AGRICULTURAL PAPERS.

A SERIES PREPARED ESPECIALLY FOR THE "RECORD-UNION."

Presenting Instruction Contained in Lectures from the Chair of Agriculture, State University.

[SEVENTEENTH PAPER.]

Geological study seems to indicate that the entire earth was once in a state of fusion, and that the crust was formed by a gradual cooling from the surface inward. The crust could not have differed greatly at first from the solidified lava of volcanic regions, and it was undoubtedly incapable of affording nutrition to plants. Since soils are made up of finely-divided particles of rock, it is evident that the first step toward the formation of a soil as a medium in which plants should grow, was the decomposition and pulverization of this igneous matter by physical and chemical forces. The causes which have produced these results are great, although the results of their action during one of our generations are not so strikingly apparent. If, however, we take into consideration the mass of the earth which has remained uninfluenced by these agents of soil manufacture, their action has been infinitely small. This insignificance can only be realized by comparing the average depth of the soil, which may be measured even in feet, with the diameter of the earth, so that the soil is in reality only a thin coating of dust over the earth's surface. The formation of soil from rock has been brought about, (1) by results of changes of temperature; (2) by the action of moving water and ice; (3) by decomposition induced by the chemical action of air and water; and (4) by the influence of

ANIMAL AND VEGETABLE LIFE.

It is a well known fact that by heating we increase the volume of almost every body, and that by cooling we decrease its volume. Just so the earth's crust must have been expanded while in the molten condition. When it began to cool a gradual shrinkage took place. One effect of this contraction would have been a subsidence of portions of the crust and a wrinkling of other portions, thus producing on the one hand sea-basins and valleys, and on the other mountain ranges. This would have been followed by a cracking or fissuring in many places of the crust itself. During this contraction and shrinkage, together with the weight of superincumbent material, immense weight was brought to bear upon the lower strata of the crust with the formation of laminated or slaty rocks. Thus we see that the first changes of temperature exerted an immense influence in the breaking up and final pulverization of the surface of the forming crust, and in the forming of many of the different modifications of rock. Besides this direct influence which the change of temperature has had upon the earth's crust, it has been the indirect cause of other or beneficial changes. In the rending action of freezing water, force is exerted which can hardly be realized. In the change from the liquid to the solid form, the volume of water increases six to seven per cent. The water of rains soaks into and fills up the innumerable cracks and crevices of rocks and hillsides, and with the lowering of the temperature this water freezes, expands, and tears open and bursts off immense masses of rock and earth. In cold countries the effects produced by this ever-acting agency of freezing water are stupendous, while in more temperate regions its results, though invariable, are not so marked. The action of freezing water separates particles of rock from the common mass quite as effectually as where the water can find its way into larger apertures. Masses of granite may be split by drilling rows of holes in it, filling them with water, and allowing the water to freeze.

THE ACTION OF MOVING ICE AND WATER

Does more to perceptibly change the appearance of the earth's surface than any other cause. Although not familiar from experience with the glacial action of ice, we all know that immense masses of earth and rock are cemented up in the mountains of ice which fill the Arctic regions; and that as the action of the sun and contact with warm currents meet these masses of ice, they deposit their burdens, which may have been transported hundreds of miles. The amount of detritus deposited by these means is slight compared to the masses which have been moved by the glacial action of ice. The seemingly motionless ice fields—in reality frozen rivers—which are formed far above the line of perpetual snow, move by a slow, intermittent motion down toward the "no frost line," which, once reached, they proceed to melt away, and disappear in numerous miniature rivers, which hurry along in their rush toward the sea. Beginning at the summit of some high mountain, the embryo glacier descends slowly by its own weight; continually meeting in its course banks of snow and ice which are impregnated with masses of rock and mineral matter from the hillsides and cliffs, it steadily adds to its own bulk till there are often glaciers of a mile in depth and carrying millions of tons of foreign matter to the regions below. The middle of the glacier, moving more rapidly than the sides and bottom, grinds up, by their mutual friction, the rocks and stones imbedded in it. The moving mass of ice carries everything before it in its slow motion, until reaching the warm temperature of the lower slopes, when it melts away and deposits its mass of mud, gravel and rock upon

