Agriculture.

New Method of Multiplying Plants.

In 1866, in conversation with that well informed horticulturist, Doct. John A. Warder, we mentioned the difficulty attending the growing of the Delaware and certain other grape-vines from cuttings in the open ground. He remarked that his friend, Wm. Patrick, a nurseryman at Terre Haute, Ind., grew such cuttings without difficulty, and would no doubt communicate his method. We accordingly wrote Mr. Patrick, and with the liberality that characterizes a true horticulturist, he at once complied with our request, and gave his plan. Mr. Patrick did not run about the country selling his secret, nor did he put it in a little pamphlet of half a dozen pages and charge a dollar for it. He not only sent it, but added: "If you can make any use of it for the benefit of horticulture, please do so, as anything of this kind should be open to all." Mr. P.'s article was published in the "Horticultural Annual" for 1867, and some time after it was given in substance in these columns. Mr. P. says:

"Before the ground freezes, I make the cuttings, from four to six inches long, with one or two eyes on each. I prefer to have two eyes, as such cuttings seem to be better able to withstand the drouth we are apt to have the last of May or the first of June. The cuttings are tied in bundles of about fifty each, and their lower ends are puddled by dipping them in mud, made of loamy soil, mixed with water to about the consistency of cream. A cold frame has been previously prepared with good sandy loam, but not rich. In this I place the cuttings, *top end down*, and sprinkle in fine earth, so as to fill all the spaces in and between the bundles. The crevices all being filled, sufficient earth is put over the cuttings to cover them about four inches deep, and they are left in this condition until they have been rained upon, and it begins to freeze. I then cover the bed with a mulch of leaves or straw, and over this a shelter of boards. If I wish to plant early in the spring, I remove the boards and mulch, and place a sash over the bed, taking care to leave an opening for ventilation; water is to be given as needed. In about five weeks the cuttings will almost all be found to have formed roots from one to three inches in length, while the buds have swollen and are just ready to burst. The cuttings are now in a condition in which they require careful handling, and they should not be allowed to dry. I usually set the cuttings, as they are taken from the frame, in a bucket containing some water, and in this way carry them to the place where they are to be planted. In planting, I set the cuttings so that the upper eye is just below the surface, and press the soil firmly around them. Treated in this manner, the cuttings will nearly all grow, and make very strong vines. If there is no cold frame at hand, another plan may be followed. The cuttings being prepared as above directed, are buried, *lower end up*, and four inches deep, in some place sloping towards the south, with the ends inclining towards the south; they are to be covered with a mulch, in the same manner as described for those in cold frames. The mulch is removed in the spring and the earth exposed to the sun. Cuttings treated in this way will not be quite so early as those in frames, but I think they are about as good. There is some danger that those in frames may get too much advanced before the ground is ready to receive them."

It will be seen this is an ingenious and simple method of applying the heat of the sun as "bottom heat." The lower ends of the cuttings being puddled or "grouted," are in a condition to slowly callus during the winter, and when they are exposed to the sun's rays in spring, the roots are induced to push, while the upper ends of the cuttings are further down and beyond the reach of the heat, and the buds kept dormant. The cuttings are, in fact, in just the condition they would be in the cutting bench—the lower ends warmer than the upper portion. This method can no doubt be usefully applied to other cuttings than those of the vine. With many cuttings, *time* is essential to success, and this can be allowed by this method more economically than in a propagating house.—*American Agriculturist.*

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The Best Breed of Fowls.

A correspondent from Batavia, N. Y., referring to an article about the merits of Leghorn fowls that appeared in the *Rural* of recent issue, claims that the Leghorns are the best egg producers. He has had ample experience in breeding choice poultry and maintains that the Leghorns are prolific layers of good-sized, very rich eggs. Moreover, the birds are very handsome, their bright yellow legs and snowy white plumage forming a very beautiful contrast. The chicks, too, are very hardy and can be easily reared. He has a hen six years old that lays as wel now as she ever did (!) and she has never wanted to sit. The combs of the fowls of this breed, however, are so large that they require a warm place in winter to prevent these appendages from freezing. In his opinion, the Black Spanish rank next to the Leghorns. Of all breeds they lay the largest eggs. They are non-sitters. They have a large red comb, a large white face and glossy black plumage, so that he considers them very showy fowls.

