

THE DAILY RECORD-UNION.

AGRICULTURAL NOTES.

PRACTICAL INFORMATION FOR THE FARMER AND THE ORCHARDIST.

This Department is prepared for the SACRAMENTO RECORD-UNION by its Agricultural Editor. All matter relating to the agricultural interest will be received and treated.

INDUSTRIAL KNOWLEDGE OF CALIFORNIA IN DEMAND.

There are few persons not in position to come in contact with the people of the Atlantic States who are not aware of the great demand there is in those States for correct and reliable information in regard to the resources and industrial advantages of California. Since our connection with the State Agricultural Society as its Secretary, we have, by correspondence and otherwise, learned something of the extent of this demand. And in attempting to supply the information demanded, we have also learned something of the meagerness of the means of supplying it. To show the character and extent of inquiries for information we will give some samples of letters being constantly received at the office of the Society:

New Castle, Pa. Commissioner of Agriculture for the State of California. Dear Sir: Please send in printed matter from which I can learn of the resources of your State for wheat-raising. I intend to go to California, to the Red River of the north in the spring to get a large wheat farm. I want to know what the market is for wheat, what the price is, what the best lands, location, soil, production per acre, etc. Any other information you can give me will be a favor to me who wishes to learn of your State with a view of locating there if all things are satisfactory. Yours truly, N. W. ALLEN & SONS.

State Department Agriculture, Sacramento, Cal. There are four or five families here contemplating a removal to California—good, industrious citizens with a capital of \$25,000 to \$30,000 each. Will you please send to my address your last agricultural report by mail, or perhaps your last agricultural brochure, and if possible, send me a few of the best charge plates you have in use and I will return them to you. Yours truly, J. M. WATSON.

State Department Agriculture, Sacramento, Cal. I should like to have any other public documents which offer information to settlers please forward.

PHILADELPHIA, Pa. The Secretary State Board of Agriculture, Sacramento, Cal. Dear Sir: Will you please send me the latest report of your State by mail, or perhaps your last agricultural brochure, and if possible, send me a few of the best charge plates you have in use and I will return them to you. Yours truly, J. M. WATSON.

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QUESTIONS ANSWERED. If it is desirable that our vacant lands should be settled up; if it is desirable that our large tracts of land now held by land monopolists should be broken up and farmed by small farmers; if it is desirable that a diversified agriculture should become possible and profitable in this State by the introduction of manufactures and other industries that bring large classes of consumers of these diversified agricultural products; if, indeed, it is desirable that California should possess a self-sustaining and self-enriching people, then it is necessary that the State take some steps to place before the world correct and reliable information regarding her real resources and advantages. Let somebody or some association be authorized and required to collect such information as is demanded. Let such person or association be furnished with the means to collect and disseminate such information and be held responsible for the faithful performance of the duties thus required of them. We are constantly crying out against the farmers for persisting in the cultivation of wheat at the expense of the sure destruction of their soil, in face of the fact that every farmer understands very well that the only agricultural products in which there is any money in raising are those that have an export demand and value. There is money in raising wheat, and wool, and wine, and some kinds of fruits, because there is an export demand for these products, but there is but very little money in raising products for which there is no export demand and value, but very little money in a diversified agriculture—an agriculture that will preserve the fertility of our soil, that will not consume a diversity of products. The truth is, we are living upon what England consumes. We are sending to England our surplus wheat to get the money to buy our agricultural implements and machinery with—to build our fences and our barns and houses with—to clothe and educate our families with, and we are sending the money that we get from abroad, abroad again for nearly all the necessities of life. Until we stop this, until we bring people here to consume what we raise at home and to make what we need to produce it with, and to clothe ourselves and families with, just so long will be contributing wealth to other people and other States more than to ourselves and to our own State. So long as we support foreign manufacturers and foreign operatives, so long will there be laborers among us out of employment and out of food, and so long will our labor be scarce and our land just what we want it most. Agriculture and mining are today the two great sources of employment for labor, and yet neither of these can give employment to the laborers in the State for more than six months in the year. This state of things brings about an apparent surplus of labor, and seasons of idleness and want to laborers. The remedy is not to be found in reducing the number of laborers, but in enlarging the number of sources of employment. If we had ten times the present number of people in the State there would be less apparent idleness, less discontent and complaint for want of something to do and something to eat than there is now, because then we would be a manufacturing people; then we would be giving employment more constantly; then our wool, our wheat, our fruit and other products would be worked up and consumed at home, and our money would go to pay our own people for labor rather than to pay laborers in the Atlantic States and Europe. As a State we are just what we need, that needs a variety of new industries, and a fresh influx of new workers, both by head and by hand. There is no lack of room—there is no lack of inducement for enterprise or labor, but we are in a sort of indefinable standstill, in which everybody is disposed to complain of everybody else to do something. We have nobody with authority to speak for the natural resources and advantages of the State, and nobody has the means of answering for the State the many inquiries that are constantly being received. Our light is under a bushel.

