NATURAL BRIDGES.

The Biggest In the World Are In the Utah Desert.

WONDERS OF WHITE CANYON.

Three Massive Towering Arches, Majestic In Their Rugged Grandeur, Span the Lonely, Picturesque Gorge Far From the Beaten Paths of Man.

Among the wonders of the west which the government has taken under its care are the remarkable natural bridges of Utah, which are, so far as is known, without a peer. In 1908 these three bridges, the Caroline, Augusta and Edwin, were set aside as national monuments, and later certain caves and springs near by were added to the reserved area.

It is difficult to give an adequate idea of these stupendous arches, and so far they have been seen by few persons, for it is a trip of days across the desert to reach them, but accurate measurements have been taken and convey some notion of their size and shape. The popular way of reaching these curiosities is from Bluff, Utah, where one can obtain a guide and outfit. Thence you proceed through dry washes, old stream beds and sage covered mesas to the great bridges, which loom up in White canyon far from the beaten path of man.

The White canyon itself is many miles long, and the bridges spring from its steep, light buff walls, the three being within a distance of five miles. They seem carved by Titanic forces, for the largest is 222 feet high and 65 feet thick at the top of the arch. The arch is 28 feet wide, the span is 261 feet, and the height of the span is 157 feet.

The Natural bridge of Virginia is a baby in comparison with any of the three Utah formations. It is to be regretted that these wonderful bridges are not easier of access. Figures give little idea of their immensity, and words but suggest their beauty.

The first account of them given to the world was that of Horace J. Long, who visited the bridges in 1903. Long was an engineer and prospecting in Utah. One day he fell in with a cattleman named Scorup, who was familiar with Utah and in particular with the region lying around the San Juan river.

Scorup, after some preliminary conversation, said that he had seen some remarkable bridges so immense and wonderful that he disliked to talk about them for fear he would be accused of manufacturing the story. He added that though he had seen them in 1898 he had always desired to go back and if Long would accompany him and take photographs he would guarantee to guide the engineer to the place.

Accordingly the two men set out with pack horses and provisions, and after a lonely trip through deserts and canyons and wide stretches where no animal was to be seen they descended into the gorge of the White canyon, the sides of which are filled with deserted cliff dwellings. Two days later they came to the wonderful bridges, the first of which, of pink sandstone, Scorup called Caroline in honor of his mother.

Long was fairly dazed at the beauty and size of this natural wonder. The pink walls were streaked with delicate colored lichens and stood out in bold relief against a sky of blue. More than this, both men felt that they were gazing on one of the wonders of the world.

They pushed rapidly down the canyon and came to another arch, more symmetrical and more beautiful than the first, with a lightness and grace and charm of coloring that made it a splendid work of nature. Long named this the Augusta after his wife and managed to get a fair photograph. The arch was so high that the trees of California would seem dwarfed beside it, and the men took what measurements they could by climbing and clinging to the canyon's sides.

They found the Edwin, or Little bridge, several miles down the canyon, the arch in reality of immense dimensions, but small in comparison with those that they had measured. All around these bridges are crags and strange formations, cave dwellings, springs and other objects of interest, but the center of attraction is and will always be these three towering arches which span the White canyon.

Undoubtedly these bridges are of great scientific interest, not alone because they are so far as known the largest natural bridges in the world, but because they are extraordinary examples of stream erosion. An ancient river probably carved these great arches, which may have been known to prehistoric dwellers of the desert west. —New York Sun.

The Crowded Way.

"The late General Booth," said a Salvation Army captain of Philadelphia, "used to admit freely that the bad man had more fun—at least while carrying on his badness—than the good man.

"Stroking his white beard, he put the matter in a neat epigram one night in New York.

"'They say the way of the transgressor is hard,' he said. 'At any rate it certainly isn't lonely.'"

A Difficult Order.

Willie (at table)—I want my pudding now. I don't want any old meat and—

Father (sternly)—You keep your mouth shut and eat your dinner.—Boston Transcript.

"To wait and be patient soothes many ... Dutch Proverb.

MANLIKE MANATEES.

These Queer Creatures Are Linked With the Mermaid Myth.

In semitropical waters of America there disports a member of that family of aquatic mammals to which has been ascribed the mermaid myth. Related to the dugong and the now extinct rhytina, we still have the manatee. This name is preferred by some to manati, under the impression that the latter is the plural of the Latin "manatus" (furnished with hands), though the name is probably of Mandingo origin.