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The Guernsey Cattle

The Guernsey breed of cattle is now receiving considerable notice from our breeders. In this country the Jerseys have heretofore monopolized most of the attention bestowed upon Channel Island cattle, though the number of Guernseys exported is large. The average yearly number of cattle sent from the island of Jersey is about 2,000, and from Guernsey half that number. Of the many thousands thus exported, comparatively few have come to this country.

The Guernseys are similar in build to the Jerseys, though larger and inclined to flesh, and not so stylish. Their color is usually a rich fawn, with much white; the muzzles and eyelids are buff; in fact, all the "points" are light, offering a strong contrast to the black points of a fashionable marked Jersey. The Guernsey is a deep milker, producing the yellowest of butter of superior quality. Some good judges, familiar with both breeds, place the Guernseys ahead of the Jerseys as butter-makers; their size and capability of taking on fat when they cease to be useful for the dairy, render them a desirable breed. One farmer of our acquaintance, who has an excellent herd of both of these breeds, says the admixture of the cream from the Guernsey milk with that from Jerseys gives the butter a deeper, richer color, and makes it bring a higher price than that from the Jerseys alone. The Guernseys being as a rule larger milkers, consequently yield more butter, but the quality of that made exclusively from their milk is not quite equal, as it lacks something of its delicate flavor, to the best Jersey butter. This experience indicates that one or two good Guernsey cows in any herd kept for butter, would probably improve its products as a marketable article. Some of the Guernsey cows that we have seen, are nearer the ideal cow than any others we have met; their rich color, large, fine bodies, handsome proportions, fully developed udders, and other "milk signs," together with their docility, and their rich and generous milk and butter yield, make them a distinct and characteristic breed of dairy cattle. The Jerseys hold a justly deserved prominence as butter producers, and it is safe to predict that their numbers will greatly increase. The recent numerous sales indicate an increase in the importations, notwithstanding the fact that some of our breeders are now breeding just as good Jerseys as can be found anywhere in the world. The rapid depletion of the herds of the "mother country" under the annual culling out of 2,000 animals for exportation, renders this state of affairs inevitable. It is a fact that the best Jersey cows, both on the Island and in this country, closely resemble the Guernseys in size and general appearance—a fact which speaks strongly for the Guernsey type as one to be regarded by breeders of dairy stock of any kind.—*American Agriculturist.*

Domestic.

Tomatoes as Food.—*Prof. Arnold, of Rochester, declares them healthful.*—Tomatoes contain neither cancers nor cancer-producing matter. Cancers are composed of animal matter, and vegetable, and therefore cannot be directly derived from the vegetable kingdom. Tomatoes are not without some defects as an article of food. They are not, like milk, a perfect diet of themselves, and besides, like most other articles of food, they contain some obnoxious qualities. But they need not be thrown aside on that account. Nature has provided us with such efficient excretory organs that obnoxious matter in our food, if in moderate amount, is readily cast out, and the body is protected against any material injury. Were it not so, we should be obliged to throw out of our dietary many kinds of food now eaten, not only with impunity but with advantage. Thus, red cabbage, cherries and peaches contain Prussic acid, which is a deadly poison when taken in sufficient quantity. The very small amount of the poisoning acid these vegetables contain is cast out of the system without any material injury to the person using them. A positive good may actually be derived from the use of food containing some such foreign matter by way of giving increased activity and strength to the excretory organs from their exercise in casting such foreign matter from our bodies, provided the quantity is not so great as to overburden them. Since we are all the time liable to take in our food substances, the tendency of which is harmful, a good development of efficiency in our excretory organs is necessary to protect us against the pernicious effects which might otherwise occur. Almost every kind of grain and fruit in use contains more or less of things which if in larger amount would prove hurtful. Unless we closely study our food, we are taking them in when we little suspect it. A Frenchman, not many years ago, discovered a substance in wheat bran, which, under the high heat used in baking, dissolved out and spread over the crumb of bread, of which bran forms a part, and discolored it, and hence the brown stain peculiar to Graham bread. But from this discovery such bread has not been rejected, but continues to be accounted among the most wholesome kinds of food. Rye is seldom used without containing more or less ergot, but rye bread is also reckoned among the most healthful. Tea contains tannic acid. apples contain malic acid, lemons and oranges citric acid, neither of which is used either in nutrition or respiration, but they only become objectionable when used excessively.