ITS LAST RESTING PLACE,

Where they are in turn taken up by the running waters and transported to their destination. It would seem as if nature would refuse to supply our rivers with water sufficient to keep them daily pouring their billions of gallons of water into the sea. Change of temperature, again, is the agent by whose efforts much of the requisite water is supplied to the sources of the rivers. It is through its action that a continuous transfer of water from the lower to the higher altitudes is maintained. The mountain tops and high table lands are colder than the valleys below; hence clouds of water vapor are continually passing from the lower to the higher regions, where, coming in contact with the cold strata of air, they are condensed and fall as rain or snow. In these mountains are thus begun the rivulets which are to end in teeming Mississippis and Amazons. These mountain streams cut and wear their way into even solid rock, and wear out channels for themselves against whose sides and bottoms are effectually ground into every grade of fineness the rocks and bowlders which are carried along by the waters in their rapid descent. The channel, too, is continually worn and ground off, and cliff and banks are by the action of rain and frost burst off and overturned into the stream. The grinding and scouring effects of bed and contents are mutual, and the channel is soon cleared of any inequalities, and is constantly being increased in size. Rocks, bowlders, gravel and sand are deposited successively as the velocity of the current slackens, and the river reaching its settling place has only fine silt and sand left in suspension. Even when the rocks have reached the sea they are continuously exposed to the friction of the tides and currents, so that the comminution of rocks and mineral matter goes on continually in the bed of the ocean as well as on the surface of the earth.

THE CHEMICAL ACTION OF WATER AND AIR,

Although acting quietly and unnoticed, yet produces effects which, in the aggregate, are second to none in furnishing the farmers' soil with the necessary inorganic substances. When water combines chemically with a substance we say it is hydrated. When you slake lime by pouring water on it, you simply hydrate it. The new compound is generally softer, occupies a larger volume, and is more readily attacked by atmospheric air than the anhydrous substance. Many of the mineral substances which were formed under the action of intense heat, when subjected to the action of water readily take up some water of hydration. This fact admits of our saying that the chemical effect of water on the transformation of rocks and minerals is undoubtedly quite great. Water owes most of its efficiency, however, to its solvent power, it being able to dissolve, disintegrate and gradually decompose many mineral substances. For instance, minerals like apatite containing soluble chlorides and other soluble salts give them up to the action of pure water. The solvent effects of water depends of course upon the amount of surface exposed; therefore finely divided and ground up mineral matter is more perceptibly acted upon by water than if it were in masses. If feldspar or common glass be ground up to a fine powder and treated with pure water, blue reactions will be got with red litmus paper, which prove conclusively that some of the alkalis have been dissolved out of them by the water. The solvent power of water is greatly increased by the presence of carbonic acid. As we have already seen, this acid is almost invariably found in considerable quantities in water. This carbonated water very readily dissolves many substances which are totally insoluble in pure water. Limestone and magnesite readily dissolve in it. It is the solution of carbonate of lime which imparts the "hardness" to most waters of limestone regions. "Chalybeate" waters are those holding in solution the carbonate of iron. Silicates are much more readily decomposed by carbonate than by pure water.

CARBONATED WATER

Having such a solvent power, it is easily understood why the water of soda and other mineral springs containing much carbonic acid are so largely impregnated with mineral matter. Ordinary river and rain waters contain a very small amount of carbonic acid and have a correspondingly small solvent power. Analyses made of rain water have given from 8 to 80 parts of carbonic acid in 10,000 parts of water. We see, therefore, that the amount of carbonic acid present in rain waters is very variable. River and spring waters contain more carbonic acid, but much of it is in combination with bases, as carbonates and bicarbonates of the bases, and hence can have no decided effect on the solvent power of the water. For all the absolute amount of carbonic acid is so small, yet, being spread over a large surface, the aggregate result of its action becomes in time very considerable. Next to carbonic acid oxygen probably does more toward the disintegration of rock and mineral than any other of the atmospheric ingredients. We have several times spoken of its intense oxidizing power, or its great affinity for other bodies. It is this same active tendency to unite with most other bodies which imparts to it its usefulness in soil formation. The low oxides, and the sulphides of many of the metals, are oxidized to higher oxides and sulphates which are more or less needed by plants. Wherever there is an exposed point of oxidizable matter there oxygen does its work. The constant oxidization on the surface of minerals and rock helps greatly in their decomposition. Although unable to treat it at any length here, oxygen plays a very important part in the transformation of all kinds of matter, both organic and inorganic.

