon the work of a diver. He is generally regarded by outsiders as a certain professional, relates the New York Tribune, and, even when every precaution is taken to guard against accidents, it must be admitted that diving presents dangers peculiar to itself and oftentimes impossible to foresee and avert. But the diver himself has grown used to feeling the conditions of his work and they have none of that terror for him which they would inspire in a man entirely unaccustomed to remaining beneath the water.

He descends trusting to the proper working of the mechanism which he has supplied with air and to the strength of the lifeline which lowers and pulls him up. Yet the experienced and trustworthy diver is anything but reckless. It is well for him to dwell little upon the various mishaps which might, but probably will not, occur; nevertheless it is essential that he should be sufficiently mindful of his position to induce him to exercise all possible care in his movements. Captain Charles Everett, the most expert diver of the Merritt & Chapman Derrick and Wrecking company, who has just gone to Havana at the head of a band of divers to take charge of the work on the Maine, is recognized everywhere as one of the most successful men in his profession, and has been diving now for thirty-one years without an accident. He is very modest in speaking of this fact and merely says:

I have been fortunate so far. There is a great deal in that. Of course I am always careful not to run any unnecessary risks, and all our apparatus is examined to see that it is in perfect working order before a diver is sent down. There are certain chances of accident. Personally I don't think they are very great if a diver knows his business. I feel just as safe when working under water as I do when on the deck of a vessel. I have been diving for so many years that every phase is an old story to me now.

LONG EXPERIENCE.

Captain Everett indeed traces the course of his experience, tried every kind of diving which is practiced with a view to recovering sunken property. He has been deep under the waves in the open sea, on a multitude of harbors, in rivers, in lakes, in canals, and, in short, in all places where wrecks are found. In prosecuting this work he has traveled extensively, not only throughout the waters in the neighborhood of the United States, but also in South America and the West Indies. One of his latest pieces of work was performed in the Allegheny mountains, high up in the Allegheny mountains. This, naturally, was not a case of shipwreck. A coal mine had been flooded, and Captain Everett dived into the water to ascertain the extent of the damage and see what could be done toward repairing it. "You see, I am a dry-land man as a deep-sea diver," he remarks.

The diving suit which Captain Everett wears, and which is the one generally used now by all divers, is made of India rubber, with a helmet of brass or copper. Outside of the rubber, to protect it from hard usage, an extra suit of canvas overalls is worn, and after a rough piece of work this canvas is frequently changed. Around his waist the diver wears a belt made of bars of lead fastened crosswise on a leather band. His shoes are of iron, heavily weighted so as to maintain the correct position easily, and the entire suit with which he enters the water weighs about 175 pounds. This is necessary to enable him to sink to the bottom of the sea. The suit is supplied with windows of thick glass, one in front and two others at each side of it, so that by turning his head slightly inside the helmet the diver can see for some distance around him.

THE EQUIPMENT.

The air tube upon which his ability to remain below depends, is of strong, flexible rubber, threaded with iron wire, and above is driven down by means of a pump. This tube, before reaching the opening in the helmet, through which the air is supplied to the diver, is connected to a large brass air-staple at the diver's left shoulder. This is so that he may be able to grasp it quickly, without having to rise from the bottom. The diver is also provided with a small, fresh, black-eyed yolk of 20 lbs. weight, and asked permission to go and see the Brown raid prisoners in their cells. Lewis and Clark, a grandnephew of George Washington, took part as a captain in the military display that day.

"When I was first married," says the Rev. Dr. Lorimer, pastor of Tremont Temple, Boston, "I had my strict ideas about Sunday observance. Mrs. Lorimer had a colored lady for a companion, and on the first Saturday after she came I went into the kitchen and told her I did not want any Sunday work. She could prepare all meals for that day before-hand. She didn't say one word while I was talking; then she looked up, and pointing to the door, exclaimed: 'Now, look you, Marse George, you jest go in dar and tend to your Christianity and leave me to mend to mah kitchen.' I went, and as Sunday is as long as she lived with us."

Ex-Congressman William H. Martin of Texas, who died the other day at Hillsboro, in that state, was known to his constituents in Washington by the affectionate name of "Old Howdy." He created a sensation in Washington, where he was regarded as a typical westerner, when he promised before he left home that the life of the capital should not change him, and he intended to cling to the button and shirt and the wide-brimmed sombrero.