Tomatoes, in common with most other fruits, contain some poisonous matter. They and the egg-plant, Jerusalem cherry, bitter-sweet, deadly night shade, and the common potato plant, all belong to the same genus—Solanum—the fruit of every species of which is more or less poisonous, but none of them very much so. The fruit of the deadly night shade and of the potato (potato balls) are probably the most poisonous. But even these are not very hurtful. The smaller amount contained in tomatoes allows of their being classed with the esculent fruits, but there is, nevertheless, enough to give them a peculiar flavor, not apt to be relished by unaccustomed palates, but which use soon renders agreeable. Used very largely, tomatoes would doubtless develop specific results peculiar to the fruit of the genus to which they belong, especially with feeble persons and those who, from their peculiar constitutions, are susceptible to such influences. But when moderately used by persons in fair health there is no more reason for rejecting them than there would be in rejecting lettuce for the opium it contains.

Pie-plant stands in similar relations. Its prominent characteristic and flavor are the result of oxalic acid, which is a powerful poison. For persons not having sufficient vigor to dispose of such a strong acid, and for those in whose systems there is already an excess of acid, such highly acid food would be objectionable. But its moderate use by people in common health is no more objectionable than many other acid foods in daily use, and regarded as healthful.—*New York Tribune.*

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Household Receipts.

To Preserve the Hair.—Wash it in cold sage tea.

Liniment.—A good liniment for cuts, bruises, etc., can be made by soaking common Maywood leaves in alcohol.

Quince Seed.—Quince seed is good for sore or inflamed eyes. Take about one-half dozen quince seeds, put about a tablespoonful of scalding water on them; let it stand till cool, and bathe the eyes just before going to bed and in the morning.

About one pound of copperas (sulphate of iron,) at a cost of a few cents put into a water-closet, will entirely deodorize it; five pounds in a bucket of water, thrown down a cesspool, will have the same effect. There is no unpleasant odor from it as there is from chloride of lime or carbolic acid. This is worth knowing.

For washing silver put a half teaspoonful of hartshorn down into the suds in which the silver is washed; have the water hot; wash quickly, using a small brush; rinse in hot water and dry with a clean linen towel; then rub very dry with a chamois skin. Washed in this manner, silver becomes very brilliant, and requires no polishing with any of the powders or whiting usually employed, and the silver does not wear out.

For the Cure of Neuralgia.—Take two ounces of chloroform, two ounces of chloral hydrate, one and one-half ounces of alcohol, one ounce of camphor, one ounce of sulphuric ether, six grains of sulphate morphine, and two drachms of oil of peppermint. Put the mixture into a bottle sufficiently large to hold it, cork it tightly, shake it thoroughly, and bathe the part afflicted frequently. The above is intended for outward application only.

Window Boxes.—Procure a box about fourteen inches wide, six inches deep, and of a length to fit your window; if possible have another box two inches smaller every way and place inside the larger one, filling the space between them with sand or tan or straw; have holes bored in the bottom of both boxes, and place pieces of broken charcoal to insure drainage; fill with the best earth procurable, remembering that good, rich soil will insure you the finest flowers; place in the end of your boxes German ivy, morning glories, madeira vine, and any other climbers that you like, and along the sides maurandia, thunbergia, othonna, nasturtion, and kenilworth ivy, and just inside of these oxalis of different colors and varieties; in the centre you must place your tallest plants and the lower growing ones around it; have some cowslips, Chinese primroses, sweet alysium, mignonette, and vinca myra; a mountain of snow geranium gives variety to the appearance, as will also the canary bird flower, which will give masses of yellow flowers if it has the sun, and the blue of the lobelia will also heighten the effect.