THE GRADUAL EXPOSURE TO THE ELEMENTS

Also tends largely to the grinding off and breaking up of rocks and minerals. By the term weathering we mean the exposure to the joint influence of water, carbonic acid, oxygen and other atmospheric ingredients. The disintegrating and chemical decomposition under such circumstances are very considerable, and more so upon some mineral matter than others, but, owing to the comparatively limited space at our command, it would be impolitic to speak further of this to the exclusion of more important ones. The last agent in the manufacture of soil from the recently cooled down crust of the earth is vegetation, for the gradual incorporation of vegetable and other organic matters with the partly formed soil must have had a no inconsiderable influence on its final construction. It probably took centuries of exposure to the action of the other agents of disintegration and decomposition before there was soil enough to support even lichens, moss, and other of the lowest species of plants. These plants can't however thrive on what seems to be bare rock, and they may be found adhering to the sides of masses of granite, and even quartz. From the little nutriment needed by them, they are well calculated to initiate the future plant kingdom by sacrificing their own individuality and structure for the enrichment and formation of a soil. The decay and decomposition of successive generations of vegetable mater gives rise to the humus of the soil. It is a brown or black mold that accumulates on the surface of the soil, and is composed of

DECAYING ORGANIC MATTER.

Common leaf mold, peat and swamp muck are only different modifications of humus. Peat is formed by the deposition of successive layers of vegetable matter under water, and hence out of contact with the air. It is almost invariably found in marshy places and in swamps. Under such conditions of formation the decomposition is not so complete as when the matter is freely exposed to the air. In other words the matter has not been so completely oxidized. This fact is taken advantage of in some of the older countries, where the dried peat is used for fuel, it being surely a good substitute for none. Humus aids in the disintegration effect and formation of soil, mechanically, by its decay, and chemically, in the generation of organic acids, ammonia salts and nitrates, which all have a very decided solvent effect on mineral matter. The chemical nature of humus and its relation to productiveness will be spoken of in its proper place. Even living plants directly contribute to the soil formation. They shade the soil and keep it in a more or less moist condition; and we have seen that carbonic acid is exhaled in considerable quantities from living plants. Organic acids are formed within the plant structure, and some of which escaping, are free to act on the soil and its ingredients.

When undertaking a long journey, we advise you to take along a good supply of St. Jacobs Oil in case of an attack of acute rheumatism or other painful ailments. In this connection the St. Louis *Post Dispatch* relates the following: Under the title of "Old Probabilities," one of the most useful and valuable officers of the United States Government is most widely known. But quite as well known is Prof. J. H. Tice, the Meteorologist of the Mississippi Valley, whose contributions to his favorite study has given him an almost national reputation. On a recent lecture tour through the Northwest the Professor had a narrow escape from the serious consequences of a sudden and very dangerous illness, the particulars of which he thus refers to: "The day after concluding my course of lectures at Burlington, Iowa, on the 21st of December last, I was seized with a sudden attack of neuralgia in the chest, giving me excruciating pain and almost preventing breathing. My pulse, usually 80, fell to 35; intense nausea of the stomach succeeded, and a cold, clammy sweat covered my entire body. The attending physician could do nothing to relieve me. After suffering for three hours I thought as I had been using St. Jacobs Oil with good effect for rheumatic pains, I would try it. I saturated a piece of flannel, large enough to cover my chest, with the Oil, and applied it. The relief was almost instantaneous. In one hour I was entirely free from pain, and would have taken the train to fill an appointment in a neighboring town had my friends not dissuaded me. As it was, I took the night train for my home in St. Louis, and have not been troubled since."

THE BASTEI.

A TRIP TO THE SAXON AND BOHEMIAN SWITZERLAND.

Scenes by the Way—The Devil's Kitchen—Colossal Rocks—In the Depths—Mammoth Bridge.

[Correspondence of the RECORD-UNION.]

DRESDEN, April 3, 1882.

