NOTICE.

To Farmers and Grangers.

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For Sale, choice lot of the California-grown Alfalfs, in lots to suit, for cash, at market rates. Our seed, un-like that Imported from Chile, is line and free from Mustard or other foreign seed. Vegetable, Flower,

Fine Plants, Trees, Bulbs, and all articles in the line, esh and good. Spiendid stock, at the old stand.

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Buy your Eggs where you can get them from the Best Imported Stock.

I am now prepared to furnish eggs for the coming season at the following rates: Light and Dark Brahmas, Buff, Partridge, White and Black Cochins, Houdan and Black Spanish, Game Hantams, Greve Cours, Rouen dand Ayleshary Ducks, at \$60 per dozen; Silver Spangled Hamburgs, Golden Peucide Hamburgs, Golden Peucide Hamburgs, Golden Peucide Hamburgs, Fremtim at Stoffalo, ISTA, ISSI very premium at Stoffalo, ISTA, ISSI very premium at Stoffalo, ISTA, ISSI very premium at Buffalo, ISTA, ISSI very premium at Buffalo, ISTA, Also, Game Imported Direct from Reifast, Issaed

Game Imported Direct from Belfast, Ireland,

At 28.00 per denon. I claim to have the finest fowls in the State, and cordially invite importion of the same at my pards. I have taken the heat of stock selected for me textra pains to precure the best of stock selected for me textra pains to precure of New York, who cannot be excelled a service of famous fowl. Birds of the above mentioned van detect of famous fewl. Birds of the above mentioned van detect of famous fewl. Birds of the above mentioned van detect of famous fewl. Birds of the above mentioned van detect of famous Pierons on hand. Bend in your orders for figgs, they will be carried packed to carry safely any distance. Also, send for Price List of Fowls to

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An Extensive Vineyard.

Mr. G. G. Briggs, who last year purchased the ranch of the Rev. M. M. Dodson, two miles south of this place, has set out 150 acres of it to the choicest varieties of raisin grapes will prove profitable, and at no distant day will receive far more attention than at present. This Continent alone will furnish market enough; if not, those of the whole world are open. And those who stop to think will see that but a comparatively small part of the vast field to be supplied is adapted to grape growing. Hence there is no danger of an over-supply. There are several in this vicinity who have done something in this line, and successfully, too, but we are not aware of any one having branched. we are not aware of any one having branched out quite so extensively as Mr. Briggs, who, we trust, will be entirely successful; and we also hope his example will be followed by others.—Yolo Democrat.

Mountain Farming.

In support of our position in regard to the profits of farming in the foot-hills and uplands, we quote the following enthusiastic endorsement of the Amador Ledger:

we quote the following enthusiastic endorsement of the Amador Ledger:

We have on a number of occasions referred to the capacities of several of the ranches, orchards, gardens and other cultivated lands in the vicinity of Jackson, and given their actual products and the amount of money realized from each acre cultivated. We have done so, to show the advantages in point of profit, of mountain over valley lands; trusting that families of limited means seeking homes in California might, from facts, be induced to turn their attention to the foot-hills, where homes can be had almost literally without money and without price and where health waits on prudence and wealth on industry.

This week we give the actual product of the ranch of Mr. C. J. Ruffner, situated at the north-western foot of the Butte mountain, three miles east of Jackson. Mr. Ruffner owns 160 acres with government title, 20 acres of the tract is cultivated to grass, producing one ton per acre without irrigation. Hay is never worth less than \$25 per ton; income from hay produced, \$500. Eight acres are planted in fruit trees and grape vines, and two acres in vegetables. The fruit-trees embrace apple, pear, peach, plum, apricot, quince and nectarine; from the orchard last year were taken and sold the following products: 8 tons of apples at 2c. per b., \$320; 2 tons peaches, pears, plums and other fruits, 3c., \$120; 18 tons grapes from 7,000 vines, 2c., \$720; 1,000 bs. of raisins, cured and sold, 20c., \$200; from eight acres, fruits and vines, \$1,360.