Uses of Ammonia.—There is nothing that can be put to so many household uses as ammonia, or hartshorn, as it is sometimes called. In cookery, there is no alkali that is equal to it. A small teaspoonful of sal volatile (carbonite of ammonia) in powder, and the same of alum, to one quart of a mixture—bread or cake—will rarely fail to make it light. Both must be dissolved, but separately, in as little warm water as possible and added just before baking. Many recipes in cookery books written thirty years ago and even later, call for sal volatile instead of salaratus, or bi-carbonate of soda.

A large spoonful of liquid ammonia to each gallon of suds, in which woolen fabrics are to be washed, will make them clean and soft, with half the labor necessary for washing in the ordinary way. Hartshorn, sufficiently reduced with soft water, is unequalled for cleaning silver and gold, mirrors, window-glass and all painted surfaces. A little ammonia, so little as to be hardly perceptible in the water used for plants in winter, will make them wonderfully thrifty. If the color is taken out of cloth, either cotton or woolen, by acids, it can generally be restored with hartshorn, slightly weakened. Applied in full strength to the bites and stings of insects it gives instant relief. Both liquid and powdered ammonia should be kept in bottles, with glass stoppers. The odor of hartshorn is agreeable to most persons, and it is strange that any housekeeper who understands its properties, will ever be without it.

Scientific.

Silk Culture in the United States.—One of the most interesting papers presented at the last annual gathering of the American Association for the Advancement of Science, was upon the subject of our caption, by Prof. C. V. Riley, the well-known entomologist of the Department of Agriculture.

The paper in question dealt fully with the statistics of the silk industry, relating both to the raw and manufactured products, and brought out very clearly the fact of the encouraging growth of the silk-manufacturing industries of the United States, and especially during the past ten years, under the stimulus of a protective tariff upon manufactures of foreign make.

The author alludes to the fact that silk culture between the years 1740-1790 had obtained considerable foothold in this country, and that in the Southern, Middle and New England States, there were, during that period, hundreds of successful silk-growers. He believes that the causes of the failures in the past to obtain for this important source of wealth a permanent foothold upon American soil were of a transient character, and argues that "just as the American Philosophical Society, little more than a century since, gave great impetus to, and fairly established the silk industry in Pennsylvania—established it so firmly that had it not been for the Revolution, it would undoubtedly have continued to grow from that day on—so there is no reason why the American Association for the Advancement of Science should not be partly instrumental in re-establishing that industry upon a broader and more permanent basis."

Prof. Riley then refers in detail to the attempts that have been made of late years to establish this industry in various localities. He regards the failure of M. Prevost, at San Bernardino, California—the climate of which State appears to be in every respect well fitted to the growth of the mulberry and to the rearing of the silkworm—to establish the industry upon a permanently successful basis, mainly to the extravagant statements and excessive enthusiasm, verging upon fanaticism, which characterized all of Mr. Prevost's writings and utterances. "Had he been as prone to report failure as he was to magnify success, there would not have been a reactive depression, which was as unnatural as was the over-enthusiasm."

Referring in terms of high appreciation to M. Boissiere's present effort to establish a silk colony at Silkville, in Franklin county, Kansas, the author affirmed that the only reason why the industry has lagged was because of the greater profits to be derived from stock-raising and other farming occupations. For Mr. Lowry's attempts at silk culture at Huntsville, Alabama, and for his reported intention of establishing a silk school, the Professor does not appear to entertain much respect—referring thereto in the following terms: "Investigation shows that the few cocoons (raised by one of Mr. Lowry's daughters) are of an inferior Syrian race, having no commercial value; that the worms were fed on lettuce, and that the silk which was carded and spun is simply interesting as a curiosity, but not as an article of commerce."

Prof. Riley argues that the time is ripe for an earnest, intelligent and systematic effort to introduce silk culture in this country. The army of the unemployed that abounds in almost every section, takes away the force of one of the chief obstacles of older days—namely, the high price of labor; and, in addition, he urges that there are thousands of families that would gladly add to the earnings of the farm the income which such light and profitable work as silk culture would be sure to bring them. That the climate of the larger portion of the United States is admirably adapted to this culture, the Professor holds to be demonstrated by the experience of the past, by the experiments which he himself has been making in this direction during the past ten years, and finally by the facts that we have a larger number of native silk producing insects than any other country of equal extent, and that the silk which has been raised here is of superior quality.

