

## WONDERS OF THE HEAVENS.

Garrett P. Serviss' Lecture Before the Brooklyn Chautauquans.

With the aid of the stereopticon the lecturer took his audience upon an excursion into the creations of space and showed them some of the marvels to be found within the ken of the telescope. It was a bird's-eye view, but no "personally conducted" party of tourists ever saw so many wonders in so short a space of time.

The first station upon this solar journey was the sun, and as it was approached Mr. Serviss attempted to give his fellow-travelers some adequate idea of how big the sun is. The earth's mass, said the guide, weighs six sextillion tons. How big is a sextillion? Well, if a man were to stand on the torch-balcony of Bartholdi's statue and throw \$10 gold pieces into the bay at the rate of one every second, it would take him thousands upon thousands of years to get rid of six sextillion dollars. Wall street might afford a quicker method of getting rid of a fortune, but not much. If the sun were put in the balance it would require 320,000 earths, each weighing six sextillion tons, to tip the beam. It may be safely concluded, therefore, that the sun is a pretty big thing. The power of his attraction was next measured, and it was illustrated by Mr. Serviss in this way: The earth moves through space at the rate of nineteen miles per second. A cannon ball will only travel one mile while the earth is traveling eighty miles. It is the power of the sun's attraction which holds this whirling sphere in its orbit. It has been estimated that were the sun's attraction to cease suddenly, it would require 160 of the finest steel 4,000 miles thick to hold it in its orbit. The sun's attraction, however, is more powerful than a steel rod of that size would be. It holds all the planets of our system in their places. It goes further than that and reaches out in the depths of space beyond our system, and acts upon other suns and is acted upon by them. It collars a vagrant comet and drags it within its kingdom, and, after compelling it to do homage at its feet, sends the visitor off again into the realms of space; but when the wanderer is 100,000,000 miles beyond our system's boundaries, the bridle of the sun is still upon its neck and his masterful hand restrains its wanderings.

Mr. Serviss next took up the subject of sun spots, and gave a very interesting account of these phenomena. He explained how vast uprearing masses of matter break from the sun's mass, tearing holes in the sun's envelope, into which a dozen worlds could drop like billiard balls into a corner pocket. Pictures were also given of the appearance of the sun at the time of a total eclipse. Other views showed the red flames of burning hydrogen, leaping up thousands upon thousands of miles above the sun's surface. The relation of sun spots to electric storms in our atmosphere was also indicated. Comets were the next thing considered. These Marco Polos of the universe, as the lecturer called them, came wandering in from the realms of space like ambassadors from other systems, to do homage to the sun. It is not until they come within the range of the sun's more powerful influence that the flaming tails begin to appear. The comet circles round the sun always with the tail turned away from the orb, and retreats from the sun still with the streamers turned away, like a suppliant backing out of the presence of a king. The extreme tenuity of comets' mass shows that they are composed of the flimsiest solar materials. It was pointed out how the phenomena of meteors are connected with comets. Mr. Serviss, as became an adventurous sky pilot, took his traveling party still further afield, and showed them that Sirius, the brilliant dog star, is a sun from 800 to 2,000 times larger than our sun of day, proving that the great lord of our solar system is a petty chieftain of a small clan when compared with many of the monarchs of the starry realms. Even the great Sirius is a small beer of a fellow by the side of some of his peers.—*Brooklyn Eagle*.

## Baby Elephants.

How the young elephants, in the large herds, escape from being crushed, is something of a mystery, as they are almost continually in motion; but when a herd is alarmed, the young almost immediately disappear. A close observer would see that each baby was trotting along directly beneath its mother, sometimes between her fore legs.

On the march, when a little elephant is born in a herd, they stop a day or two to allow it time to exercise its little limbs and gain strength, and then they press on, the mothers and babies in front, the old tuskers following in the rear, but ready to rush forward at the first alarm. When rocky or hilly places are reached, the little ones are helped up by the mothers, who push them from behind and in various ways; but when a river has to be forded or swum, a comical sight ensues.

The stream may be very rapid and rough, as the Indian rivers often are after a rain, and at such a place the babies would hardly be able to keep up with the rest; so the mothers and fathers help them. At first all plunge boldly in—both young and old—and when the old elephants reach deep water, where they have to swim, the young scramble upon their backs and sit astride, sometimes two being seen in this position. But the very young elephants often require a little more care and attention, so they are held either upon the tusks of the father or grasped in the trunk of the mother, and held over or just at the surface of the water. Such a sight is a curious one, to say the least—the great ele-

phants almost hidden beneath the water, here and there a young one seemingly walking on the water, resting upon a submerged back, or held aloft while the dark waters roar below.—*C. F. Holder, in St. Nicholas*.