Herr Krupp has just obtained, through the German foreign office, from the King Alexander's government to work the coal, iron, copper, lead and silver mines in the east of Serbia. The concession is for a period of ninety-nine years, and has also been given to use the rapids of the Danube between Brunita and Kladoof for the development of the power needed for the enterprise. Ex-King Milan is reported to have contributed in no small measure to the grant of the concession and to have received a considerable sum from Krupp for his trouble. Krupp has already formed a company at Berlin with a capital of \$8,000,000 to work the concession.

I CANNOT QUITE FORGET.

New Orleans Times. I cannot quite forget! Though crowding years have thrust their Through trails of half-wakened joy, Or breathe's wash of weary pain— The road, I cannot quite forget. I cannot quite forget! But on a day when sunshine falls, Or sweep the woodlands wild with rain, A sudden memory, bright and clear, I hold thy hands, dear love, again. I cannot quite forget! And memory, trailing thro' the deeps Of long—such long—evanescent years, While sudden, from the past, I see thy face thro' vaporous tears, And all the echoing aisles of time Bring back thy voice, sweet as the rain, Poring the measures of thy love In passion-fraught rhapsody.

LIMIT OF HUMAN ENDURANCE.

There is, of course, a limit beyond which human endurance cannot go. This is generally reckoned at about 120 feet, when the diver is under a pressure of "five atmospheres," or seventy-five pounds to the square

TURNING OUT GREAT GUNS

Active Work for Coast Defense at the Watervliet Arsenal.

THE ARSENAL AND THE GUN WORKS

A Monster that Will Cost \$300,000. Throw a Projectile Fifteen Miles and Use 1,000 Pounds of Powder at a Charge.

The great gun factory at the Watervliet (N. Y.) arsenal is humming with activity in these days. On every side and in every department, reports the New York Sun, one hears the whirl of ponderous wheels, the creaking of giant cranes, the rattling of colossal chains, the rumbling of heavy conveyances and the clang of many hammers. Hundreds of men are at work at huge pieces of ordnance. It is here that the government is building the great 16-inch gun which, when finished, will be the largest in the world, and here, too, guns are being made for seacoast defense and field service.

When President McKinley visited the arsenal last August he stood upon a huge gun and glanced toward the shrinking city of the West Troy. The great ordnance department, he turned to the venerable Colonel Charles L. MacArthur, who stood at his side, and remarked:

"Well, this is truly a wonderful sight. I really had no idea that the arsenal was such a magnificent place."

Secretary of War Alger approached.

"What do you think of it, Alger?" asked the president.

The tall, slender secretary of war stroked his mustache for a moment, then replied:

"It is certainly a wonderful place, Mr. President."

The president's surprise and gratification have been shared by thousands of visitors to the arsenal. The great ordnance department, he turned to the venerable Colonel Charles L. MacArthur, who stood at his side, and remarked:

It was on July 14, 1813, that the first purchase of land for an arsenal was made in the town of West Troy. The deed of that date conveyed a little more than one acre, lying on the east side of River street, now Broadway, and affording a river frontage of about 700 feet and about twelve acres of the property. The construction of the arsenal was originally designed as a small depot for supplies and the buildings constructed at that time were suited to that purpose. In 1828 the government had purchased 138 acres. It was not until October 18, 1837, that the manufacture of ordnance was begun there. The first section of the large shop was started in October, 1839, and was completed in 1843. On the anniversary day, in 1853, exactly three years afterward, work on the hot every instrument of war ever turned out of the arsenal has been a complete success. When taken to the proving grounds at Sandy Hook these pieces have been found to be every way satisfactory. The arsenal employs about 400 men.

HISTORY OF THE ARSENAL.

The length of the gun factory is about 1,000 feet. It contains machinery of the latest type. The three electric cranes in the shop are marvelous in their capacity. The smallest has a capacity of thirty tons, the second of seventy-five tons, and the third of 120 tons. These cranes pick up ponderous cannon with marvelous ease and convey them the full length of the shop. It is a remarkable sight to see the largest crane carry a gun weighing as much as 600,000 lbs. easily as though it weighed only 600 lbs. Another wonderful machine in the main room of the gunshop is the compound lathe, which is used for measuring machine and takes account of the one-thousandth part of an inch.

A MONSTER GUN.