Professor Riley's proposal for the establishment of silk culture in the United States is, that the government shall encourage the growth of silk by the imposition of a small duty on the importation of the raw article. Our silk manufacturers, he contends, have so well established themselves, by the introduction of improved machinery, that they are in a position to stand this import duty; and this once effected, there would be no dearth of parties to engage in the business of silk-reeling, upon which, at the present time, no prudent business man will venture, since he would have no assurance of obtaining a supply of cocoons. The Professor proposes also, as an incidental means of encouragement, that Congress, after the imposition of the duty aforesaid, should "give to the Department of Agriculture the means to erect proper reeling machinery, and to introduce properly trained reelers, so as to form a nucleus for the reeling branch of the industry."

The States also should second the efforts of the general government by encouraging the culture of silk, and by offering a bounty in money upon every pound of cocoons raised.

One of the most interesting branches of Prof. Riley's paper was that which narrated his own experiments during the past eight years. He has succeeded, it appears, in raising an improved breed of worms by crossing the best Japanese and the best French races, which, he finds, flourish remarkably well upon the common Osage orange, so well, in fact, the Professor reports, that the silk produced from the worms so fed was equal both in quality and quantity to that obtained from mulberry-fed worms. This fact the Professor esteems to be of great importance in view of the liability of the supply of the mulberry to be affected by mildew and other diseases, from which the Osage orange — which flourishes throughout that portion of the country best adapted to silk raising—is quite exempt.

Prof. Riley's exhaustive and intelligent paper, to which we refer those of our readers who desire to read his views in full, appears to contain the most reasonable and practical suggestions that have yet been made toward introducing this important branch of industry into the United States.

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Wood Pavements in London.—The asphaltum pavements, which were being extensively laid in London six years ago, have been mostly taken up in the business sections, and wood pavements substituted. The greater portion of the Strand is now laid in wood, and it is being laid at various points of Cheapside, Fleet street, up towards the Bank of England. Some of the suburban streets are also paved with wood. A bed of asphaltum is at first laid, and allowed to harden, and on this the blocks are laid. They are of hard seasoned wood, and are first kyanized. After being laid, coal-tar is poured in all the crevices, and when opened for travel it presents a very solid and enduring appearance. It has been in use for a couple of years in the neighborhood of Charing Cross, and it is solid and perfect as when first laid. The asphaltum caused great injury to horses, as it became very slippery in wet weather, and for this reason was removed and abandoned.—*Eng. News.*

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Submarine lightning has been effected by compressing pure oxygen into a cylindrical reservoir of plate iron under a pressure of about 420 pounds. This oxygen is supplied to a kind of alcohol lamp, provided with means for the escape of the gaseous products of combustion. This light is very good and it lasts for four hours. Another plan consists in attaching to a diver's helmet a glass cylinder containing an electric lamp of polished copper, the carbons of which last for four hours without renewal. The light is intense and brilliant.

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The construction of steel-clad turret ships is the next step to be taken by the British admiralty. A vessel protected with a thickness of from fifteen to twenty inches of steel will be a very costly concern, but if the effort is to be continued of making ships of war resist heavy shot, recourse must be had to steel. At the target tests at Spezzia, the one hundred-ton Armstrong gun belonging to the Italian Government, easily sent projectiles through the heaviest iron plate used; but, though the shot cracked the steel plates, there was no penetration.

◆

Avoid a Costive Habit of Body, not only because of the attending discomfort, but lest it engender more serious consequences. Dr. Jayne's Sanative Pills are either Laxative or Cathartic, according to the dose, and may be depended upon to produce healthy secretions of the Liver and Stomach.

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The Royal Mannfacturing Company presents our readers to day with another advertisement of something new. This popular company are doing an enormous business, built up by strict fidelity, which has gained for them the confidence of several hundred thousand customers throughout the United States and Canada. Before buying your holiday gifts write to them for catalogues.