AGRICULTURAL INTELLIGENCE.

HOME MARKET FOR CHEESE.—Our dairy farmers, says the *Jeffersonian*, are doing well, and seem to be blind to the advantages of their best market. A very low estimate must be placed upon the taste of our citizens in their purchases of cheese. Perhaps, however, their indifference in the home market arises from a disbelief in its importance. Notwithstanding this, it is a source of profit to our dairymen and dairymen are elated or depressed as the news from that source is favorable or otherwise. We have a population capable of consuming all the cheese that is produced in the country. It would be not only conducive to their health, but they are quite able to pay for it. There is considerable foreign cheese imported into our country, and it is sold at a much higher price than is now obtained for our cheese exported. Our people pay high prices for "glit-edged" butter, and they would not hesitate to pay as much for cheese as much better profit than is now obtained for our cheese exported. Our people pay high prices for "glit-edged" butter, and they would not hesitate to pay as much for cheese as much better profit than is now obtained for our cheese exported.

THE TARGET.—On Saturday, February 14th, the Colusa Shooting Club met at their rifle range in full force. The weather was clear and bright, and the wind from the north, which was steady and strong. The conditions of the practice were 200 yards, from the shoulder, standing, any rifle, under Cremonese rules, fifteen rounds to the man. The following are the scores: M. M. Albert, 64; Dr. L. Robinson, 64; M. Sealie, 59; E. W. Cameron, 57; E. W. Kern, 61; J. L. Howard, 60.

THE ENOS BELL.—In response to much inquiry, we are glad to announce that the Enos Bell, which was sold at auction on Saturday, February 14th, at the Colusa Shooting Club, was sold for \$1,500. The bell is a fine specimen of the work of the Enos family, and is a valuable relic of the past.

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OUTDOOR AMUSEMENTS.

ITEMS OF INTEREST TO THE LOVERS OF FIELD SPORTS.

(In this department, as the head interests, we prefer to give the most interesting and profitable communications to the paper concerning such matters should be addressed to the "Outdoor Amusement Department.")

NATIONAL TROTTERING CONGRESS.—This body convened at the Fifth Avenue Hotel, N. Y., on Wednesday, February 10th, for the purpose of discussing the various points of interest to the lovers of the turf. The meeting was called to order by First Vice-President Thorne, but owing to indisposition he soon relinquished the position to Second Vice-President James Grant. There were a number of gentlemen prominent in the management of trotting affairs present. The Secretary and Treasurer's reports were read, and it was apparent that the affairs of the Association, as indicated by the reports, were in a flourishing condition. The Committee on Rules having signified their readiness to report, the Congress listened to the result of their labors with great attention. The Congress voted on the following resolutions: That the Secretary, James Grant, and Treasurer, Edwin Thorne, Millbrook, N. Y.; Second Vice-President, S. K. Dow, Chicago, Ill.; Treasurer, Lewis J. Powers, Springfield, Mass.; Secretary, James Grant, Hartford, Conn.; Eastern District—Burdett Loomis, Hartford, Conn.; Lewis J. Powers, Springfield, Mass.; General Wm. L. Titton, Topeka, Kansas; Atlantic District—George Stages, Philadelphia, Pa.; M. P. Bush, Buffalo, N. Y.; G. W. M. Root, Easton, Pa.; Central District—Charles L. Hunt, St. Louis, Mo.; Jabez W. Fitch, Cleveland, O.; Richard West, Georgetown, Ky.; Western District—M. M. Morse, Louisville, Ky.; J. F. Kinney, Nebraska, City, Neb.; E. H. Broadhead, Milwaukee, Wis.; Pacific District—T. W. Hinckman, San Francisco, Cal.; N. T. Smith, San Francisco; Christopher Green, Sacramento. After deciding to hold the next biennial meeting in New York City, the body dissolved.