The manatee is a herbivorous mammal inhabiting the shallows about the coasts of Florida, Mexico, central America and the West Indies. It is not known to attempt the open sea and does not possess the ability to come ashore. This animal is somewhat whalelike in shape, with a horizontal tail fin. It is from eight to twelve feet in length, the body being scantily covered with hair. The only limbs are the fore flippers, low on the side of the body. This flipper has no fingers. It does possess, though, three flat nails and has a free motion in all directions from the shoulder. The elbow and wrist approximate the human anatomy in movement. With this crude resemblance to an arm the manatee has been said to carry its young. While the statement is not authentic, it is quite believable, its possibility being vouched for by all observers of the arm in motion.

The head of the manatee is divided from the body by a slight indication of neck. The upper lip is extraordinarily flexible—so much so that each side can protrude independently of the other, and, thus separated into two lobes, the upper lip can perform the complete operation of grasping food and conveying it into the mouth. In each jaw are twenty pairs of two ridged teeth. With this formidable equipment the manatee is not, however, ferocious, but browses tranquilly on the water plants of its habitat. In some views the head is surprisingly manlike, though far from beautiful, and no specimen has ever sat on the rocks and combed its golden hair.—Harper's.

ELECTION STRATEGY.

Incident of an Old Time English Parliamentary Contest.

In the days before the institution of the secret ballot, when the candidate with the longest purse usually won an election, a former Lord Dundonald, who refused to give bribes, contested Honiton, but was beaten by an opponent who paid his electors at the rate of £5 a vote.

Then the unsuccessful candidate conceived this brilliant plan, says the writer of a history of the Dundonald family. He announced to his friends that he was quite determined to win the seat next time without bribery. Then he sent the town crier round the town to announce that all who had voted for him in this first election might repair to his agent, from whom they would receive £10.

As comparatively few people had voted for him, this was not a very expensive process. And at the next election Lord Dundonald was elected by an enormous majority. After the triumph several people came to him and delicately suggested that some reward was due to such loyalty.

"Not a farthing," was the reply.

"But, my lord, you gave £10 a head to the minority at the last election, and the majority have been counting on something handsome on this occasion."

"Perhaps so," said the clever candidate. "My former gift was for their disinterested conduct in not taking my opponent's bribe of £5. For me to pay them now would be to violate my own principles."—Pearson's Weekly.

Thermometer and Gulf Stream.

Investigators have observed that the thermometer is not necessarily a sure indication of the gulf stream; that the strongest current does not necessarily coincide with the highest temperature. The warmth of the water only indicates its tropical origin, and it may or may not be accompanied by a current. Thus the warmest water off Cape Hatteras is the result of a very gentle flow coming from the trade wind region outside the West Indies. The gulf stream itself is between this warmer water and the 100 fathom curve.—Shipping Illustrated.

Against Speculation.

The head of a big trust said at a dinner in Boston:

"I have always been against speculation. To try to get rich by stock fluctuations instead of by honest work for the common good is to be an undesirable citizen.

"Besides, these fluctuating investments are very risky and uncertain. It's a wise stock, you see, that knows its own par."—Exchange.

Wise Provision.

"Biggins says he has the smartest youngster in the world."

"Of course," answered Mr. Growcher. "Every parent feels that way, and it's a wise provision of nature. In every human being's life there ought to be a time when somebody thinks he is smart."—Washington Star.

His Tints.

"When I last saw him Jabbs was green with envy, yellow with jealousy, white with fear and red with rage."

"What a highly colored life his must be!"—Baltimore American.

Another Optimist.

Tommy—Pop, what is an optimist?

Tommy's Pop—An optimist, my son, is a man who is married and glad of it.—Philadelphia Record.

MISSING A CARIBOU.

An Attack of "Buck Ague" Made a Fool of the Hunter.

What the "buck ague" is like is described in "The Journal of a Sporting Nomad," by J. T. Studley. The author's first attempt against the caribou resulted in humiliation. He tells that Johnny, his Indian guide, suddenly dropped like a stone into the wet grass and muttered "Stag," and there, sure enough, strolling along the front was a fine caribou. "I sat down, resting my elbow on my knee, waiting until he should put in an appearance my side of the rock. I had the rifle to my shoulder, and at last the grand beast walked into view, not more than 100 yards away. He stopped, looking about him, and I drew a bead on his shoulder. Useless! The rifle wabbled all over the place, and for the life of me I could not keep it still nor hold my breath. My heart was in my mouth, and all the time the rifle trembled and shook. The caribou moved on a few paces, and I determined that if I meant to shoot at all I must obtain better control of my nerves. I still covered him with the sights, or thought I was doing so, as I pulled the trigger on the beast that was standing broadside on with his head turned from me.