Humorous.

—Young swell: "I should like to have my moustache dyed." Polite barber: "Certainly; did you bring it with you?"

—Miss Gushington: "Why should the pine trees pine?" Fred Punsmythe: "Pine! pine! Ah, yes! Repine. True enough: what fir?"

—A young lady being asked by a rich bachelor: "If not yourself, who would you rather be?" replied sweetly and modestly, "Yours truly!"—*Turner's Get-up Times.*

—Being the first bachelor and the first Benedict, how stands Adam's claim to being first in peace and first in war?

—When an artist climbs over a fence to get a nearer view of a handsome building, he must take the chances of his sketching the dog or of the dog's ketching him.—*Puck.*

—Talk about a joke which requires explanation—how is this for explaining things? A Vermont legislator said in a speech: "My wife, who is a married woman!"—*N. Y. Mail.*

—When we read that "General Szaparitz is fighting at Doboj," we feel like calling on a merciful heaven to stop this cruel war while there is any of the alphabet left.—*Burlington Hawkeye.*

—There is where clergymen get left. They get no more for marrying a couple weighing 200 pounds apiece than they do for splicing a sharp-nosed woman to a man with a voice like a darning-needle.—*Free Press.*

—Detroit is the only city not ruled by tax-eaters.—*Courier-Journal.*

Thank you. You might also state that we haven't a noisy cat in town, no fish-horns, no hand-organs—no mother-in-law ever comes here, and lightning strikes on the Canada side.—*Detroit Free Press.*

—People have different notions of time. A landlord, who is his own rent-collector, recently called on an old tenant, who, with pale, trembling lips, faltered: "I'm verry sorry; but times are so bad, and—and—I'm not quite ready. If you could only give me a little time."

"Well, well. You have always been a good payer," said the landlord. "A little time—eh? Certainly! I am going up-stairs, and I will look in as I come down.—*Real Estate Reporter.*

Let Her Be.—A Detroit mercantile gentleman, while traveling eastward, went to the clerk of one of the Ontario boats, to be shown his stateroom. The clerk handed the applicant a key, at the same time pointing to a door at some distance, marked B. The traveler went in the direction indicated, but opened the door next to his own, marked A, and discovered a lady passenger making her toilet, who, upon the stranger's appearance, uttered a scream. "Go away! Go away!" cried the lady. "Letter B!" yelled the clerk. "I am not touching her at all!" shouted the indignant merchant.

—To some pungent remarks of a professional brother, a Western lawyer began his reply as follows: "May it please this court: Resting upon the couch of republican equality as I do, covered with the blanket of constitutional panoply as I am, and protected by the ægis of American liberty as I feel myself to be, I despise the buzzing of the professional insect who has just sat down, and defy his futile attempts to penetrate with his puny sting the interstices of my impervious covering."

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THE YELLOWSTONE CANON.

WONDERS OF THE ROCKY MOUNTAIN REGION.

A gentleman holding a prominent connection with Professor Hayden's geological survey is detained at the Grand Pacific Hotel by the illness of his wife. To a representative of the *Times* he gave an interesting account of the operations and adventures of the expedition in the Yellowstone country during the past summer.

This party of scientists took to the field in July. There were forty men in the different divisions, and eighty animals were required to transport provisions, instruments and personal effects. The field of operations covered the most interesting portion of the Rocky Mountains lying in Wyoming, Idaho and Montana Territories, out of which flow many streams of indispensable importance to the miner, the stock raiser, the agriculturalist and the tourist. The territory covered embraces the Yellowstone Park, in which the investigations of the explorers may be at all times most usefully prosecuted. Especial attention was given to this area, and the survey of it is now complete. This spot abounds in the most phenomenal wonders, the fame of which has spread to the uttermost ends of the earth. The examination of the whole district was thorough. Carefully detailed observations, locating all the geysers, hot springs and mud volcanoes were recorded and will be used in the preparation of charts. Numerous sketches and photographs were also made, and the temperature of each of the springs and the measurements of their dimensions were accurately ascertained. It is calculated that the material and data collected will enable the survey to make a report and charts so accurately describing the park that any changes by vandalism or natural causes in the curious features hereafter may be readily detected. While this work was being performed by one branch of the expedition, other divisions were engaged in an examination of the adjacent districts. The party having charge of the primary triangulations covered an area of about 80,000 square miles. The height of over 150 mountain peaks was determined. The highest of these are from 10,000 to 14,000 feet above sea level. Fremont's Peak and Mount Washburn are among the very tallest.