It is announced that the War department intends to mount the great 16-inch gun on the coast of France. The protection for this gun will be a turret which will entirely enclose the crew and the greater part of the gun. From its position the gun will have a full sweep of the channel leading into New York harbor. According to fortunate reports now in the hands of the United States navy, John P. Meigs of the United States navy is superintending the construction of this monster rifle, a shot from this new gun will have a striking range of 15 miles. There is no known armor of sufficient strength to resist its terrible force. The caliber of the gun will be 16 inches. The length, from breech to muzzle, will be 52 feet 2 inches. The gun will measure exactly 5 feet through the breech in a vertical position. The powder charge will weigh nearly 1,000 pounds.

The first shot of this monster gun was cast in October last at Bethlehem, and was for the tube forging. It weighed 82,500 pounds. The jacket forging weighed 99,600 pounds. The tempering and annealing processes are also done at the Bethlehem shops. Every ounce of the metal used in this monster gun is fluid compressed. The specifications demand the most exacting tests. Specimens from all the forgings are carefully subjected to elongation, breaking and bending tests. The hammer which pounds the tube into round shape is capable of delivering a blow of 100 tons, or ten tons more than the celebrated Krupp hammer. When finished the gun will weigh 138 tons. This is six tons more than the monster gun which Krupp exhibited at the World's fair. Before the American gun finally accepted it must withstand charges of powder which, when fired, will develop a pressure of at least 35,000 pounds to the square inch. The gun will have no trunnions, but will be secured by steel bolts in the carriage. This is the first modern gun built by this government in which trunnions have been omitted. The gun when completed will cost about \$300,000. The velocity of the projectile will be, it is estimated, about 2,000 ft. per second. Its extreme range will be fifteen miles.

HOW BIG GUNS ARE BUILT.

One of the most interesting features in connection with the construction of one of these big guns is the shrinking of the jacket. The jacket is called, is a coat of iron fitted around the portion of the cannon most likely to become weak. This means that the jacket is shrunk over the larger steel cylinder at the breech end of the gun. The gun proper consists of a long central steel cylinder, technically known as the tube. Over this tube a number of steel jackets are shrunk. Some of the jackets weigh as much as 35,000 pounds. The greatest care must be taken in fitting the hoops and jackets. The slightest mistake in calculation often means the loss of thousands of dollars.

When all is in readiness the jacket is put in a vertical position in the center of a cylindrical retort furnace. Here it is expanded, being heated to a temperature of 700 degrees Fahrenheit. The brick furnace is inclosed in an iron cylinder, with a considerable space between and a heavy iron cover at the top. The jacket is usually remains in the cylinder about thirty hours. During that time the greatest care is exercised to prevent any foreign particles from entering the furnace. The jacket with the metal. Meanwhile the gun tube has been put into the shrinking pit, muzzle down. Here, also, the nearest care must be taken to prevent the tube from being seriously affected. When all is in readiness the jacket is quickly measured and aligned, and then taken up by the big cranes and lowered over the breech of the gun. The operation is a most delicate one. After the gun and its jacket have remained in the retort for about twenty-four hours the jacket are placed in one of the largest lathes and turned down to receive the hoops. These hoops are heated and expanded and shrunk over the tube. The hoops are then turned to horizontal position. All the work of handling is done by the big cranes. After the gun is properly jacketed, hoops and turned down in the lathe, the gun is ready for the firing process. All of these processes require time, skill and patience, but when the gun is last finished it is a deadly thing of beauty.

THE SURPRISE OF ALL.

Mr. James Jones of the drug firm of Jones & Son, Cowden, Ill., in speaking of Dr. King's New Discovery, says that last winter his wife was suffering from becoming an invalid. She grew so serious that physicians at Cowden and Pana could do nothing for her. It seemed to develop into Hasty Consumption. Having read in the New Discovery in a store and seeing lots of it, he took a bottle home, and to the surprise of all she began to get better from first dose, and half dozen dollars worth of the New Discovery in a store. King's New Discovery for Consumption, Coughs and Colds is guaranteed to do this good work. Try it. Free trial bottles at Kuhn & Co.'s drug store.

OUT OF THE ORDINARY.

The rubber-shed home and the rubber-tired buggy have appeared in Washington. A vein of iron ore nine feet thick, smelting 60 per cent pure iron, has been located in Center county, Pennsylvania. A sponge with the great circumference of five feet has been discovered near the waters of Biscayne Bay, Florida. The streets of London, placed end to end, would stretch right across the American continent from New York to San Francisco. There is an immense garden in China that embraces an area of 50,000 square miles. It is all meadow land and is filled with lakes, ponds and canals. The five-year-old English watch, bearing the inscription: "Given by Sir Walter Scott to his valet, John Baxter Nicholson." This watch is mentioned in the introduction to "Waverley."