To the Bastei! To the Bastei! Over and over again resounded the cry, and still we did not comprehend that this reveille contained a promise of a glorious revelation, a far-reaching panorama of everlasting hills and gigantic rocks; rocks and hills that have endured the violence of the elements since the world began. Every day I am more thoroughly convinced that we go through the world with our eyes only half open; and when we actually do realize what we might have enjoyed long ago, but for our own blindness and stupidity, the prayer rises involuntarily to our lips, "O, let us carry with us ears and eyes for the time, and hearts for the occasion!" Now at the very sound of the word

SACHSISH BOHMISCHE SCHWEIZ

A grand vision of prodigious statues, giant forms and fantastic shapes, all with staring eyes and outspread arms, immediately springs up before our mental view, and we are ready to grasp our umbrellas and start at the faintest hint of a trip to the Bastei. But finally one beautiful day in March—one of those days when mere existence is a blessing—a party of us did conclude to make an excursion into the Saxon Switzerland. Accordingly, at 1 o'clock we entered the cars at Dresden, and were soon en route for the Bastei, which is the grand culminating point of this wonderful region. We found others "fully persuaded," fired with the same laudable enthusiasm and bent on the same expedition. Some spoke German, some French, some English and some American, for in foreign countries English and American are two quite distinct languages. Following the curve of the winding Elbe for about three-quarters of an hour, we arrived at Potscha, a little village on the left bank of the river, although the district known as Saxon Switzerland began properly at Pirna. We passed neat little villages and towns on the way, all putting forth buds and blossoms, glad of the sweet spring-time. One especial object of interest was the

IRRENANSTALT AT SONNENSTEIN,

Or the lunatic asylum, on a rocky prominence at Pirna. This immense castle-like building, rising so majestically from its solid foundation, with its widely-extended view of Saxony, looks inviting to sane as well as crazy people; and we almost felt like saying, "I want to go there, too!" It brought to mind the little song in "Fatinitza," by Suppe, who says: "You are insane my child, and you must to Berlin." But the naughty little boys "darf nicht" (dare not) sing it in the streets, because the policemen don't like it; and they immediately become interested in a little bey who exercises his vocal organs on that little song. At Potscha we went down to the bank of the river, and waited for the coming of the queer old flat-boat, which silently plies "from shore to shore." It neared the bank, stopped, about a dozen passengers embarked, and it pushed off again, without any visible means of locomotion. The peaceful flowing river, the budding trees, singing birds, grassy banks and pretty villages, all lent their charms, as we seemed to drift along with the tide; and we devoutly wished that it were possible to reach that invisible chain underneath the boat (which we heard the boatman describing to a passenger), and indefinitely extend this delightful floating down the river. But "end things must, end howso'er they may," and intangible fancies and beautiful dreams were soon interrupted by a thump of the boat on the stone steps at the other side; and two by two, as the animals went into the ark, we went out of the boat, and scrambled up the stone steps to the little village of Wehlen. This quaint little village is celebrated for the remains of an old fortress, which was built early in the thirteenth century. It is said to be one of the oldest on the Elbe; fortunately it escaped destruction, but is now slowly falling into decay. Just outside the village, before we commenced the ascent proper, we passed through a narrow gate, when presto! about a dozen little, old, bent, wizened-faced women appeared. So like mountain witches did they look, that involuntarily we glanced around for the broomsticks; but found only alpine stocks, which the poor harmless women wanted to sell. Already burdened with cloaks and umbrellas, we concluded that these would prove troublesome comforts. Since the descent is made on the other side of the mountain, and it is always cool in the evening, it is absolutely necessary to be burdened with these encumbrances.

THIS SLIGHT DISCOMFORT

Was soon forgotten, however, for ever more and more delightful became the mountain path; grand old rocks loomed up before us, cool and inviting mossy banks appeared, graceful ferns nodded and waved, perpendicular rocks like mighty sentinels stood at regular intervals, covered with that strange yellow coating, which extended almost within our reach, and about which Geinitz, the scientist, has written so much; and over whose origin the guides love to tell the following tale: When railroads were first built in Germany and only a few post-carriers were needed, the yellow-clad officials met and quarreled over the remaining positions; a great battle ensued, and as they beat each other the yellow dust from their coats lodged up on the rocks, and has remained there down to the present day. However it may have originated, the light yellow contrasts beautifully with the dark green of the tall trees, through which no sunny rays ever penetrate, and where

Birds in their branches high
Sing sweetest melody
Hidden from sight.

