FARM AND FRUIT.

IMPORTANT RESULTS OBTAINED FROM SUBSOIL PLOWING.

Sacramento Valley Fruit Lands—Value of Sunflower Seed—Grasses for Dry Soils—Miscellaneous Items.

The beneficial results to be attained by subsoil plowing received quite an extended consideration by us in these columns some time since. It was then shown that in many parts of the East subsoil plowing and thorough cultivation had resulted in securing good crops, while adjoining fields, treated in the ordinary method—with shallow plowing and imperfect cultivation—had utterly failed in seasons of droughts. An instance was also given where a man in San Joaquin county had found a like result from similar methods, while his neighbors, who had only surface-plowed in preparing their fields, were proportionately slighted by nature in its bounty. The writer, while in the San Joaquin valley last week, made considerable inquiry and investigation with a view to learning the cause of fine grain prospects in some fields, while there was very much less in others, and the result was all in support of the theory above stated.

The importance of this subject may be readily comprehended by all at first sight, but upon reflection it will be seen to be of vast concern to the people of the State, and the very keystone to a new and grand success in such sections as have only had crops at such irregular intervals of seasons as the uncertain rains of winter seemed to permit. If this uncertainty can be overcome, and in its place the fertile lands which have thus far held fast to nearly all their virgin power, because of the uncertainty of rains to make them produce, can be rendered as certain through any new method as they have heretofore been otherwise, it will not only be doubling the productive value of many vast sections in various parts of the State, but in the San Joaquin valley alone will bring into annual succession profitable crops over an empire in extent of territory which has heretofore only given uncertain returns in about one year in four or five. If such a transition as this in the grain-producing status of the State can in any manner be be brought about, it would virtually be regarded as certain evidence of lack of sanity for any person whose interests could be favorably effected by it, not to take the necessary steps and use the required energy to avail themselves of such permanent financial advantages. Unfortunately, so little attention has been paid in California to deep plowing, and especially to subsoiling, that the instances wherein demonstration is possible as to these results are exceedingly rare. A sufficient number of cases, however, can even now be found in scattered localities of the State to establish the theory and fact stated, that by subsoil plowing and thorough cultivation good crops may be rendered generally sure in the dryer and now uncertain sections, and thereby removing the uncertainty now existing from dependence upon favorable winter rains. A convincing example of this fact can now be seen upon the ranch of W. L. Ashe, between Atwater and Merced. Here are several hundred acres in wheat just ripening, which stands nearly as high as the head of a man; very thick upon the ground, and with heads of grain ranging from four to six inches in length. Some heads were found which exceeded the latter figure. This was admitted to be no better ground than other fields about it, and while there is much good grain in the vicinity, there is none that will compare with this. The neighbors are convinced and well understand the reason, and remarked, "It's the way he cultivated the land."

This ground in this case was first plowed to a uniform depth of twelve inches, as summer fallow, and immediately afterwards cross-plowed eight inches deep. In the fall or winter, at sowing time, it was plowed again, but not as deep as the second time, and the wheat very thoroughly put in. The result is as above stated. Now here was combined deep plowing and thorough cultivation, although the plowing was not sufficiently deep to be what is properly termed subsoil plowing.

It is said that the work and seed had cost $5 per acre, when the seeding was completed. This amount, to those who are in the habit of merely scratching over the ground, and call that putting in wheat, would seem an exorbitant outlay; but when three or four fold return is produced upon the same area, and with only the same amount of capital invested in land, the great profit and advantage of the system is at once apparent.

If then the result given above can be obtained from merely deep plowing, and that because the moisture is better retained in dry seasons, or on dry lands, subsoiling to a depth of from fourteen to sixteen inches will render the operation or system still more sure and successful, and substantially solve the problem of overcoming failures from lack of rain. Most of the soil in the San Joaquin valley can be subsoil-plowed with but the least effect, as the earth is loose and can be turned up deep with only light draft of plow. Nearly the entire valley, where not irrigated, suffers by far the majority of seasons for want of rain, and failure of crops result. Other portions of the State also suffer frequent failure from the same cause. Let the fact become established—or rather known, because it is already established—that in subsoil plowing and thorough cultivation these failures and losses of crops can, as a rule, be overcome, and the value of California farms, as well as the wealth from products, will be proportionately increased.

THE SACRAMENTO VALLEY.

The Concord *Sun* of recent date says: Having had occasion to travel through one of the most prolific and beautiful valleys of the State—the Sacramento—we could not help but compare it with our favored county of Contra Costa. From Homestead Station to the flourishing town of Folsom, is one continuous vista of fruit, vine and grain land. Passing through Routier's vineyard and orchard—which we remember ten years ago as being partly cultivated—we find that the Senator has evinced considerable enterprise, and really made it one of the most charming, as well as profitable, pieces of property in that county. Next in view came the enormous vineyard and orchard of 500 acres set out last spring by the Natoma Water and Mining Company. This company has not spared any expense in procuring the finest qualities of grape cuttings from Italy, Germany, Spain and France. The cuttings, with but few exceptions, are growing very finely.