"I was using a fine rifle, and it was the work of an instant to pump another cartridge into the chamber and fire again. Still no move on the part of my target. He faced the other way nonchalantly, listening with interest to the echo of the rifle in the distant canyons. I was getting desperate now and could hear the Micmac muttering all sorts of imprecations behind my back, which only made things worse. I fired five more shots at that caribou as he stood as though carved in wood, persevering until he turned off calmly into a belt of timber.

"This story is an absolute fact. I would not have credited it had I not been the one to make such a fool of myself. My feelings can be more readily imagined than described. I could have cried with vexation and shame. Johnny took the rifle, looked it over, patted it as though he would demand of it whether the fault lay with it or the user, and I tried to make excuses to myself for myself."

BLACK LETTERS AND WHITE.

The Former More Distinct at a Distance Than the Latter.

There is a tendency on the part of railroads to adopt signs with white letters on a black background, not realizing that the black letter on a white background is easier to read and can be seen at a greater distance. This follows in an interesting way from the structure of the retina of the eye.

The impression of a letter at the limit of vision is received on the ends of a small bundle of nerves which convey to the brain a sort of mosaic impression. A nerve can only transmit to the brain information as to whether or not a ray of light is falling upon it, and when a nerve is partly in the light and partly in darkness the sensation is the same as though all of it was in the light.

It follows, therefore, according to the Scientific American, that all nerves on the dividing edge between any black and white area transmit the sensation of light so that all white lines and white areas appear wider and all black lines and black areas appear narrower than they really are.

Black letters grow thinner at the limit of vision and are still recognizable, while at the same distance white letters grow thicker and cannot be distinguished. There are circumstances when it is necessary to use white letters, but in such cases legibility will be improved if they are made with a thin stroke and strongly lighted. Black letters are more distinct if made with a heavy stroke.

"Doing the Trick."

Kean played Brutus to his son's Titus in "Brutus, or the Fall of Tarquin." As may be imagined, the benefit was a bumper. There was over £300 in the house. Kean, invigorated and strengthened by his holiday, played magnificently. Charles supported him extremely well, and Kean's delivery on his son's neck of the lines, "Pity thy wretched father," stirred the audience to their very depths. There was not a dry eye in the house, the applause was frantic and Kean whispered to his son, "We are doing the trick, Charles!"—Armstrong's "Century of Actors."

A Blunt Monarch.

James I., being requested by his old nurse to make her son "a gentleman," answered emphatically: "I'll mak' him baronet, gin ye like, luckie, but the de'il himsel' couldna' mak' him a gentleman."

James I. was the first to create baronets (1611). He it was, also, who said of the wives of his law lords, "I can make the carls lords, but I canna' make the carlines ladies."

Neighborly.

She—I have not seen you for an age, Herr Doctor, notwithstanding that we live only a few streets apart here in Berlin. I learned, with much regret, that you've been ill. Herr Doctor—Who told you that? She—My brother wrote me from India.—Fliegende Blatter.

No Chance.

"What became of your anti-noise movement?"

"We couldn't hire brass bands and megaphones to popularize it without being inconsistent."—Washington Star.

Every one sings as he has the gift and marries as he has the luck.—From the ...

THE UNERRING SUN

It Is Uncle Sam's Most Reliable Lighthouse Keeper.

NEVER FALTERS IN ITS WORK.

By the Aid of the Wonderful Sun Valve It Lights the Acetylene Beacons as It Sets at Night and Extinguishes Them as It Rises In the Morning.

The sun is the most trustworthy of lighthouse keepers. The sun or the heat from it lights many hundreds of beacons along our coasts and waterways evening after evening and extinguishes them punctually every morning. They are guides on land and sea that are never touched by human hands from one month's end to another. The way in which the United States government, through its lighthouse board, has utilized the services of the sun and made that great lamp of heaven a faithful and unerring servant is most interesting.

The discovery of acetylene gas was the first step toward retiring the lonely keepers of the little lights in faroff places. Modern magic was not slow in recognizing the fact that by the application of certain well known scientific principles the lighting of the great chains of beacons that girdle the coasts of the two seas and the gulf and cover the great lakes and every navigable stream in our huge country could be much simplified.