Taller grew the trees, darker the shadows, loftier the rocks and narrower the paths, till finally, with outstretched arms, we could touch both the rocky walls at once. How quiet and majestic seemed this narrow way, where "through nature we looked up to nature's God," with never a sound to distract save now and then the ripple of a tiny rivulet, the twitter of happy birds, or the scampering of mountain children, who stood for a moment and gazed liked scared animals, then took to their heels—a cloud of dust, the bottoms of little bare feet, and all was silent and grand again. "Shall we turn aside for a few steps and visit the devil's kitchen?" asked our leader. With flitting visions of California geysers before our eyes, with its devil's teakettle, witches' caldron and devil's inkbottle, all hissing, boiling and seething, we readily assented. But judge of our surprise at finding a dark, cold, slimy cavern, only wanting a clumsy toad, a great, stupid snail and an ugly, green, crawling lizard to complete the picture. Three immense bowlders, like the wicked angels, were thrust from their homes above, and are now wedged firmly between the walls of the pass, forming gloomy and forbidden canopies; from these a few cold drops of water trickle down the sides and drop into a diminutive pool below—nothing more. Concluding that his Satanic Majesty occupies cooler quarters in Germany than were assigned him in our orthodox catechism, we turned away from his culinary department.

BUT THE HIGHTENING GRANDEUR

Of the mountain-way quickly consoled us for any disappointment at the lack of warmth experienced in the devil's dominion. Now and then a formidable rock jutted out, and seemed to need only a feather's weight to send it crushing down upon our insignificant heads. "What is man that thou art mindful of him," came to us over and over again in the midst of these invulnerable mountain fastnesses. Soon, almost hidden by a mighty rock, we espied a spring of clear sparkling water. Is there any one thing more refreshing and inspiring to a thirsty, dusty traveler than to come suddenly upon pure, clean, bubbling water? That poet must have discovered just such a treasure, slaked his thirst, wiped his brow and overflowed with gratitue, when he wrote:

Fair dweller by the wayside high,
Sweet saint within a mossy shrine,
The tribute of a heart to day
Weary and worn is thine.

We almost envied the good little boys who sat near the spring, eating their semmel (rolls) and hard boiled eggs, sweetened with this delicious beverage. But "hights are not obtained by sudden flight," so on we plodded up the winding road, till gradually the rocks bowed their majestic heads, and finally the sentinels disappeared from our side entirely; the trees became shorter, the path grew broader, and we knew that we were almost at the goal. Here we found a little rustic house, where the inevitable "bier" is furnished, with tables and seats invitingly placed in the cool shade of the trees. Near this is a dangerously fascinating point of view. Down a dizzy hight, hundreds of feet below, we saw the trees, mosses, ferns and rocks in deep dark caverns, while directly opposite were castellated peaks, majestic columns and huge forms, standing thickly side by side, like a battalion of

GIGANTIC SOLDIERS,

While the straight, dark trees against the light, rocky shapes completed the fancy and supplied the guns. German caution here, as everywhere else, is observed. A strong railing is built around this wicked point, to prevent rash adventurers from yielding to the fascination and venturing too far over the edge. The light covering of moss is exceedingly treacherous, and where to all appearances it is perfectly safe, one can slide off so easily. Here we laughed, shouted and sang. The faithful sentinels on the other side caught up the sound, and the sweet echoes reverberated from point to point, till finally, far away in the distance, only the faintest whisper was heard. But this was only a preparation for the grandeur of scene which awaited us at the Bastei, the aim and object of our two hours' climb. Saxon-Bohemian Switzerland is a district of about 60 square miles, which lies between Bohemia and Saxony, earlier known as the Meissen Highlands. It embraces the southeast of Saxony and the northeast of Bohemia. There is a flat rock at the boundary line, where you can sit on one side in Saxony and go around on the other side and sit in Bohemia. It is a peculiar sandstone formation elevated high above the surrounding country. This and a similar district found in France are said to be the only known districts of the kind. The Bastei, the chief point of attraction, is a colossal rock which rises almost perpendicularly 600 feet over the right bank of the Elbe. There a hotel is situated, furnished with stable and restaurant. Tables and chairs are arranged outside near a wall along one side of the rock, where you can refresh body and soul at the same time. The enjoyment of the beautiful panorama stretching far out before your gaze is hightened by the weird strains from the Bohemian band at your left.