Fruit land in Sacramento county brings as high a price as $100 per acre, and even higher. And yet in our county—Contra Costa—the same quality of land, fully as contiguous to market, can be secured at one-half the price. This may sound strange to the viticulturist. But it is easily explained when we state that Contra Costa has not had its railroad communication many years, and is consequently not so well-known to the outside world as the beautiful valley of Sacramento. We look forward to the day—and a not far distant one, either—when the vine and fruit lands of Contra Costa will bring double their present prices. The vast shipping improvements being built along the Straits of Carquinez, from Port Costa to Martinez, will certainly invite the attention of numerous people to the interior beauties of our county.

MISCELLANEOUS.

The Plumas Grange has, for a few years past, devoted itself to the experimenting of different kinds of grasses, with the object of obtaining some kind that will thrive on the dry soils of portions of the valley, and at the same time will withstand the severity of our winters. Among the varieties now being tested are the evergreen millet, a variety of meadow grass, Japan clover and meadow fessler. Some of these grasses display congeniality to their surroundings, and it is probable that they will prove to be highly valuable. It is the intention of the Grange to have a report prepared and published, showing the results of these experiments as soon as sufficient data therefor can be secured. Such a report will be interesting, and its coming will be awaited with interest. [Sierra Valley Leader.

An Iowa farmer gives these novel directions for raising cabbage seed: Procure a good, sound, firm head, and if it has a long stalk or stem, cut it off close to the head, throw the root aside and plant the head only. This may seem folly and contrary to nature, and I grant that it is contrary to general practice. Dig a hole deep enough to bury the whole head; put in your cabbage-head and cover up and press the earth closely, leaving the top of the head about an inch below the surface. Then take a knife and cut the head in the form of a cross, and leave the result to the growth of the season—being careful, however, to cultivate enough to keep the weeds down, and stake up the stalk to keep the seed from the ground, and you will be sure to have an abundant crop of seed.

Agriculturists claim sunflower seed to be the best egg-producing food known for poultry, keeping them in a thriving condition and largely increasing the production of eggs. Every poultry raiser who tries it will find that the seed is the best food known for glossing the plumage of fowls, and is almost indispensable to those who want to fit their birds for exhibition to the best advantage. The Russian sunflower is easily raised, requires very little care, can be grown in fence corners, or other places difficult to cultivate. Its production of seed is immense, yielding often at the rate of 100 bushels to the acre. It should be planted in hills four feet apart, any time from the 10th of May to the 1st of July. Three quarts of seed will plant an acre.

Mr. Gautier, of near Bear river bridge, brought us in some samples of wheat from his place the other day that measured over five feet in hight. He also brought in a sample of orchard grass, which he has growing on his place. This, from all accounts, is likely to be the crop for the foothills, as it is claimed for it that it produces a good hay, a heavy crop, and once rooted, lives without irrigation, producing a stronger crop with each succeeding spring.—[Placer Herald.

A mixture of 20 parts of hard soap, 40 parts of kerosene and 1 part of fir balsam has been found very effective in destroying the insects which damage the orange tree. Prof. C. V. Riley is the authority. Other valuable plants, notable the vine, might be similarly protected by a spray from an application of the same recipe. It can be diluted at will with water so as not to interfere with the constitution of the plant.

At the recent meeting of the State Horticulturist Society in San Francisco, during the discussion of "Almond Culture in California," A. T. Hatch said he thought that early blooming seedlings best resisted frost and were easier to hull. He recounted his own experiments, and said that he averaged a yearly profit of about $80 an acre, at a bit a pound, and eighty trees to the acre.

The following is recommended for preserving machinery: Take one-half ounce of camphor, dissolve in one pound of melted lard; take off the scum and mix it in as much fine black lead as will give it an iron color. Clean the machinery and smear with this mixture. After twenty-four hours rub clean with a soft linen cloth. It will keep clean for months under ordinary circumstances.

The export of sheep from Canada is now assuming such large proportions that it bids fair to become one of the leading industries of the agriculturist. The numbers of sheep shipped to Europe during the past year were 75,905, worth about $500,000, and to the United States 233,600, worth in round figures $900,000, or altogether a trade of about $1,400,000 per annum.

At a meeting of the Santa Clara Viticultural Association, held recently at San Jose, it was decided to hold a Wine-growers' Convention in that city on the 21st and 22d of August, and an invitation was tendered the State at large to send delegates to attend the same.

Perkins & Co. and James C. Gray are erecting a fruit cannery at Oroville, which is to have a capacity of 5,000 cans per day of ten hours. The machinery has been ordered, and the new firm will soon be ready to make contracts for fruit.

M. Angot finds that the harvest in France for winter wheat is retarded on an average four days when the hight is increased about 360 feet.

The breeders of Jersey red swine have formed an association of which W. H. Morrison, of Elkhorn, Wis., is Secretary.

UNFULFILLED.