THE HOUSES OF PARLIAMENT.

The houses of Parliament are partly lighted by 40,000 electric lamps, which number is being constantly increased. Fifty experienced electricians are employed to keep the system in order. A resident of Quitman, Mo., owns 42,000 acres of land, one of his sons 4,000 acres, and another son 8,500 acres. All their farms are well held up by an extensive system of telephones. Africa's monkeys are giving out. In the neighborhood of the Gold Coast they have been exterminated, and last year the colony covered only 600 monkey skins, whereas, in 1894 168,405 skins, valued at \$205,000, were exported. Brunswick, Germany, is troubled over a peculiar epidemic known as hysteresis, which has broken out in one of the high schools. The girls in one room started the others, hysterics spread to all the classes and within three days the school was closed. The island where Dreyfus is imprisoned is called "Devil's Island," but it is not named on the maps. It is the smallest and most northerly of the three Iles du Salut, situated about twelve miles from Cayenne and eight miles from the mainland of French Guiana. It is as easy thing to be a millionaire in Berlin. A yearly income of over \$9,000, representing the interest on 1,000,000 marks, is the qualification for that title, which is enjoyed by 2,902 Berliners. The richest of the millionaires has a capital of about 75,000,000 marks. The immense traffic on the great system of canals which traverses the Chinese empire could be so increased and expedited by the use of steam tugs or launches that the authorities are said to be considering favorably the plan of enlarging the canals and introducing steam power. It is said that the mines of the world produce every year 540,000,000 tons of ore.

THE FASHION FOR LADIES' PAGES.

It is interesting to note the pressure which divers at a great depth have to endure. At the sea level the atmospheric pressure is about fifteen pounds to the square inch. Below the surface it increases a little less than half a pound for every foot of depth. Thus at a depth of thirty feet the diver is under a pressure of thirty pounds to the square inch, or, as he terms it, he has the weight of "two atmospheres." At sixty feet he has another fifteen pounds of "three atmospheres" to stand, and thus it increases, every additional three feet bringing another fifteen pounds' pressure to the square inch.

Free Samples to All

15,000 Packages to be Given to All Who Apply—John A. Smith and Remarkable Rheumatism Cure.

THE FIRST TEST AND WHAT IT LED TO

Cured Himself First, Then His Friends and Neighbors and Now Proposes to Cure the World.

It seems that to find "the cleanest city in America" we must travel clear down to Phoenix, Ariz., where 4,000 or 5,000 people walk on asphalt sidewalks which are not permitted to be defiled by spitting. The penalty is \$5. It is rigidly enforced, and curiously enough the first person compelled to pay the fine was the city attorney, who temporarily forgot the prohibitory ordinance.

The observance of "fools' night" by the Germans is a unique ceremony of fun and merriment. Every participant wears a false nose and goggles, and is provided with a long pipe, but is not able to make a puff of smoke. The fool of himself is the lion of the occasion. There are men who are not Germans who could carry off the honors if there were such a celebration every night in the year.

Dr. Van der Heyden of Yokohama has just built an anti-theft dwelling house, supposed to be microbe-proof. The walls of this building are plates of glass set in metal fastenings and made air-tight. Near the roof there is a small opening for the outflow of air from the living rooms, so arranged that no air can enter that way. Air from outside can get in only through a tube, the opening is at some distance from the house. The air that enters is filtered first through cotton batting and then is sterilized by passing through glycerine.

A new French police idea is to provide each member of the force with a piece of chalk. He is expected to mark his assailants with this when he gets in a row, and, being thus identified, they can be arrested later. The chalk cannot be snatched from him as easily as his club, nor can it be turned against the original owner with such terrible effect, while the bearing of chalk marks is entirely precluded from setting up the favorite plea that he was merely "an innocent bystander." On the whole, such a piece of chalk device, while it has its disadvantages, is not half a bad idea.