NEXT IN ORDER

Is the grand view from the point of the Bastei. Here again all danger is removed by the presence of a firm iron railing which completely surrounds the point, a space of about twelve square feet. Here is a place "for thought and not for speech," and even now words come slow to describe either the transporting prospect or the accompanying sensations. Far down in the depths below, the Elbe "winds about and in and out" like a beautiful silver thread, and up and down ply the clumsy little steamboats. The banks on either side are dotted with tiny villages, between which charming little patches of cultivated fields are seen, while far as the eyes can reach the everlasting hills and rocks rear their mighty heads. In the distance are discerned the celebrated points, known as Schandau, Kuhstall, Lilienstein, Konigstein and Schneeberg. But the lengthening shadows warned us that the descent was yet before us, so with many "long lingering looks behind," we prepared to follow the example of those who had gone before, and were now seen threading their way among the trees and rocks below us. Not far from the summit a point juts out, on which nature has provided a sort of round tower, from which we looked down upon a labyrinth of caverns, trees and isolated rocks. Here we longed to linger, but time forbade, so on we went to the gigantic stone bridge, which is 270 feet long and 7½ feet wide. This bridge is constructed entirely from rock and supported by heavy arches of stone masonry, built up from the recesses in the rocks below. Both sides of the bridge command

MAGNIFICENT VIEWS.

At the right is the Elbe and valley, and at the left a long sweep of the Saxon Switzerland. One immense perpendicular rock, with its smooth surface facing the bridge and forming a portion of the wall, is completely covered with the signatures of those who are unwilling that their names should perish with them. One tablet on the rock is sacred to the memory of two pastors, Nicolai and Gotzinger, who were the first to call attention to the charms of this delightful region. Fascinating views met the gaze at every turn during the entire descent; true, some were marked "gefahrlich" (dangerous), and a friendly rail prevented us from realizing the extent of the danger, but this only increased their fascination. We passed one lonely spot known as the "Rosenbett," which ought to be designated inspiration point. There the poet Tiedge, chiefly known from his Urania, loved to muse. Cut in a rock are the words: "Zur Erinnerung an Tiedge den Sanger der Urania" (In remembrance of Tiedge the Singer of Urania). And thus on we went spying wonders; first one, then another, calling attention to the attractions we were leaving in the shadowy past, pointing out figures in the rocks above, and around us. Finally a shout of delight went up as "Mary's little lamb" was discovered perched comfortably on the top of a flat rock, "natural as life and forty times the size." But in half an hour we had completed the short steep descent, and arrived at the little village of Rathen, and there again waiting for the boatman to ferry us over the Elbe. Soon again we were in the charge of the iron-bound horse homeward bound, feeling happier, better, and fully realizing that there are "books in the running brooks, sermons in stones, and good in everything."

SORROW.

When I was young I said to sorrow
"Come, and I will play with thee!"
He is near me now all day,
And at night returns to say
"I will come again to-morrow—
I will come and stay with thee."

Through the world we walk together—
His soft footsteps rustle by me;
To shield an unregarded head
He hath built a winter shed;
And all night in rainy weather
I hear his gentle breathings by me.
—[Aubrey De Vere.

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TO MY OLD PATRONS.

I STILL OFFER MY VALUABLE SERVICES to you are so unfortunate as to require them. With a mind matured and enriched by studies of an advanced order, I can safely say that there is hardly a disease in the catalogue of human ills that I cannot treat to a successful issue.

LADIES—I am always ready to assist you. My past knowledge has been increased by extensive experience. I am now able to treat you with the certainty of success. No case peculiar to your delicate organism is beyond my sure control.

My Female Monthly Medicines are superior to any offered heretofore, and will be warranted to have the desired effect in all cases.

Those of the public who need my service can depend upon gentlemanly, honorable and scientific treatment at reasonable rates.

I address particularly those who have been injured by youthful indiscretions and those who have contracted local diseases.

Persons afflicted can, if they prefer, consult me by letter, detailing the symptoms of the disease or trouble, and receive medicines by express, with full instructions. All letters must be directed: J. H. JOSSELYN, M. D., 226 Sutter street, San Francisco, Cal.

Cure warranted in all cases, or no pay required. Consultations, personally or by letter, gratis. Send for book. Comfortable apartments for patients at my Infirmary (when desired), with experienced nurses.

Consultation Parlors, 226 Sutter street, adjoining the Young Men's Christian Association Building.

Office hours—From 9 A. M. to 8 P. M.

My Diploma hangs in my office.

Purchase my Essay on Physiology and Marriage. For sale by all newsdealers.