Within a poet's heart a song
Throbbed wild and sweet the whole day long;
Yet ere he sang age came and stole
The music of his tuneful soul.

At artist felt the impulse fine
To paint a masterpiece divine;
Yet while he dreamed years passed away;
Death knocked upon his door one day.

A wrapt musician by the sea
Pondered a mighty symphony;
Yet with him in his grave it lies—
Mute are its wondrous harmonies.

O thou who, in thy secret heart,
Dost muse some life-long dream of art,
Be wise to-day! Essay thy might;
Make large with toil the hours of light!

* * * * * *

Lo! o'er the landscape dim and brown
How silently the night comes down.
—[R. Trowbridge, in the Continent.

THE MONKEY TRIBE.—Prof. Bickmore in a recent lecture at the American Museum of Natural History, in New York, on "Insectivore, Chiroptera and Quadrumana," said: The insectivora, or insect eaters, are divided into moles and hedgehogs. The moles have highly developed shoulder-blades, and wide, paddle-like feet for forcing their way through the ground. They have eyes, but these are covered with the soft, furry hair, which extends all over the animal's body. Some pictures of a curious looking flying lemur were shown on the screen, and two stuffed specimens were exhibited. The chiroptera, or bats, are divided into leaf-nosed and fruit-eating species. The vampire bat is a small leaf-nosed creature. Its tongue is rough like that of a cat, so that it can rasp the skin from the flesh of a man and suck his blood. The fruit-eaters are rather large, and have well-developed molar teeth. First among the monkeys, or quadrumana, the lemurs, were mentioned. They crawl on all-fours, and belong to a low order of monkey, looking more like dogs than anything else. Among the monkeys of the old world are the dog-nosed species. Their noses are like those of dogs, and their canine teeth are well developed. These belong to the baboon class. The lion monkey, also a baboon, has a heavy mane, and looks something like an old man wrapped up in a muffler. A picture was shown of a group of these monkeys perched upon the limb of a tree. The picture closely resembled a Democratic caucus in full blast. The cunio, or bearded saki, is a very homely monkey, which keeps up a mournful howling all night in the forests. Another monkey has a nose like a lobster's claw, which grows as the beast grows older, until it finally reaches a resting place on its chin. Among the anthropoids the first to claim attention is the orang-outang. These gentlemen are the forest tramps. They move slowly, and spend much of their time in making beds for themselves of broken limbs. The tshego, from the west coast of Africa, has a habit of walking on his knuckles. He has a mild, intelligent eye, and a well-developed brow. Chimpanzees exhibit affection, and sometimes weep after their keepers. The gorillas are now found only in the region around the Congo river, in Africa, though Hanno found some much further north.

FOREST AND STREAM.

THE QUESTION AND METHOD OF GAME PROTECTION.

The World Champion Wing Shot—The Coming International Rifle Match at Wimbledon—Miscellaneous.

EDS. RECORD UNION: From every quarter of our own and other States complaints are heard of the want of proper game—a demand for the enforcement of those existing, and the declaration is made that violation of the close season is diminishing game to such extent as to approach annihilation. When it is considered that game laws have been enacted to protect game during breeding season, and we are compelled to believe these continuous reports; when from every quarter we hear a decided sentiment expressed by sportsmen against these acts; when we are unable to find among lovers of the gun and sports of the field, a single expression of opposition to game protection; when we find sportsmen's associations existing everywhere, and new ones forming; when we hear of existing game protective associations in every part of our land; of State sportsman's associations and conventions of sportsmen with representatives from every district; when we consider that the sentiment of game protection is so universal and unanimous, it is almost impossible to comprehend why so many violations are committed, or that it is possible that they can be committed without detection. But greatest of all is the wonder as to who the perpetrators are. Every candid, unselfish sportsman should pause and consider whether, with this sentiment so universa against violations, it can be possible for "renegade sportsmen" to destroy game enough during the breeding season to lead to extermination, unless the "renegade" class includes far more than sportsmen are generally willing to admit that it does.

While there is no doubt that the effect of destruction during the breeding season is visible, yet it is difficult to decide that the true cause of diminution has been truly and fully considered. It is a vainglorious boast that "he is not a sportsman who will take game during the close of the season," when the party so asserting will, by every means of which he is capable, seek to take game to any extent whatever in his power, simply for sake of the sport of slaughter. That there exists such an element among sportsmen there is no doubt—an element that no laws will deter or opposing sentiment of society entirely hold in check; whose desire for recreation goes beyond their judgment or feelings of humanity; whose gratification is greater in committing an unlawful and unnecessary act than the pleasure afforded in a privilege granted them.

The second element found among sportsmen is one which, while he advocates the close season, never loses an opportunity for a shot when the chance of exposure is not great. The third is the man who owns a pot-metal gun and a mongrel dog. His love for field sports when the season opens, and for want of something to do, never allows a Sunday or idle day to pass that he does not devote to the slaughter of every game bird he can find or decoy within his ability to kill, and for which he has no proper use.