From the two acres cultivated in vegetables, the following sums and products were realized; Four tons of tomatoes, at two cents, \$160.00;

the following sums and products were realized: Four tons of tomatoes, at two cents, \$160.00; from the sale of cucumbers, beans, peas, cab-bages, beets and other vegetables, \$300 00; product from two acres, \$460 00. Whole amount product from two acres, \$460 00. Whole amount realized from thirty acres as follows: From twenty acres to hay, \$500 00; eight acres to fruits, grapes and rasins, \$1,360 00; two acres to vegetables, \$400 00, total sum realized \$2,320 00; being \$25 per acre for land cultivated to hay, \$270 per acre for land cultivated to fruit and grapes, and \$230 per acre in vegetables. There are two living springs on the tract, affording through the driest months three inches of water, with which the orchard and tract, affording through the driest months three inches of water, with which the orchard and garden are irrigated; about forty acres of the land is well adapted to alfalfa, and the whole tract can be irrigated from the Amador canal. From the amount realized from this small area of cultivated land we think we can safely say to immigrants, come to foot hills, secure homes in the healthiest part of the world, and where independence is the certain result of industry.

MULBERRY TREES .- We regret to state that Mr. Brannan has uprooted his whole mulberry orchard of nine thousand trees, of seven years d is, viz:

ECONOMY.

Vivisection.

The dissection of living animals for scienti-tic purposes, is at present the subject of warm debate in England. On the one hand it is maintained that vivisection is not justified by of it to the choicest varieties of raisin grapes intending, we understand, to cure the raisins himself, pack and ship them to the Eastern markets. It is surprising that more of our farmers do not engage in this profitable branch of industry. Our valley is splendidly adapted to grape cultivation, and the crop never fails, no matter how dry the season may be. It is said, too, that grape growing does not exhaust the soil anything like equal to the continual wheat cropping that is now practiced, while the older the vines get the more productive and valuable they become, and the quality of the product is also improved. We have not the facts, necessary at hand to give a comparison of the expenditures and profits—if any one will favor us with them we shall be pleased to publish them. We are satisfied, however, that the culture of the raisin grape in this valley will prove profitable, and at no distant day will receive tar more attention than at present. This important acquisitions to physiological science, could hardly have been achieved without experiments upon living animals, no one will venture to deny; and that the pain inflicted is, when the end to be attained bears a reasonable proportion to the brute agony inseperable from the investigation, fully justifiable, will be granted by all in whom sentimentalism does not reach the degree of mental weakness. But, while the investigations of a Harvey, a Bichat, or a Brown-Sequard, involving more or less animal misery, ought not to be, and cannot be reasonably condemned, it does not follow that their experiments are to be repeated by every stuexperiments are to be repeated by every stu-dent, or for the edification of every class of dent, or for the edification of every class of students who may find it necessary to be informed of the facts which the leading scientific investigators have brought to light. A renewal of Harvey's experiments, for instance, is not necessary to the understanding of the laws of the circulation of the blood; neither would a promiseuous slashing and mutilating, either with the hope of stumbling upon some new fact, or merely for the purpose of witnessing, at first hand, phenomena already known and described, be anything more or less than diabolical crucity.

COLUR-CHANGING IODIDES. -Some time ago Colum-changing lopids.—Some time ago M. Meusel announced the discovery of two new double iodides of mercury, silver, and copper, which were of especial interest in virtue of the property of changing color upon the application of heat. The first of these new compounds is prepared by adding a solution of silver nitrate to one of mercuric iodide in potassium iodide, and is of a bright, lemon yellow color, chancing under the influence of heat becolor, changing under the influence of heat be-low 212 deg. to a rich orange, and regaining its original tint when cooled. The second is preoriginal thit when cooled. The second is pre-pared by adding to a warm solution of mercu-ric iodide, in potassium iodide—first, copper sulphate, and then sulphu-ous acid. Its col-or is carmine, becoming black, however, at a temperature of 158 deg. Fah., but restored on cooling. When mixed with gum-water and ap-plied to paper, these bodies exhibit their color-changes in a post striking manner. Expensive changes in a most striking manner. Especially interesting, however, is the fact that Professors Barker and Mayer have suggested and patented the application of the carmine compound to the bearing portions of machinery in motion, which are frequently difficult of access, to determine whether they are heating. An inspection of the paint would determine the fact without the necessity of actual examinafact without the necessity of actual examina-

