# WILLAMETTE FARMER.

## MISCELLANEOUS.

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#### Cotton.

[From Pacific Rural Press.]

There is scarcely any agricultural product in which the readers of the Passs have manifested more interest during the present season than in cotton. Being aware of this we shall continue to lay before them such information on the subject as we are able to obtain. It is essential that the people of California familiarize themselves with the manufacturing and commercial aspects of this important product, as well as to learn how to grow it. We therefore give the following digest of the Departmental report of the cotton crop of 1874. It will be well for the California cotton grower to note, in reading this report, where allusion is made to the condition of the crop in June, with the statement that "vigiance, stimulated by fears of utter failure kept the fields entirely clear of or utter lattice kept the ficial entirely clear of grass," etc., for though the crop here is not liable to suffer from floods, it will probaby pass ihrough other trials or succumb to them, if the owners are not alike watchful and vigilant. Following is the digest of the report referred to:

"The cotton product of 1874, as estimated by the correspondents of the Department of Agriculture, somewhat exceeds the ee and a half millions of bales. The yield per acre is re-Agriculture, somewhat exceeds three and a ball millions of bales. The yield per acre is re-poted less than in 1873 in most of the States. The weather for ripening and gathering the top crop has been very favorable. The reports are nearly unanimous in stating that the propor-tion of lint to seed is large. The percentages of last year's aggregate of bales in the princi-ral courter States and the princiof last year's aggregate of bales in the princi-pal cotton States are as follows: Virginia, 89; North Carolina, 89; South Carolina, 92; Geor-gia, 93; Florida, 100; Alabama, 95; Missis-sippi, 90; Louisiana, 85; Texas, 90; Arkansas, 60; Tennessee, 57. This result corresponds very closely with the indications of the monthly statements of condition made by the Department

The October statement, which has been mis-The October statement, which has been mis-interpreted, or misrepresented, as indicating 3,000,000 bales or less, makes the average for 10 cotton States, 71 per cent. of normal con-dition, or an impairment of 29 per cent, from all causes, sgainst 79 per cent, last year. So far as condition in October indicates final results in bales, the proportion would be: As 79 is to 71 so is the aggregate yield of last to that of the present season. This would make, within a fraction, 3,748,000 bales on the same acreage: but on an area 10 per cent, less it within a fraction, 3, 43,000 bites on the same acreage; but on an area 10 per cent, less it would mean 3 373,000, or with the outlying area, fully 3,400,000. The fine season for ripening and gathering during the last two months accounts for the slight increase in the final returns, and renders the accuracy of judg-ment in the two returns almost absolutely

As to the necessity that all the monthly reports of condition throughout the growing season should be identical in their procentages, it is an absurdity and an impossibility, which no man of since would suggest, as there must ever he a constant warfare between the vital and destroying forces of nature, the current results of which it is the business of our cor-

respondents to report from month to month. The statement of condition, (100 representing normal condition of healthy development, above which extraordinary vigor and growth may sometimes be written, while all impairmay sometimes be written, while all impair-ment of vitality or reduction of healthful growth are represented by lower figures), dur-ing the growing season of 1874, has been reported as follows, the figures being in each case an average, for the State named, of the county percentage of normal condition, by the side of which are placed similar State aver-case for 1973. ages for 1873:

STATES .	June.		July,		August.		Sept.		October.	
	1873	1874	1873	1874	1878	1874	1873	1874	1873	1674
N. C	85		91	102		25	95	87	88	8
8. C	BH	81	82 94	88	87	97	86	86	80 82	8
Georgia.	04 102			91 96	95 103	94	90 85	177	07	8
Florida	93		35		91	20	85	81	76	70
Alabama Miss	92		83	87	88	89	82	74	75	
L's	94	70			86	83	80	62	75	65
Texas	80		78			105		63	80	70
Arkansas			106		93	87	93	47	83	70 52 50
Tenn	90	85	96		95	83	91	62	90	50