The number of birds killed during the close season, excepting doves, are very few—for the reasons, first, that there is too great a risk; and, second, because the birds do not congregate in sufficient numbers to make the sport interesting. Yet the number is far too great. If, however, it was one hundred times greater, the effect would not equal that of the superfluous slaughter beyond the wants of those who kill as an accomplishment, or for ambition to excel, and the delusion of pleasure. The killing of inferior animals by man is justified so far as his wants extend. The pursuit of game and its killing is justified to this same extent, and so far as, in its pursuit, man can find health and recreation, it is proper; but beyond this it becomes unjustifiable, unmanly and degrading.

MISCELLANEOUS.

As has been seen by dispatches, the international rifle contest is to finally take place at Wimbledon. The English team got down from their high horse, and adopted permission for the use of the screw-adjusting wind gauge, probably having discovered how utterly untenable and unreasonable was its position, not to say that it savored strongly of a disreputable effort to gain an advantage in conditions, without which it was refusing to meet its adversary. The shooting of the American team at final practice at Creedmoor, as given in dispatches yesterday, shows a record at 800, 900 and 1,000 yards of 84 7-12 out of a possible 100, surpassing British record of last year by five points. The twelve selected to constitute the American team are, in order of merit at last practice shoot: Dolan, S. J. Scott, Rabbeth, Kainer, Butt, Polland, Walter Scott, Paulding, Cish, Van Heusen, Smith and Stewart. Their practice record is, from best information obtainable, 24 points in the lead of the record practice of the British team which they are to meet at Wimbledon.

The recent contests between Dr. Carver and Captain Bogardus has raised the question as to who is in reality entitled to the name of champion wing shot of the world. There can be no question that good marksmanship with a gun of small caliber is evidence of better skill than the same results attained with a gun of larger caliber. Captain Bogardus, after being defeated by Dr. Carver, both using small caliber guns in accordance with established rules, claims that his defeat was owing to having to comply with this rule, and that if allowed to use a gun of larger size he can turn the tables upon his successful competitor. While this is a doubtful proposition as to fact, it is also an ineffective method of holding himself upon a level with Carver, in the minds of sportsmen, as to their relative skill.

An instance of the rapid increase and profit of carp was recently witnessed on the premises of Peters & Milco, near Atwater, in Merced county. Their pond, which is about one hundred and twenty feet square and six feet deep, was constructed about a year and a half ago, and was stocked with five carp in the spring of 1882, for which five dollars each was paid. Upon the water being drawn off this spring it was found that there was nearly 2,000 carp in the pond, and the smallest of them was from seven to eight inches in length. This is a remarkable increase from a plant of only five in a single year.

Everything seems to be getting along very well, says the Grass Valley *Tidings*, at the experimental fish hatchery at Shebley's. Spawn from Modoc county trout will be tried in this hatchery. This reminds us to remark that when the picnic takes place near there, on Wednesday, the 13th instant, it will be interesting for young and old who go to the picnic to look at the hatchery. It may be that some one living near town, seeing how fish are propagated, will establish hatcheries right at home. Many here have the water for ponds for fish breeding.

A clause of the game law passed by the Legislature last winter reads in relation to doves as follows: "Every person who in this State, between the first day of January and the first day of June of each year, hunts, pursues, takes, kills or destroys doves, is guilty of a misdemeanor." Thus it appears that the close season for doves has ended. But it must be remembered that the Act from which the above quotation is made does not go into effect until July 1, 1883, so that it is illegal to shoot doves during the present month.

At the shoot of the California Wing-shooting Club, held recently at San Bruno, Robinson led off, killing every bird, with the use of only one barrel, thus keeping first medal, which he has held for sometime. Knowles was second, killing 10 birds, and winning upon ties shot off with Walsh, who also killed 10. Walsh took third place. The match was for three gold club medals, elegantly mounted, first, second and third prizes, at twelve live pigeons, thirty yards rise, eighty yards fall, ground traps, under Hurlingham rules.

The Carson *Appeal* says that the surface of the water of Washoe lake is a mass of dead fish, that they are piled up along the shore by thousands, and the air is filled with the stench of their decaying bodies. No cause can be assigned for this unless the intense heat of the sun, acting upon the shallow water, made it too warm for them. Most of the fish are perch, catfish and whitefish. Many of the perch weigh a pound and a half.

At the Colusa Club shoot held last Saturday, to contest for an elegant gold medal, in a clay pigeon match, eighteen yards rise, Jas. W. Porter won. The score stood: Porter 15, Crane and Haugh 14 each; Murdock, Basford and Cutler 13 each; Burton and Totten 12 each; Gilmore 11; Jennison and Wilson 10 each; F. Miller 9; Wilbur 8; Bridgeford 7; Radcliffe 5, and De Jarnett 3.