Frank Perkins of Poughkeepsie, N. Y., the chicken thief who attempted to commit suicide about six weeks ago at police headquarters by shooting himself in the head, is about to be discharged from the hospital as cured. The bullet entered the brain, and the man lay unconscious for more than a week. The doctors said that his death was only a matter of time. He lay so long ago it is recalled that his right eye was bulging out, and after an examination it was decided to remove the eye. The operation was performed, and lo! the big 23-caliber bullet dropped out completely. At Pittsfield, Ind., a druggist was cured after thirty-three years suffering. John Caraton of Belton, Tex., had planned to give his wife a trip to Europe, but she was taken with an attack of rheumatism and the trip abandoned. But she tried a sample of Gloria Tonic, got some more, was cured and went to Europe rejoicing. She is a firm believer in Gloria Tonic. Mrs. Persohn of Amsterdam, N. Y., believes Providence directed her to Mr. Smith's remedy. She was nearly insane from the intense suffering from rheumatic pain and was entirely cured. Thousands of other instances could be related where this magical remedy has cured rheumatism. In case your druggist does not have it, it's well worth anybody's time to send their name and address to Mr. Smith and he will send a trial package of Gloria Tonic absolutely free of charge. If you are a friend, or acquaintance, a neighbor or relative suffering from rheumatism send for a trial package and give it a test. It is a remarkable remedy and there is no question here what it will cure any case of rheumatism no matter how severe or of how long standing. Send your name and address to John A. Smith, 212 Chamberland Church Building, Milwaukee, Wis.

THE WORLD'S RICHEST LAND.

It is in New York City and is worth \$330 a Square Foot. The most valuable plot of ground in the world, at least, the one that has commanded the highest price, is located at the corner of Broad and Wall streets, New York City. Several years ago Mr. Wilkes established a record for high-priced realty by paying \$168,000 for 508 square feet of ground on this site, or \$330.70 per square foot. The immensity of this rate of valuation can be appreciated by measuring a square foot of space and then comparing its dimensions with those of \$330 in money. Such a comparison will show that if Mr. Wilkes had been able to cover his entire lot with eighty-two layers of greenbacks, or he could have paved it with four tiers of silver dollars placed side by side as closely as they would lie. Doubtless if the worthy Dutch burghers of New Amsterdam could return to earth they would be astounded to learn that the plots in New York City which they pastured their cows 200 years ago. Though no other piece of ground has commanded an equal price per foot, there are several other plots in New York City which are quite equal to the Wilkes property in value. For example, a considerably larger lot on the northwest corner of Nassau and Pine streets, valued at \$1,500,000. The lot on the corner of Broadway and Maiden lane and the site of the Commercial Cable company's building in Broad street, valued at \$1,500,000. The lot on the corner of Broadway and Maiden lane and the site of the Commercial Cable company's building in Broad street, valued at \$1,500,000. The lot on the corner of Broadway and Maiden lane and the site of the Commercial Cable company's building in Broad street, valued at \$1,500,000.

BY SPECIAL ARRANGEMENT,

FRANK G. CARPENTER'S

LETTERS FROM SOUTH AMERICA

WILL BE PRINTED IN

THE OMAHA SUNDAY BEE.

Mr. Carpenter, the well known newspaper correspondent, is making a trip of over 25,000 miles through the frequented and unfrequented parts of South America. He will describe for The Bee what he is seeing, tell of the incidents of his journey, give interviews with men prominent in all walks of life—in a word give a series of graphic pen pictures of life and its conditions in the countries to the south of us. Old readers of The Bee know what Carpenter's letters are—new subscribers will need read but the first letters to become enraptured with his style and subject. These letters, commencing during March, will continue regularly each Sunday for a year.

FOR CARPENTER'S LETTERS

READ THE SUNDAY BEE.

ALL NEWS DEALERS.

OMAHA MEDICAL AND SURGICAL INSTITUTE

ARE OLD SPECIALISTS

In the treatment of all Chronic, Nervous and Private Diseases, and all WEAKNESSES OF MEN

Cataract, Liver, Blood, Skin and Kidney Diseases, Gonorrhea, Gleet, Syphilis, Stricture, Piles, Stomach, Bowels, Diabetes, Bright's Disease, and all other ailments. Free Book and New Methods. Treatment by Mail, Consultation free. Omaha Medical and Surgical Institute, Room 5, 1215 North 16th St., Omaha, Neb.

Comparison is invited

Of the Quality

And Quantity

Of Readable News

Printed daily

In The Bee

And in other papers.

For the news

And all the news

Read The Bee.