The United States did not become interested in the acetylene light and its automatically generating gas buoy until about the year 1906 and did not adopt it until 1908. Then the engineers of the lighthouse board devised some wonderful improvements, among them the utilization of the sun.

The self lighting and self extinguishing acetylene beacon is a very simple thing, but it depends almost entirely on the "sun valve," which is one of the most wonderful but least complex of the achievements of modern science.

In the first place, the source of light for these lone beacons is dissolved acetylene, which is stored under pressure in steel cylinders. One of these cylinders can be charged with enough gas to last a small beacon three years. Usually, however, in the case of floating buoys, a six months' supply is all that is necessary, as such buoys are overhauled and painted twice a year. Knowing the size of the flame and its hourly consumption of gas, it is very easy to compute how long a cylinderful will last and how often it will need to be visited. That is all the care the light will need. The sun valve does the rest.

The scientific principle upon which the sun valve depends is that light waves become transformed in different degrees, according to the nature of the intercepting body. Sunlight upon dark surfaces is converted into heat, and heat produces expansion. This expansion is especially perceptible in certain metals.

In a carefully sealed and substantially mounted glass jar nearly a foot high and about one-fourth that in diameter a thick black rod is placed perpendicularly through the center. It is supported by three slenderer rods of highly polished copper. The big black rod is of copper also and is coated with lampblack to make it absorb light to the greatest possible degree. The supporting rods reflect light without absorbing it and do not expand or contract to the same extent as the largest rod.

The thick black piece of copper in the center of the jar is extremely sensitive to light and heat. As the sun appears and the atmosphere grows warmer in the morning this rod lengthens. It pushes down into the metal chamber in which the glass jar rests and touches the end of a lever. It presses down on this lever, which is controlled by a spring and cuts off the flow of the gas to the lamp.

When the sun disappears from view in the evening and the temperature of the air falls the process is reversed. The rod contracts and releases its pressure on the lever, allowing the gas to flow upward to the lamp. The gas is ignited by a little pilot flame that is never extinguished. Thus the beacon is lighted at the proper time and is put out when it is no longer needed, although along desolate coasts it may never gladden the human eye for months at a time.

The engineers of the lighthouse board say that the precision of this device is almost incredible. It can be used with equal certainty in equatorial heat and in polar cold, for it responds with the utmost accuracy to small variations in temperature. It is used on lonely islands in the Pacific. There are nearly a hundred of these sun valve beacons in Alaska. In summer they are aids to navigation, and in winter they guide the travelers on dog sledges over the frozen wastes.—Harper's Weekly.

Deadly.

"I understand that a number of women have learned to smoke cigars," said the frivolous observer.

"I don't believe it," replied Mr. Meekton. "The kind of cigars that women buy nobody could smoke."—Washington Star.

Sarcastic.

Softly—I'd have you to understand, sir, that I'm not such a fool as I look. Sarcast—Well, then, you have much to be thankful for.

Riches are like sea water, the more you drink the thirstier you become— ...

AN IRON WILLED MONARCH.

One Man Rule as Exemplified In Frederick the Great.

Frederick was an intensively active, highly capable, strong willed and self reliant commander. He concentrated all power in his own hands, reducing his ministers to clerical work and his generals to the duties of personal lieutenants. Below him the Prussian administration was a thing of stiff and mechanical obedience, lacking in initiative and individuality.

Several of Frederick's military losses were due to the fact that he gave his generals such minute orders and was so severe in case of disregard of instructions that they did not dare to use their own judgment when unforeseen conditions presented themselves. He personally foresaw and provided for everything, and he inspected frequently and thoroughly. His discipline was severe, his organization good, his calculation accurate and limited to what was possible. His movements, which were skillfully disguised, were rapid.

So superior was Frederick to his opponents in strategy that they were obliged for safety to keep their troops in so concentrated a form that there was not sufficient space for effective maneuvers. He was more capable in marching and maneuver than in battle, more capable in battle than in siege.

His great defect as an administrator lay in the fact that he dwarfed the growth of those below him and so educated no talented corps to bear the political and military burdens of the state when he should be obliged to lay them down. He apparently could do things only through himself. Having a supreme contempt for the capacities of most mortals, he had no mind to make experiments which might have changed his opinions. Although he knew for many years that his successor was to be a man without ability, he handed down to him a system which required a Frederick. We may say that he brilliantly administered a system which was badly organized.—Edward D. Jones in Engineering Magazine.