Commissioner Dibble, upon a recent visit to Lake Tahoe, found that parties were violating the law there by catching trout in weirs in the inlets to the lake. By this mode of capture a great part of the spawn is lost, and a ruinous depletion of the finny tribe is made. Adequate means will be taken to prevent further violation of law. Fishing was found to be excellent at the lake.

BITS OF SCIENCE.

Cultivation of the Portuguese oyster is recommended in the French official journal on account of the alleged richness of that bivalve in iodine, bromine and chlorine.

There is reason to believe that the power of the more intractable explosives will soon be made simply motive force—at least some of them, judging from some of Herr Beck's experiments.

Metallic iridium is very hard. It easily cuts or marks steel. It can be cut by a copper disk revolving at a very high velocity, if the surfaces in contact are treated with corundum and oil and the iridium sheets are very thin.

Lescarbault, in observing the late transit of Venus saw, as he thought, a grayish, yellowish fringe all around the planet when it was three-fourths on the sun, and that this phenomenon continued until the entrance, so to speak, was completed.

Dr. Henley and Herr L. Von Frutzschler Falkenstein have made a new compound which burns slowly under ordinary pressure, but develops extraordinary energy when confined. It consists of a mixture of saltpeter, chlorate of potash and a solid hydrocarbon.

Near Tabiana, Italy, the remains of a fossil elephant have been found. The tusks measure 3 2 meters in length and 0 28 meters where they are narrowest. The find has caused quite a sensation, and there will likely be a careful excavation made when the winter is over.

The Volta prize of $6,000 will be awarded by the Academy of Sciences, Paris, in December, 1887, under the decree of June 11, 1882, for the discovery or invention of whatever shall render electricity applicable and economically to one of the following objects: Heat, light, chemical action, mechanical force, the transmission of messages, or the treatment of sick persons.

In the *Journal of the Society of Arts* it is stated that M. Marey has made a communication as to the new process of M. Chas. Petit called "similigravure" for reproducing photographs on metals, so as to print from them in the ordinary way and at the same time surrounded with explanatory type. Two specimens of the proofs obtained—one representing the attitudes of a man walking at the parade step, and the other a white horse leaping—were considered very satisfactory. It was thought, however, by the specialists of the French Academy of Sciences that the process admitted of much improvement.

WOMEN IN JAPAN.

At a recent missionary meeting held at Cleveland, Ohio, Rev. Dr. Harris gave an interesting account of the condition of the women in Japan, and of this address the *Herald* of that city says: The theme was the so-called religious condition of women in Japan. He said that women in that country were far down in all the relations of life. There is no such conception of the marriage tie as there is in America or other Christian countries. Among the lower classes there is no form of matrimony. Among the higher classes there is only saki drinking by the bride and groom and the family, and a feast. No priest gives the contract a religious blessing; it is purely a business affair. All the Japanese husband cares for is that his wife may be a good servant. It is impossible to depict the degraded social condition of women in Japan. He said that in some of the open ports as large a proportion as 60 per cent. of the marriages were annulled by divorce. One often hears the greeting exchanged on the streets of Yokohama, "Have you the same wife you had when I last saw you?" The moral condition of the open ports on this point is much lower than in the interior of the country. It should not be said that there are no good husbands in Japan, but the general feeling is such that wives are required to shave their eyebrows and blacken their teeth, so as not to be attractive to other men after marriage. When they go out with their husbands to the parks or to the theater, they keep a respectful distance behind, and they were very much astonished when the speaker and his wife were seen walking side by side as equals. The native women thought it was scandalous. The causes for divorce are very trivial. A woman can be divorced from her husband because she talks too much. If she is sick for a long time she is divorced, although if her husband is a kind man he will provide her a living. Obedience is the one thing needful in her life, even to yield to a life of shame, if her husband wills it. It is true, however, that new laws have been made, but the old customs are hard to abolish. The new movement in Japan is seeking to relieve women. The women of Japan are eminently religious in their natures. They are mostly Buddhists, and that religion has done a great deal for the woman of Japan. Their condition is much higher than in any other unchristian country. Said Dr. Harris: "I have heard their prayers for help to the unhelping Buddha, and I have thought that in the tenderness of his heart the All-Father would hear and answer them, although in their ignorance they knew not." But Buddhism has done a great deal of harm to women. Its holy men have taught that women are the origin of evil; that they are inferior in intellect and in morals to men, and that they are bad, inevitably bad. The priests would hardly say that this is the teaching of the religion, but it is the general feeling. It is a superstition that if a baby dies in its early infancy it is because of some sin in a previous stage of existence still unatoned for, and that the child is suffering in purgatory for it. A piece of cloth is fastened on four sticks and passers-by are asked to say a prayer for the soul of the baby and at the same time pour a cupful of water in the cloth. When it has become so worn by decay that the water passes through without touching the cloth, the sin is purged away. These teachings are hardly those of Sakyamuni.

MR. JOHN R. PATTERSON, of Evansville, Ind., says: "*Samaritan Nervine* cured my wife of female weakness." Your druggist keeps it.

REDDING'S Russia Salve is an invaluably dressing for inflamed and sore joints. Price, 25 cents.