J. H. JOSSELYN, M. D.
7-3pimdswimWS

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Two-story Brick Building, two upper stories finished into two compartments, 6 rooms in each, and finely finished; first story and basement occupied as a grocery store; the building is well finished and in a splendid state of repair; will pay 9 per cent. per annum clear of taxes, insurance and repairs; lot 44x160.

—ALSO—

Two-story Brick Building, with frontage of 53 feet on J street by 160 feet to alley, the whole renting for $142 50; the whole property is offered at the low price of $12,500.

WE ALSO OFFER

FOR SALE

A Good Stand for Wood Business, having a lot 80x160, covered with sheds and stable; has eight horse power engine and boiler, barley mill, capacity of two tons an hour; saws, belting, pulleys, etc.; situated on H street, between Sixth and Seventh streets; the whole is offered for $3,500.

Apply to

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REAL ESTATE

—AND—

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1015 Fourth st., Sacramento,

Between J and K streets.

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A CAR-LOAD OF SUPERIOR

Nevada Potatoes.

L. & M. STAR TOBACCO!

CAR-LOAD OF

"PERFECTION" DRIPS!

(Bbls, Half-barrels, Kegs and Cases.)

ONE CAR OF

HARKNESS CANDLES

FINE LOT OF EXTRA CHOICE

ROLL BUTTER!

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Is now being daily done by our men, who are skilled in the lines of tasteful combinations of DECORATIONS and excellence in TINTING. The most critical of this city and the interior are invited to call and arrange for having their work done in a FIRST-CLASS MANNER. Best satisfaction guaranteed to all by

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Rubber Hose,
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UNION NURSERY,

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GROWS AND KEEPS CONSTANTLY ON HAND a choice collection of EVERGREEN TREES, SHRUBS and FLOWERING PLANTS, which he offers for sale this season cheap for cash. Orders for CUT FLOWERS, BOUQUETS, and all kinds of Floral Designs filled at the shortest notice. a11-3pim

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H. FISHER, NOS. 508 AND 510 J STREET, Sacramento, has just taken the Wholesale Agency of the CALIFORNIA CRACKER COMPANY of San Francisco. CRACKERS sold at lowest San Francisco prices, with difference in time and freight in favor of purchasers. Also, FISHER'S CHOICE CONFECTIONS, at lowest market rates. fe22-3pdn

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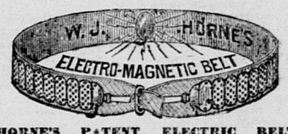

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COMMERCIAL OF SAN FRANCISCO.
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Policies written at this Agency and issued at short notice. m18 3pim

To the Consumers of Ice.

THE RENO ICE COMPANY, WHOSE PRINCIPAL place of business is Sacramento City, at No. 819 K street, have

5,000 TONS OF ICE

Stored in their houses in the mountains. It is of the very best quality, made from the waters of the Truckee river. Being anxious to sell the same, they offer extra inducements to consumers, as the following prices will show:

Ice by the Carload.....$7 per ton
Ice by the Ton, delivered.....$9 per ton
Ice by the Hundred Pounds.....50 cents per 100 lbs
Ice Less than 100 lbs..Three-quarters of a Cent per lb

Will guarantee the above prices to continue. Orders left at the above place will be promptly attended to. Reno Ice Company.

a15 3pim W. H. McINNIS, Agent.

DISSOLUTION OF COPARTNERSHIP.

THE COPARTNERSHIP HERETOFORE EXisting between LEE GEE, CHING SING and CHING COON SANG is hereby dissolved by mutual consent. The business of General Merchandise will hereafter be conducted by LEE GEE and CHING SING at the same place of business as formerly. CHING COON SANG has retired from said firm, and has no further interest therein. All debts due the firm will be collected by LEE GEE and CHING SING, and all liabilities paid by them.

Dated this 22d day of April, 1882.

LEE GEE,
CHING SING,
a29-1aw2wS CHING COON SANG.

FARMERS, Stop and Think!

DO YOU WISH TO MAKE OR SAVE MONEY You can buy a GRAIN MILL which will grind all your feed, with wind or horse power, for One Hundred and Twenty-five Dollars. It can be operated with man power, and do a reasonable amount of work. It grinds or rolls the barley or corn, crushing it into fine meal, if so desired, or simply crack it. This cannot be done with the stone or roller, for the one grinds but cannot roll, and the other rolls but cannot grind; but my mill does both,