The expedition endured many hardships and met with many thrilling adventures. The crossing of the swift mountain streams in that region was often attended with extreme peril to both human and animal life. The animals were frequently led along the most dangerous defiles. One mule, bearing a heavy pack, missed its footing and tumbled over a precipice 1,600 feet high. The men peeped over the brink, and saw a pile of bones and mule meat at the bottom, but no time was spent in efforts to recover the pack. Wild game abounded, and men could sit by their camp-fires and shoot moose, elk, deer and bears. The Grand Canon of the Yellowstone was explored by Prof. Hayden, who had penetrated it once or twice before in former years. The gorge is 3,000 feet deep, the walls being almost perpendicular. It is so dark at the bottom of this awful chasm that stars are plainly visible in the sky at any hour in the day. The loneliness of the place is dreadful. Waterfalls are numerous. The four highest and grandest ones are called the Tower, Shoshones and Upper and Lower Yellowstone Falls. The lower fall has a plunge of nearly four hundred feet; the others average about one hundred feet. The average width of the river in the canon is less than six hundred feet. The celebrated geysers were re-examined by Prof. Hayden, to ascertain whether the phenomena had developed any new features. "Old Faithful," the largest of the group, is still subject to hourly eruptions, the intervals of activity occurring as regularly as the ticks of a clock. When at work "Old Faithful" projects a stream of hot water two hundred feet in the air. The party camped for seven days within sixty yards of this geyser, the mild temperature of the spot greatly mitigating the rigors of the weather, which was severely cold and tempestuous, snow having fallen to the depth of two feet in some localities. The suffering experienced by the men was intense. Mr. Wilson, in charge of the primary triangulations, had his knees and face severely frosted. Wilson's party is still at work in the Wind river mountains, and it is feared that the heavy snows may render their escape from the mountains a most arduous and dangerous undertaking.

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Compound Oxygen Treatment.

A long article in the *Lutheran Observer*, in which the history of the discovery of Compound Oxygen is given, and the philosophy of its action as a curative agent clearly described, closes with these paragraphs:

"In cases of low vitality, and in convalescence, this treatment, it is alleged, has been found of great value. After medicine has done its work of breaking up some acute disease, and the physician leaves his patient, as he must, to nature for repair and restoration, he too often finds that nature builds again so slowly that the period of convalescence is often prolonged through weary months, while in too many cases the old vitality is never restored. In this condition, it is said that Compound Oxygen is a wonderful restorer of force; and taking the theory of its action to be true, it is just here that its value should most certainly appear.

"If all that is claimed for this new combination of oxygen and nitrogen be indeed true—*and we have the most unequivocal testimony to its curative power from many persons of high character and intelligence, who are well known throughout the country*—then it looks as if a brighter day had come for thousands of invalids who have heretofore sought relief from suffering and slow decline."

Drs. Starkey and Palen, No. 1112 Girard Street, Philadelphia, have a small treatise on Compound Oxygen, in which will be found a large number of testimonials to very remarkable cures. It is sent free. If you are suffering from any form of chronic disease, for which you have so far sought relief in vain, get this little book by all means, and read it carefully.

◆

Excessive Indulgences and riotous living soon bring on Delirium Tremens. Vitalized Phosphates relieves the craving for strong drinks, gives strength to the stomach to digest food, quiets the brain, gives sleep, and restores impaired nervous vitality. F. Crosby, 666 Sixth Ave., New York. For sale by druggists.

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NOT A DRUG but Nature's own life-giving element. It does not cure by substituting one disease for another, as when drugs are taken, but by a NATURAL PROCESS OF REVITALIZATION.

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