"BUCHU-PAIBA."—Quick, complete cure, all annoying Kidney and Urinary diseases. $1.

THE best cure for diseases of the nerves, brain and muscles, is Brown's Iron Bitters.

PISCATORIAL.

THE INTERNATIONAL FISHERIES EXHIBITION AT LONDON.

Interesting Particulars and Statistical Information from the "Record-Union's" Special Correspondent.

LONDON, May 24, 1883.

The object of greatest interest to the visitor in London for the next six months will be the great International Fisheries Exhibition. A saunter of a few hours through its multitudinous departments brings forcibly to mind some features of our own Centennial Exposition. This, to be sure, is much more limited in its scope, but in the large number of foreign nations taking part, and the appearance of permanence and durability presented, as well as in point of vastness, the comparison is very striking. The importance of such an exhibition can scarcely be overestimated when one considers either the number of people engaged in this special industry, or the prominent place which fish holds as an article of diet. And these two considerations together are amply sufficient to account for the magnitude of the display. To give in a single letter any proper idea of what may be seen at this exhibition is, of course, quite beyond the range of possibility. There are

SPECIMENS, LIVING OR STUFFED,

Of perhaps a greater variety of the finny tribe than were ever brought to popular notice before, and the aquarium, where so many of these disport themselves in their native element, is naturally much frequented. But the exhibition is chiefly valuable in the illustrations it gives of the different methods of catching, hatching, preserving and cooking fish, and in the opportunity afforded for observing the newest inventions for saving the lives and reducing the perils of "those who go down to the sea in ships" in prosecution of the business of fishing. Well worthy of study, too, are the natural history and fine arts divisions, for most admirably here is the esthetic side of one's nature ministered to, while if one is fond of sentiment he will naturally linger long around the craft in which Grace Darling saved the lives of the people of the Forfarshire. This historic boat is of the Coble type, fitted with four thwarts, very strongly built, and looks good yet for many years of service. About the one solitary oar which remains in it what memories of courage and heroism cluster! But, descending from the sentimental to the practical, what of

THE DISPLAY MADE BY THE UNITED STATES?

It is very creditable, let me say, and compares very favorably with the displays made by other countries, but it is far from being the leading feature of the show, and is not what, with more care and a greater outlay of money, it could have been made. The seaboard States are well represented, and there are some valuable exhibits from the interior.

What interested your correspondent in connection with this International Fisheries Exhibition more than the mere opportunity for sight-seeing it afforded, was the information gleaned from it of the relative extent and value of the fishing interests in the different countries, and of the economic condition of the large number of people who derive their subsistence from this branch of industry. In 1880

THE NUMBER EMPLOYED

In the fishery industries of the United States was 131,426, of whom 101,684 were fishermen and the remainder shoresmen. The fishing fleet consisted of 6,605 vessels, with a tonnage of 208,297 82, and 44,804 boats, and the total amount of capital invested was $37,955,349, distributed as follows: Vessels, $9,357,282; boats, $2,465,393; minor apparatus and outfits, $8,145,261; other capital, including shore property, $17,987,413. The value of the great fisheries of the sea, the great rivers and the lakes was placed at that time at $43,046,053, and that of those in minor inland waters at $1,500,000—in all $44,546,053. The fisheries of the New England States, which are the most important, engage 37,043 men, 2,066 vessels, 14,787 boats, and yield products to the value of $14,370,393. Next in importance to New England are the South Atlantic States, employing 52,418 men, 3,014 vessels, 13,331 boats, and returning products to the value of $9,602,737. Next are the Middle States, employing in the coast fisheries 14,981 men, 1,210 vessels, 8,293 boats, with products to the amount of $8,676,579.

THE PACIFIC STATES AND TERRITORIES

Employ 16,803 men, 56 vessels, 5,547 boats, and show products to the amount of $7,484,750. The fisheries of the Great Lakes employ 5,050 men, 62 vessels and 1,594 boats, with products amounting to $1,784,050, while the products of the Gulf States' fishing interests amount to $545,584, employing 5,131 men, 197 vessels and 1,252 boats. The annual products of the British American sea fisheries are set down at about $20,000,000, an estimate, however, which is entirely too small, as the great cod and seal fisheries of Newfoundland must alone produce nearly that amount. In France 80,875 sailors, manning 22,155 ships and smacks, with a tonnage of 149,297, are employed in fishing, besides which 55,485 riparians (men, women and children) practice fishing on the banks. The total products from the French fisheries, including the sum derived from the sale of oysters, amounts to about $34,000,000 per annum. The annual value of the takes of fish in Norwegian waters is a little over $15,000,000, with from 70,000 to 90,000 persons, or 11 per cent. of the whole population employed in the fisheries, and about 50,000 persons or 7 per cent. in the shipping trade. Sweden, although the people of that country fish with great industry, does not derive from its sea wealth a larger sum than $1,825,000, while the Dutch fisheries must bring

AN ANNUAL INCOME OF FULLY $15,000,000.