THE HEAT OF THE MOON.—The Earl of Rosse, in a recent lecture before the Royal Institution, gave some interesting information concerning the various experiments heretofore made to de-tect the heat of the moon, and then described his own efforts in this line, which are the latest his own efforts in this line, which are the latest that have been made known. By means of a specula-mirror, a thermo-pile, and a pair of reflecting galvanometers, made on Sir William Thompson's plan, such as are used for sending messages through the Atlantic cable, the Earl was enabled to demonstrate the presence of heat from the moon, but the temperature of the lunar surface still remains far from being determined. My calculations he says lead are determined. My calculations, he says, lead no to estimate the heat from the moon as the to estimate the heat from the moon as the eighty thousandth part of that from the sun. Bouger's experiments give the brilliancy of the full moon as the 300,000th part of that of the sun. Wollaston gives it as the 80,172d; Zollner as from 618,000th to 619,000th; and Bond as the 470,980th. The maximum of the lunar heat appears to be a little before full moon; the unequal distribution of its mountains and plains, perhaps, goes to explain this phenomenon.—The Engineer.

SUNSHINE AND SLEEP.—Sleepless persons should court the sun. The very worst soporific is laudanum, and the very best, sunshine. Therefore it is very plain that poor sleepers should pass as many hours as possible in the sunshine, and as few as possible in the shade. Many women are martyrs, and yet growth. The reason assigned is, viz: There is no demand for that kind of property! This asks public attention. Mulberry trees flourish; four years' experience in Novada county proves that silk-worms thrive, and that first quality cocoous are raised; but there is no market for them.

Yet we have in San Francisco a silk factory, getting its raw silk from Japan, and declining to buy and reel our own silk! They say, bring your silk ready reeled and we will buy; but we don't want to take cocoons at any price. Something is wrong here, which will, we trust, find an early remedy.—Bulletia.

sunshine, and as few as possible in the shade. Many women are martyrs, and yet they do not know it. They shut the sunshine out of their houses and their hearts, they wear veils, they carry parasols, they do all possible to keep off the most potent influence which is intended to give them strength and beauty, and cheerfulness. It is not time to change all this, and so get color and roses in our pale cheeks, strength in our weak backs, and courty trust want to take cocoons at any price. Something is wrong here, which will, we trust, find an early remedy.—Bulletia.

To Increase the Adhesiveness of Gum Arabic.—Concentrated solutions of gum arabic as mucilage, says Hager, possess the disagreeable property, when spread upon printing or other paper not strongly sized, to penetrate them to transparency, and in spite of this not making them adhere to other paper. Paper cannot be attached to common pasteboard, nor wood to wood. Paper pasted with mucilage on metallic surfaces usually falls off soon. The use of gum as cement for glass, porcelain, or earthenware, etc., is entirely impossible. All these disadvantages of mucilage are remedied, when an aqueous solution of sulphate of aluminum is added. For 250 grammes of the concentrated gum solution (prepared with 2 parts of gum and 5 of water,) two grammes of cryst, aluminum sulphate will suffice. This salt is dissolved in ten times its quantity of water, and mixed directly with the mucilage, which in this condition truly deserves the name of versible gibe. Solution of alum serves the in this condition truly deserves the name of tegetable glue. Solution of alum serves the same purpose, but far less efficiently.

Another process for preserving meat is announced. By this method the animal is killed by felling, and immediately skinned and cleaned. It is then glazed over with a preparation of sugar and alcohol and placed in a bod of fat. The case is exhausted of air and soldered up.

A Wisconsin man claims to have invented a machine with which wagon and buggy wheels can be made in fifteen minutes.

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