BLOODY WORK.—A youthful Nimrod of Altaville went out hunting one day last week, armed with a double-barreled shotgun, loaded with No. 6 shot. He was only a few rods from his house when he started a quail, and the dogs apparently looked at it in a different light, for they soon brought a bay by a huge buck. The boy heard the barking of the dogs, only a short distance from where he was, and he started rapidly as possible in the direction indicated by the noise of the canines, but when within twenty or thirty feet of them he discovered a large deer engaged in a desperate encounter with the dogs. He was so terrified that he ran, and as he ran he saw the deer being wounded by the dogs. He saw the deer being wounded by the dogs. He saw the deer being wounded by the dogs.

GOOD HUNTING.—Fine duck hunting is reported on Butte slough. The slough for miles is reported alive with ducks of all kinds. But the ducks are said to be a little shy from much shooting.

MESSINA QUAIL.—The sportsman of Jefferson City, Mo., have sent for 100 Messina quail, to be distributed in the hunting grounds thereabouts.

THE QUIET HOUR.—(Contributions to this department should be addressed to "The Quiet Hour," Room 100, No. 100, Broadway, New York City.)

THE "TANGLER'S" PARADISE OF CHARADES, ENIGMAS, ETC.

(Contributions to this department should be addressed to "The Quiet Hour," Room 100, No. 100, Broadway, New York City.)

ANSWERS TO FEBRUARY 14th.

570. Alberta, heacon, Saturna, oxyria, limb, enble, nitral.

571. Powhatan, father of Pocahontas.

572. I l a t e r e d

573. I n p a r t e n t

574. P I L O T

575. Out of His Head (Aldrich), Lightning Express (Adams), Lord Bride (Arthur), The Pilot (Cooper), The Pioneer (Cooper), My Sixth in this world for a girl (Dunne), Bumbled Alive (Dunne), Bulah (Evans), 576. Renner Leta's wife.

577. Owen, Peto, enow.

578. Penitence, 579. Penitence, 580. Varsity, 581. Clock, lock, eoch.

582. Necessity is grandmother to good luck.

New Tangles.

My first is in table but not in chair; My second is in man but not in boy; My third is in top but not in fore; My fourth is in two but not in four; My fifth is in four but not in ten; My sixth is the name of a small shell-fish.

595. Enigma, by Amy.

I am composed of 20 letters—the name of an author. My 13, 14, 15, 16 is what everyone dreams but never sees. My 17, 18, 19 is a nickname for a boy. My 20, 21, 22 is a preface to a noted motto. My 23, 24, 25 is a motto. My 26, 27, 28 is a motto. My 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50 is the name of the seasons. My 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100 is a motto.

597. Triple acrostic, by Hattie Heath:

1. A writer; an animal; government; curtailed whole me of a pause; an author. Primals and initials give two noted writers. Can raise a girl's name.

2. A plant; a tree and its fruit; Scripture proper name; the civility in which; some Primals and initials give the name of two distinguished poets. (Citing examples.)

3. Changed headings, by Marius:

To prisoners I bring release; But change my head, and I sometimes please. Again, I sometimes let; I'm angry when my next makes us feel gay. Again, I sometimes let; I'm angry when my next makes us feel gay. Again, I sometimes let; I'm angry when my next makes us feel gay.

Answers to Correspondents and Correct Solutions.

F. M. S.—572, 578, 574, 576, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

POPULAR SCIENCE.

TO HARDEN PLASTER.—It is recommended to add to fresh plaster of Paris from 10 to 20 per cent of powdered marsh-mallow root, to obtain a plaster that will set more quickly and harden more. The materials are mixed dry, when the water may be added to form a paste. The plaster sets in about an hour and becomes sufficiently hard to cut into dovetail-joints and other small articles. A large percentage, over eight per cent, of the marsh-mallow root increases the hardness of the plaster. To hasten the setting a little alum may be added to the mixture.

NEW PROCESS FOR BRONZING.—Professor Botty, who has brought out several new metallurgical and chemical processes of value, offers a new process for bronzing iron and proclain. The article to be coated with bronze is painted with soluble glass and the solution sprinkled over it from a sieve and then covered with the sulphur powder is rubbed off with a brush. The process is simple, and is said to resist heat or washing with alcohol, and takes the burnisher readily. It would seem as if the process of bronzing were a most desirable one for iron-work exposed to the weather.