Russia derives every year a large sum of money from her sturgeon and sterlet fisheries, the amount being not less than $20,000,000, while the fishing interests of Denmark and Iceland each yield an annual income of 5,500,000 crowns. Great Britain claims to realize about $50,000,000 annually from the fisheries. She has 120,000 persons constantly or occasionally employed in fishing, who, with their dependants, may be taken at 400,000. Notwithstanding this, however, fish is comparatively high-priced here, and we are daily reminded by the papers that one of the problems to be solved by the present exhibition is how this article of food, so nutritious, so palatable, and which nature is providing in such prodigal abundance, may be placed on the tables of the people at a cost that will bring it into common use, a problem which is worthy of consideration, also, in the United States, for, if my memory does not deceive me, the price of fish is as much too high there, relatively, as it is here, and with as little good reason for being so.

THE first real skin cure ever discovered was Dr. Benson's Skin Cure. It cures all rough and scaly skin diseases and makes the skin smooth and healthy. It is an ornament to any lady's toilet.

DO NOT DOUBT OR DESPAIR.—If you are suffering from chills, malaria or bilious disorders, Mason & Pollard's Pills will entirely eradicate the disease and restore you to health. They are the most perfect tonic in existence. Druggists.

THAT bad breath comes from indigestion. Take *Samaritan Nervine*. It stops the cause. $1 50.

MISCELLANEOUS.

A TRIUMPH OF SKILL.

Dr. Price's SPECIAL

FLAVORING EXTRACTS.

Prepared from Select Fruits. That yields the finest Flavor. Have been used for years. Become The Standard Flavoring Extracts. None of Greater Strength. None of such Perfect Purity. Always certain to impart to Cakes, Puddings, Sauces, the natural Flavor of the Fruit.

MANUFACTURED BY

STEELE & PRICE,

Chicago, Ill., and St. Louis, Mo.,

Makers of Lupulin Yeast Gems, Dr. Price's Cream Baking Powder, and Dr. Price's Unique Perfumes.

WE MAKE NO SECOND GRADE GOODS.

SOLD AT WHOLESALE BY

ADAMS & McNEILL, Sacramento

m5 1yisTuThS&w1y

THE Admiration OF THE WORLD.

Mrs. S. A. Allen's WORLD'S Hair Restorer IS PERFECTION!

Public Benefactress. Mrs. S. A. ALLEN has justly earned this title, and thousands are this day rejoicing over a fine head of hair produced by her unequaled preparation for restoring, invigorating, and beautifying the Hair. Her World's Hair Restorer quickly cleanses the scalp, removing Dandruff, and arrests the fall; the hair, if gray, is changed to its natural color, giving it the same vitality and luxurious quantity as in youth.

COMPLIMENTARY. "My hair is now restored to its youthful color; I have not a gray hair left. I am satisfied that the preparation is not a dye, but acts on the secretions. My hair ceases to fall, which is certainly an advantage to me, who was in danger of becoming bald." This is the testimony of all who use Mrs. S. A. ALLEN'S WORLD'S HAIR RESTORER.

"One Bottle did it." That is the expression of many who have had their gray hair restored to its natural color, and their bald spot covered with hair, after using one bottle of MRS. S. A. ALLEN'S WORLD'S HAIR RESTORER. It is not a dye.

DR. WOOD'S LIVER REGULATOR

90 PER CENT. OF ALL DISEASES CAN BE TRACED TO A DISORDERED LIVER.

DR. WOOD'S LIVER REGULATOR, A PURELY VEGETABLE COMPOUND, AFFORDS IMMEDIATE RELIEF from all diseases that arise from this source, such as INDIGESTION, DYSPEPSIA, JAUNDICE, SICK HEADACHE, MALARIA, BILIOUS FEVERS, &c

SOLD BY ALL DRUGGISTS.

a19-2mTuThS

New York.

This is to certify that I am well acquainted with a man 59 years of age, for many years a resident of this city, who has been at times extremely ill, but could not tell from what cause, unless it was worms. He told his attending physician his suspicions, but the physician at once ridiculed the idea, and refused to attend him any longer. His son then mentioned Dr. C. McLane's Vermifuge, and asked him if he would take it; his reply was—I must take something to get relief, or die.

They at once procured a bottle of *Dr. C. McLane's Vermifuge*, and he took one dose. The result was, he passed upwards *of three quarts of worms*, cut up in every form. He got well immediately, and is now enjoying excellent health; and, like the good Samaritan of old, is endeavoring to relieve his unfortunate neighbors. He makes it his business to hunt up and select all cases similar to his own, that may be given over by regular physicians, and induces them to try Dr. C. McLane's Vermifuge. So far he has induced more than twenty persons to take the Vermifuge, and in every case with the most happy results. He is well satisfied that Dr. C. McLane's Vermifuge, prepared by Fleming Bros., Pittsburgh, Pa., is far superior to any other known remedy, and if more generally known would not fail to save many valuable lives. For further particulars inquire of Mrs. Hardie, 114½ Cannon street, New York City.