## Evolution of the Dress Coat.

Every part of the despised dress coat has a reason for its peculiarity of shape. The apparently foolish neck or slit at the junction of the collar and facings on each side dates from the time when men rode a good deal, and the coat collar must be frequently turned up and the chest buttoned closely over to meet the severity of sudden storms. A division was made on each side of the collar to permit this to be done, and the present useless slit is the survival of this very useful predecessor. Not even the buttons which adorn the small of one's back are mere vain ornament. In about the year 1700 it began to be the custom to gather in at the waist the sack-like coat of the period. This was done by two buttons sewn on over the hips, which were attached to loops set on at the edge of the coat. Then, as waists became a permanent fashion the loops were disused, and the buttons, instead of being discarded, were simply moved a little further back; here they attached to a new usefulness in supporting the sword belt. Now that sword belts are no longer worn, these two buttons seem merely a meaningless excrescence.

The very shape of the dress coat, which has been so much and so often ridiculed, is not an arbitrary fashion, but a natural development. Starting from the ample square-skirted coat of the close of the seventeenth century, itself a development, we next find the same coat with the corners of the skirts buttoned together for the convenience of riding; then the same garment with the lap-corners cut off instead of buttoned up—the swallow tail of the early years of the present century; finally by a very slight degeneracy the modern dress coat was produced.—*Cork Herald*.

## Toads.

In most districts of Great Britain toads are moderately numerous—more numerous, indeed, than might be imagined, for they are not animals that court publicity. In the face of this it is rather surprising to hear that toads are now being imported into this country from Austria. They are packed in wooden boxes filled with moss, and on their arrival fetch as much as from \$15 to \$20 per 100. Toads have long been an article of commerce here; in most well-ordered gardens the visitor will occasionally be startled by a quaint apparition on the pathway, puffing like an asthmatic old gentleman, and the suburban market-gardeners and nurseries very frequently have them in their frames and greenhouses and about their grounds. But until recently our horticulturists have been satisfied with the exertions of the native toads in ridding them of slugs, grubs, and noxious insects. It is possible that the Austrian toad may be larger and more voracious than ours, and this may explain the fact of its importation. At present it does not seem to have put in an appearance at Covent Garden, where a stock of toads and green frogs is usually kept. At any rate the new visitor, if only as useful as the native animal, deserves a hearty welcome as a cheap and useful ally of the gardener, for not only does the toad live to an extreme old age but it has the unusual merit of finding its own provider and lodging. And beyond this, it has much more good-nature in it than its forbidding exterior would seem to indicate, and has frequently become so tame as to come at a call or even at the sound of a whistle. —*London J. F. MERRY, Gen. West Pass, Agt.*

## Cock-Fighting in Macassar.

The spurs used were about three inches long, and made of the blades of razors ground down to excessive thinness.

With such weapons there is but little cruelty in the affair. We waited to see a main fought before we left. The King and other royal personages made their bets, the combatants were placed opposite to one another, they made two feints, and in less than half a dozen seconds the vanquished bird lay motionless on the ground. Had he met his fate legitimately at the hands of the poultier his death could not have been more rapidly effected.—*The Cruise of the Marchesa*.

## One Who Loves Naughty Things.

The small child is to the front again. He had been naughty. The naughtiness of youth and the naughtiness of age are widely different.

"If you do that nobody will love you," the tender mother told him.

"Taint so; I know one who'll like me," he answered.

"Who?"

"Satan. He likes the bad ones."—*San Francisco Chronicle*.

To the untrue man the whole universe is false—it shrinks to nothing in his grasp; and he himself, in as far as he shows himself in a false light, becomes a shadow, or, indeed, ceases to exist.

An ugly complexion made Nellie a fright. Her face was all pimply and red, though her features were good and her blue eyes were bright.

"What a plain girl is Nellie!" they said.

But now, as by magic, plain Nellie has grown

"As fair as an artist's bright dream;

Her face is as sweet as the flower new-blown,

Her cheeks are like peaches and cream.

