The winter was unusually severe on them, but nature is now compensating for her former severity.

This valley extends from Palisade to Fruita, a distance of thirty miles, and is ten to fifteen miles in width. It embraces an area of over 230,000 acres, nearly all of it susceptible of cultivation. Probably 125,000 acres are under ditch, and the laterals are being extended and the area increased yearly.

A great ditch is contemplated by Smith & Struthers, to be thirty miles in length and cover 80,000 acres. It is to start in at the upper end of the valley and terminate near Fruita. Considerable work has already been done on it, and when the financial conditions are ripe the enterprise will be pushed to completion.

A few years hence and this magnificent valley will be densely populated, and its arable acres will all be under a high state of cultivation. The soil once quickened with water its fertility is magical and marvelous.

It is estimated that over 100,000 fruit trees have been set out in the valley the present season, an dthe farm and garden areas are being extended in every direction. The Grand valley is carrying 200,000 inches of water 528 feet a minute. That is about the volume and velocity during theirrigating season.

SCIENTIFIC MISCELLANY.

If air resistance could be abolished, Prof. C. V. Boys points out, the man who drives his bicycle at 30 miles an hour would be able to attain 330 miles, and his 20 miles an hour would be increased to 100 miles. Prof. Boys proposes some curious experiments. To reduce wind resistance, he would cover the bicycle rider with a large bottomless box having glass sides, and would have this box dragged along by steam at speeds gradually increased until the cyclist begins to lag. For safety the box could be open at the rear. A more serious suggestion is that record-breaking be attempted when the barometer is very low, for a fall of an inch, if it reduced the air resistance by one-thirtieth, might mean a gain of a minute an hour—unless the diminution of oxygen in the rider's lungs should compensate for the reduced air resistance.

A little known group of fungi is the Laboulbeniaceae, which grow only on insects and almost exclusively on beetles and flies. Though first described in 1853, according to Dr. Roland Thaxter, hardly more than a dozen species had been distinguished in 1884, while not less than 150 species belonging to 30 genera are now known. The study of these fungi, which appear like minute hairs seldom more than a fiftieth of an inch long, seems to have been confined almost wholly to American botanists, only 19 European species having yet been found. Of 250 species of insects infected, 241 are beetles.

Medium weight pneumatic tires inflated to a pressure of 30 lbs per square inch have been shown by late tests to be just able to keep the fellows off the road with a weight of 180 lbs in the saddle. The efficiency of the machine under these circumstances was about 61 per cent. With a pressure of 40 lbs the efficiency rose to 74 per cent, and at 70 lbs it was about 81 per cent.

A bridge fifty feet under water is the latest English Channel scheme. A raised platform car, capable of carrying four railway trains, would be propelled across by electricity.

The double stars thus far discovered, says M. Camille Flammarion, number about 15,000, but the orbits of only 25 have been calculated. These orbits vary greatly in length, the period of revolution ranging from a little more than five of our years to nearly two centuries. A star of the constellation Andromeda, however, is resolved by powerful telescopes into three suns, one of which turns around another in 54 yeras, and these two revolve about the third in a period which—if continued uniformly at the rate observed since the first discovery of the third sun in 1777—must extend to 360 centuries! This triple star is visible to the naked eye, becoming double in a small telescope. It is a mistake to regard double stars as a separate class of heavenly bodies, for they are of various kinds, some consisting of two similar suns, while in others an enormous sun is attended by a much smaller star, as in the case of Sirius, and in still others we have a sun with a dark star, which makes its presence known by eclipsing its companion and causing the latter to appear as a variable star. One of the most remarkable characteristics of double stars is the wonderful coloring of some of them. The star in Andromeda, for instance, contains an orange, a green and a blue star, of a beauty that defies the art of the painter to reproduce.

Some striking experiments with serpent venom and immunizing serum have been shown by Dr. A. Calmette, now of the Pasteur Institute of Lille. A mixture of the venom of the bothrops, the naja and the cobra-de-capello —the most active snake poisons known —proved fatal to rabbits in 20 and 3 minutes respectively when injected to the amount of five and ten times the fatal dose. Like injections, however, had no effect upon rabbits that had just been inoculated with 2 and 5 cubic centimeters of protective serum. Snake poisoning is now so well understood, it is stated, that results can be calculated with great precision, and from a person's weight it can be reckoned how much poison would destroy and how much serum would save life. Large quantities of the serum have been sent to India. It keeps a long time and is easily produced, horses being inoculated with venom and bled once a fortnight, no injury to the animals resulting.