THE ONLY GENUINE

McLane's Vermifuge!

Is the Dr. C. McLane's Vermifuge,

PREPARED BY

FLEMING BROS., Pittsburgh, Pa.

je21yToTh&wly

Nervous Prostration. Overworked Brains.

Brain worry kills many thousands every year. School children and others have nervous headaches, and their overtasked brains need repair and sedation. Here is prompt relief

DR. C. W. BENSON'S CELERY & CHAMOMILE PILLS. ARE PREPARED EXPRESSLY TO CURE AND WILL CURE HEADACHE OF ALL KINDS NEURALGIA, NERVOUSNESS AND DYSPEPSIA. PRONOUNCED BY PHYSICIANS. Dr. C. W. Benson FAC-SIMILE SIGNATURE ON EVERY BOX.

mr3-1yTuThS&wly

Symptoms and Cure.

SWAYNE'S OINTMENT THE GREAT CURE FOR ITCHING PILES

The symptoms are: Moisture, like perspiration, intense itching, increased by scratching, very distressing, particularly at night; seems as if the pinworms were crawling in and about the rectum; the private parts are sometimes affected. If allowed to continue, very serious results may follow. "SWAYNE'S OINTMENT" is a pleasant, sure cure. Also for Tetter, Itch, Salt Rheum, Scald Head, Erysipelas, Barbers' Itch, Blotches, all scaly, crusty Skin Diseases. Sent by Mail for 50 cents; 3 boxes, $1 25 (in stamps). Address DR. SWAYNE & SON, Philadelphia, Pa. Sold by Druggists.

je2 1yTuThS&wly

SOCIETY BADGES, JEWELS AND CHARMS of every kind, in gold, silver or metal, at NATHAN JOSEPH'S, 641 Clay street, SOLE AGENT IN SAN FRANCISCO for the Universal Badge and Regalia Co. Workmen's badges in solid gold for $1, postage free. Single badges C. O. D. Trade supplied. a7-tfWS

MISCELLANEOUS.

TREAT THE HUMAN MACHINE GENTLY.

NEITHER CONSTIPATION, COLIC, DIARRHEA, DYSENTERY, OR OTHER BOWEL COMPLAINTS, CAN BE CURED BY ABUSING THE DELICATE MACHINERY OF THE SYSTEM WITH FURIOUS PURGATIVES. THE BEST AND SAFEST REMEDY, PARTICULARLY AT THIS SEASON, IS A TEASPOONFUL OF TARRANT'S SELTZER APERIENT, TAKEN IN A GLASS OF WATER, WHICH WILL GENTLY RELIEVE, WHILE TONING AND HEALING THE IRRITATED INTESTINE.

m15-1yTuThS

IMPERIAL EGG FOOD

(Trade Mark.)

WILL MAKE YOUR HENS LAY—IT KEEPS Fowls in best condition, and makes Poultry the most profitable stock on the farm. When the Imperial Egg Food is fed according to directions, sick and drooping chicks will never be seen.

Try it! Beware of Imitations!

THORLEY'S IMPROVED HORSE AND CATTLE FOOD

IS PRONOUNCED BY HORSE AND TURF MEN, stockfeeders and breeders to be the greatest discovery of this nineteenth century with regard to the improved treatment of animals. As with the progress of enlightenment mineral poisons have ceased to be used in the treatment of the human system, so THORLEY'S FOOD supersedes the barbarous mineral compounds, still to some extent in use as so-called condition powders, in treating our domestic animals. Although it has been only some four years since this celebrated Food was first introduced in America, the great sale and unparalleled success that it has met with in all parts of the Union give the proprietors license and boldness to proclaim to the world that the Thorley system of feeding all kinds of stock stands unrivaled in the New World as it does in the Old, and is justly entitled the Great Discovery of the Age, as the thousands of voluntary testimonials received by the Company fully corroborate. Sold by the Trade generally. Wholesale by HALL, UHBS & CO., Sacramento, or G. C. WICKSON & CO., No 8 New Montgomery street, San Francisco.

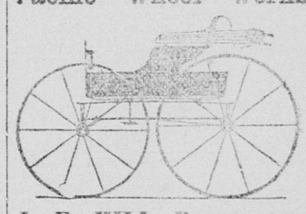
je7-5plmTuThS&w1m

A Select Overland Party

WILL LEAVE SAN FRANCISCO ON JUNE 23d for all points East. For full particulars call on or address C. W. WADHAMS, 32 Montgomery street, office of the Great Burlington Route.

je11,12,14,16*

Pacific Wheel Works.



J. F. HILL, PROPRIETOR,

MANUFACTURER OF CARRIAGE AND Wagon Wheels, Gears, etc. The Trade furnished at lowest prices. Best Carriages and Wagons of all kinds made promptly to order and on hand. m26 eod1yTTh&S&w8tf

HUNTER'S SIFTER

12