NEW FORM OF MARINER'S COMPASS.—A new form of mariner's compass has two horizontal hands, resembling the hands of a clock, and a frame to turn round over the entire surface of the compass, and made parts of an electrical circuit. The course of the steamship having been laid, the hands are brought together on either side of this point, leaving only a space of a few degrees between them. This can still free to move in any direction, but if it touches the hands on either side electrical connection is made, and a bell rings in the Captain's cabin, or in any other part of the ship, as desired. By this arrangement the mariner is enabled to see when the course laid down for him is reported by the bell, which rings continuously till the ship's course is corrected.

STONE PLANING MACHINE.—A machine for planing granite and other hard stones has been brought out, promising to prove of value in reducing the cost of preparing building stones. It consists of an oblong frame of iron, supported at the corners, and carrying a movable platform, somewhat after the manner of iron planing machines. The stone is placed on a piece of iron tool holder, and by means of a system of long pulleys and corresponding belts, power may be brought to the tool whatever its position during the work. The block of granite to be planed is placed on a hand-truck and rolled under the machine and raised by means of jack-screws to the proper level for the work. The revolution of the cutting tool planes down the stone at about the pace of the iron planer, and the stone is cut to a number fully equal to hand labor. The tool is fed to the work by hand, one man being sufficient for all the work.

INLAYING WOOD BY COMPRESSION.—A method of producing inlaid wood for ornamental purposes by compression has been recently tried with success. A veneer of some soft wood is laid over a board of hard wood of a contrasting color and the two are firmly glued together and dried. The pieces are then steamed till softened, and a sheet of zinc is placed over the veneer and while the wood is still soft, the whole is passed between heavy rollers. The pressure forces the zinc into the veneer, and the zinc is forced into the wood. The soft veneer swells up through the openings in the zinc plate, and in this manner the pattern is reproduced in relief on the wood. The plate comes off easily and then it is necessary to re-veneer the wood. The hard wood is reached, this method of compressing one wood into another is reported to give a smooth unbroken surface with clearly defined lines between the two woods.

PRESERVATION OF WOOD.—Two new processes for the preservation of wood are reported. In one a boiler is prepared, and in this are placed iron gratings, on which the pieces of wood may be placed, care being taken in loading up the boiler to keep each piece of timber separate from the others. Water is then poured into the boiler and raised to a temperature of 113 Fahr., when the following chemicals are added in these proportions: Sulphate of zinc, 55 kilograms; American potash, 22 kilograms; Potassium permanganate, 22 kilograms; Manganese, 22 to each 55 kilograms of water. When these dissolve, sulphuric acid of 60° in the proportion of 22 kilograms may be slowly added till the mixture is of a dark color. The mixture is then placed in the boiler containing the wood till the wood is covered, when the whole is boiled for three hours. The wood is then taken out and laid on wooden gratings to dry and harden. Wood treated by this process is said to become nearly as hard and able to resist fire successfully, only charring slowly under intense heat. The second process is cheaper and much more simple. Timber is placed in pits and covered with a layer of earth. The timber is then slowly slaked with water. The timber is then left undisturbed for eight days. Wooden sleepers thus treated are reported to become very hard, tough and durable, and retaining all their strength and elasticity.

METEORS AND METEORIC PHENOMENA.

When observers band together to watch every quarter of the sky, and to keep on the lookout through the whole night, the number of meteors that present themselves is very great. In this way it has been ascertained that upward of thirty on an average, which are conspicuous enough to be seen without instruments, come within the view of the observers stationed at one locality. And it is estimated that telescopic meteors must be counted forty or fifty times as numerous as those visible to the naked eye. These results may be obtained from observations made at one station; but when concerted observations are carried on at different stations several other facts of interest come to light. By simultaneous observations at distant stations, it has been discovered that the height of meteors above the surface of the earth usually ranges from one hundred and twenty miles to twenty miles; the average height being about sixty miles; that the direction of their flight is toward the earth, either in a vertical or in a sloping direction; and that their speed in most cases lies between thirty and fifty miles a second. It is also ascertained at the conclusion that visible meteors are phenomena of our own atmosphere; and as the atmosphere reaches its height at most of one hundred and fifty miles, and is therefore but a few miles above the surface of the globe as the earth, it is obvious that the spectators at any one place can see only a very small portion of the meteors which dart about through all parts of this envelope. After this has been proved,