FLUNG FROM A WINDOW.

Horrors of a Death Sentence In the Middle Ages In Bohemia.

How many people know what defenestration means? Yet it was once a popular method of executing criminals and was the mode of capital punishment used in Bohemia in the middle ages and later. Defenestration means "throwing from a window," but that did not always include all the arrangements made for the doomed man's exit from the world.

In Prague in 1419 the council chamber of the hradschin, or town hall, was used as the place of execution. There in the presence of the assembled nobles, their invited guests and the dignitaries of the city, the unhappy wretches were cast from a window eighty feet to the courtyard below.

If his crime was an ordinary offense the prisoner was merely dropped on the stones and allowed to lie there bruised and broken until death put an end to his sufferings, succor being forbidden.

But if he was guilty of treason or any act of violence against a noble he fell on the sharp spears of a squad of soldiers or dropped to the tender mercies of a pack of fierce dogs specially trained for the purpose, or he might be flung to wild boars previously enraged by being pricked with spears.

The last time defenestration was practiced was just before the Thirty Years' war, when the imperial commissioners brought an unwelcome message to Prague and were promptly thrown from the window. This precipitated the war and abolished the custom.—New York Press.

Executioner Sets a Fashion.

In England fashions have been killed at executions, but in France over a century ago fashion in men's attire was set by Sanson, the public executioner. Sanson, who had high ideas of the dignity of his office, was famous for the richness of his attire when officiating on the scaffold. Just before the revolution he was forbidden to wear blue, the nobleman's color, and by way of protest he made himself even more gorgeous. He took to green, and that color, as well as the peculiar cut of his clothes, was adopted by many of the young dandies of the court.

Breaking Scotch Idols.

No less an authority than Sir Aleck MacKenzie declares the fiddle is Scotland's national instrument and lays no claim to the bagpipe.

Another high class expert asserts the bagpipe was born among the Seljuks, the ancestors of the modern Turks.

Weel, weel!

Next thing it's likely some expert will tell us that the Hielanders were not the inventors of bare knees.—Cleveland Plain Dealer.

One Fisherman's Idea.

First Angler—Look! This fish was almost caught before; see the broken hook in its mouth. Second Angler—It should have had sense enough to steer clear of hooks after that. First Angler—Oh, come, you can't expect a fish to exhibit more sense than a human being.—Boston Transcript.

Cause and Effect.

"He spoke very highly of you a month ago."

"Yes; I had just loaned him $10."

"But today he cannot think of enough harsh things to say about you."

"True. I stopped him on the street ... and asked him to pay ... —Detroit Free Press.

... universe. It is really nothing ... tricity, though it possesses the ... ties of matter—mass, moment... netic energy and probably ... Christian Herald.

Beggars' Day In Costa Rica.

In Costa Rica the beggars are privileged characters on Tuesday—that is, they are allowed that day of the week in which to beg from shop to shop. It is the custom for business houses to prepare for the weekly visit of the mendicants and to hand over to them small coins or articles of little value. In some instances where merchandise is given away the beggars peddle it about the poorer quarters and so earn a few cents apiece.—Argonaut.

Simple Locomotion.

"I was just thinking," said one weary tramp to another, with a long journey in front of them, "about bad roads and the wonders of science. This earth is spinning round faster'n a railway train behind time."

"Well, we ain't fell off yet."

"No, but think o' what a convenience it would be if we could have some place to grab on to while the territory slid under our feet until the place we wanted to go to came along!"

The Turkish Fez.

The Turk's devotion to the fez is clearly explained by Duckett Ferriman: "The prejudice against the hat rests on a religious basis. If the ramaz (form of prayer) is rightly performed the forehead must touch the ground. The brim of a hat or the peak of a cap would prevent this."—London Globe.

A Beautiful Sight.

"There is no such thing as true friendship."

"Oh, yes, there is. Did you ever remark the implicit trust and confidence existing between two girls who have known each other for about a week?"—Louisville Courier-Journal.

Intellect.

Knicker—Is Jones smart enough to set the river afire? Bocker—No, but he is smart enough not to get up to beat the fire himself.—New York Sun.

Grim Humor.

Hokus—I will tell you, an operation for appendicitis is no joke. ... but if it were it wo... ... thing one.—Life.

... justice ... still ...