A simple method of cleaning iron from rust, suggested by Mr. Carl Hering, to immerse it with a rod of zinc in an acid bath, the two metals being electrically coupled.

Rain colored red or black is not rare in localities where the air is often highly charged with particles having one of these colors, but the recent occurrence of an intensely black rain in the agricultural district of Mullingar, in Ireland, is regarded as a remarkable phenomenon. The fall has been traced over an area of about 30 by 16 miles. So dense was the blackness that lamps were lighted, birds went to roost, and superstitious people were terrified. It is suggested that this was a sequel to the northeasterly gales that had blown for a week previous. The coloring matter was simply soot, which it is thought the winds had collected from the manufacturing cities of northern England and southern Scotland, and had carried at a high altitude in a southwesterly direction, causing brilliant sunsets like the memorable ones following the Krakatoa eruption. When the soot-laden air current was struck by a moist wind from the southwest, the one parted with its soot and the other with its moisture.

The wonderful gun of Mr. James Judge, expected to discharge 30,000 bullets per minute, is a development of the ancient sling. The bullets are fed from a hopper into the rim of a three-foot disc, which is rotated in a case at 15,000 revolutions per minute, the centrifugal force causing the missiles to be discharged through a sleeve—which can be sighted and elevated or depressed like the muzzle of a rifle—at a tremendous muzzle velocity.

A novel treatment of affections of the hair has been adopted by Dr. Deichler, a French physician. He has sought to keep up the hair's supply of glue-like substance by administering colloids, in different forms, and he gives, in addition to a tonic regimen, bouillons made by long boiling of meat and bones, frequently replacing the bones by gelatine or the shavings of deer's horn. Systematic following of this course will do much, it is claimed, toward preventing baldness. The effects are first seen in old men in an improvement of the general condition, increased elasticity or rejuvenation of the skin, and diminished rigidity of the arteries; while in young persons thin hairs become firmer, acquiring brilliant luster, and falling out of hair ceases.

An electric plant for calcium carbide is proposed as a means of utilizing the peat bogs of Northern Germany. A peat bed ten feet thick is estimated to contain 1,000 tons of dried peat per acre, and a 10,000 horse-power station would consume 200,000 tons yearly.

DEATH OF HYRUM MAUGHAN.

Elder Hyrum Maughan of Weston, Idaho, son of John and MarlaMaughan, was born at Weston, Idaho, Dec. 17, 1871, and died at Anderson, Indiana, Friday, June 3, 1898, at 9:40 a. m.

In obedience to a call of the Lord, he was set apart Dec. 1, 1898, for a mission to the Northern States, arriving at Chicago Dec. 5th. He was appointed to labor at Anderson, Indiana, together with Elder Jonathan H, Hale Jr. They labored unitedly together and made many friends. March 12, 13, and 14, 1898, he met in conference at Indianapolis with the Elders of Indiana, after which he was assigned to labor in the same place with Elder W. R. Andrew.

Elder Maughan labored with a zeal, cheerfulness and love for his fellow man that was highly commendable. His great faith in the Lord was fully maintained to the last moment.

April 20th he felt unwell and steadily grew worse with cramps until he was advised by his brethren to consult a doctor, which he did. Other doctors were called in and all agreed that his trouble was a case of appendicitis and advised an immediate operation to which Brother Maughan willingly submitted, feeling he was in the hands of the Lord in whose service he was laboring.

Accordingly he was taken to St. John's hospital, April 22nd, and the operation performed by five skillful surgeons. Through the blessings of the Lord he rallied successfully from the operation and began to improve rapidly. Most of the Elders of the mission made special mention of Brother Maughan in the prayers that, if it be the will of the Lord, he speedily recover from his affliction. He so far recovered that, on May 28th, the doctors advised him to leave the hospital and go back to his room. Here he ate heartily and had great faith in his recovery. He was advised by many to return home, but his answer was, "I did not come here to return home until the Lord calls me there."

June 1st, after eating a hearty meal, he was taken with cramps and everything possible was done to relieve him. Thursday Elder J. E. Cardon was telegraphed for and went to Anderson immediately. He, together with other Elders, asked the Lord to relieve Brother Maughan, if it be His will or