As Nellie walks out in the fair morning light,

Her beauty attracts every eye,

And as for the people who called her a fright,

"Why, Nellie is handsome," they cry.

And the reason of the change is that Nellie took Dr. Pierce's Golden Medical Discovery, which repaired her liver, cleared her complexion, made her blood pure, her breath sweet, her face fair and rosy, and removed the defects that had obscured her beauty. Sold by druggists.

## Hebrews in Gotham.

It is a curious fact that one out of every nine persons you meet on Broadway is a Hebrew. They number in this city about 120,000, and with their wealth and intelligence, if ever organized politically as a party, would exert a very strong, if not a controlling, influence on local politics.—*New York Herald*.

## A Sharp Traveler.

Train Robber (on Texas express)—Shell out now, quick.

Passenger—All my money is in this satchel.

"Open it."

"Look."

"All in silver dollars! Keep it. We ain't no draymen."

## How to Select a Wife.

Good health, good morals, good sense, and good temper are the four essentials for a good wife. These are the indispensables. After them come the minor advantages of good looks, accomplishments, family position etc. With the first four, married life will be comfortable and happy. Lacking either, it will be in more or less degree a failure. Upon good health depends largely good temper and good looks, and to some extent good sense also, as the best mind must be affected more or less by the weaknesses and whims attendant on frail health. Young man, if your wife is falling into a state of invalidism, first of all try to restore her to health. If she is troubled with debilitating female weakness, buy Dr. Pierce's Favorite Prescription. It will cure her.

YOU should never tease blackbirds. They are apt to get raven mad.—*Pittsburg Chronicle*

PIERCE'S Pleasant Purgative Pellets Possess Powerful Potency, Pass Painlessly, Promote Physical Prosperity.

A NEGRO barber-shop must be a great place for wool-gathering.—*Puck*.

For Throat Diseases and Coughs use BROWN'S BRONCHIAL TROCHES. Like all really good things, they are imitated. The genuine are sold only in boxes.

WHEN a man gets a hat on credit is he not over his ears in debt?—*Puck*.

In General Debility, Emaciation, Consumption, and wasting in children, Scott's Emulsion of Pure Cod Liver Oil with Hypophosphites is a most valuable food and medicine. It creates an appetite for food, strengthens the nervous system, and builds up the body. Please read: "I tried Scott's Emulsion on a young man whom physicians at times gave up hope. Since he began using the Emulsion his cough has ceased, gained flesh and strength, and from all appearances his life will be prolonged many years."—*JOHN SULLIVAN*, Hospital Steward, Morganza, Pa.

THERE is one tie-up that everyone can approve of, and that is marriage.—*Boston Post*.

Cheap Farming Lands South.

It is a recognized fact that the cheapest farming lands in America to-day are in the South, and men of much or moderate means, looking for real estate investments, or permanent homes, should not fail to visit the following points, where so many Northern people are now settling, viz: Jackson, Tennessee; Aberdeen and Jackson, Mississippi; Hammond, Crowley, Jennings, Welsh and Lake Charles, Louisiana. Round Trip Tourist tickets, limited to June 1st, 1888, with stop-over privileges south of Cairo, Illinois, are on sale to New Orleans, Jennings and Lake Charles. For rates apply to nearest ticket agent, and be sure your tickets read via the Illinois Central Railroad from Chicago or St. Louis. For pamphlet entitled "Southern Home Seeker's Guide," and circulars concerning the above named points, address the undersigned, at Manchester, Iowa.

J. F. MERRY, Gen. West Pass, Agt.

A Popular Thoroughfare.

The Wisconsin Central Line, although a comparatively new factor in the railroad systems of the Northwest, has acquired an enviable popularity. Through careful attention to details, its service is as near perfection as might be looked for. The train attendants seem to regard their trusts as individual property and as a result the public is served par-excellence. The road now runs solid through fast trains between Chicago, Milwaukee, St. Paul and Minneapolis with Pullman's best and unequalled dining cars; it also runs through, solid sleepers between Chicago, Ashland, Duluth and the famous mining regions of Northern Wisconsin and Michigan.

Consumption Surely Cured.

To the Editor:—Please inform your readers that I have a positive remedy for the above-named disease. By its timely use thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy to any of your readers who have consumption or if they will send me their Express and P. O. address. Respectfully,

T. A. SLOCUM, M. C., 181 Pearl St., N. Y.

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