ported lower than in the same period of 1873 North Carolina. Louisians, which suffered most by floods, made the lowest average; Mississippi next; Georgia, South Carolina and Alabama coming next in order. Saturating rains, caus-ing overflows of every spring-branch as well as larger streams, left cotton more unthrify, irregular, and stunted in appearance than years at the early stage of its growth. The writer of this visited most of the cotton States. The and can testify to the reliability of the first and can testify to the reliability of the first report. After the rains came exceptionally fine weather; stands were perfected by replanting; the plants took root more firmly in the warm soil; growth became rapid; and vigilance stim-ulated by recent fears of utter failure kept the field unusually clear of grass, so the July returns everywhere indicated improvement, as those of the previous year had shown decline of condition. A comparison of the two years in July shows higher condition in 1874 in North Carolina, South Carolina, Alabama, Mississippi and Texas. In August a record of continued improvement was made in all the States except North Carolina, Alabama, Arkan-mas and Tennessee, deterioration being notice-States except North Carolins, Alabama, Arkan-mas and Tennessee, deterioration being notice-able in the latter two. At this point in the comparison with 1873, a d cline commences in the condition of cotton of the present season, though it is mainly seen in Arkansas and Tennessee, very alightly in Georgia, Florida, Alabama, and Louisiana, while in Bouth Caro-lina and Texas a higher condition is marked then in Anomat Lat year. tins and Texas a higher condition is marked than in August last year. In September this slight difference is evi-denced, especially by the low returns of Tennessee, Arkansas, Louisiana and Texas, resulting from drought and other causes which would have made still greater reduction of pro-duct but for the fact that losses from the cater-pillar were far less than in 1873. In October there appears a slight improvement in Georgia, Florida, Texas, Arkansas and Tennesses; small reduction in the Carolinas and Alabama; and in Mississippi and Louisians no change is in Mississippi and Loui iana no change is indicated. The general average for this month

## The New Homestead Plan.

[FromPacific Rural Press.] We are requested to call the attention of Eastern editors and readers to the following "Cali ornia Letter" from the Corresponding Secretary of the State Grange Committee on

Secretary of the State Grange Committee on Immigration. The explanations following are of interest to readers at home and abroad: "California is now attracting about one thousand peuple a week to her beautiful val-leys, who are trying to escape from the rough climate of their childhood. Many desire to make new homes in a lan 1 where they can enjoy perpetual summer and have their fruit, and joy perpetual summer and have their fruit, and flower gardens always in bloom. The rush to-ward the Pacific is quite as great now as it was in early times, when those who came expected to accumulate a fortune from our golden sands. and return to their native homes to enjoy their suddenly acquired fortunes and spend the re-mainder of their days in luxury. At that time maiuder of their days in luxury. At that time no one thought of residing permanently in this in accessible territory, where the only exports for generations had been hides and tallow. Wild cattle roamed at will, through the valleys and r-ndered it unsafe for the ped-strian. They sold at a dollar a head, the land thrown in hardly worth mentioning. This was the con-dition of our country when Americans were first stract-d to her shores. Bread had to be imported at great expense, until some ind-mitable Yankee, experimented with the cereals and d-monstrated that even the hills and mountains would bring forth

the hills and mountains would bring forth abundantly with little or no attention from th forth busbanding with fills of no attention the fills of the busbanding of the set of the United States combined. It is estimated that we will ship about \$40. 000,000 worth this year at last year's prices. Only about one twentish of our arable land is in cultivation, yet we surprise the world with our wonderful surplus. When properly popu-lated who can estimate the value of our productions?

Wheat, barley, and wild oats are used for hay in place of timothy, red top and other per-

In y in place of timothy, red top and other per-ennial grasses, reducing the average yield per acre as indicated by those who write on this subject from statistics instead of observation. We harvest more than one-fourth of all the barley produced in the United States. This crop yields well, and requires very little labor or attention especially where allowed to volun-ther from year to year bacond on all end teer from year to year, hogged off, and con-verted into pork worth five cents a pound on foot.

foot. About twenty years ago a young Ohio shep-herd started for this coast with a few hundred sheep, and although laughed at by some, and pitied by others who regarded him as insane, he tradged along after his little flock and ar-rived in due time with three or four hundred, at his destination. That young man still in his prime has the activity of man still in his prime has the satisfaction of seeing California surpass Ohio in his chosen pursuit, and yield about one-third of all the wool produced in the Unit-d States. After supplying the factories of the Pacific coast this year, we expect to export about 36,000,000 pounds. More than three-fourths of the wine pro-

duced in the United States is manufactured in the State of California, and the people of Santa Barbara have the lirgest vine in the world, more than a foot in diameter, covering a trellis 60 by 72 fe-t, and yielding annually from four to six tons o' grapes. Immigration has been retarded in consequence

Immigration has been retarded in consequence of the fact that about one-twentieth of the land in the State, including many of our most de-lightful valleys, are owned by private parties under Mexican grants, called ranchos, contain-ing from one to eleven square leagues, former-ly of nominal value and now in the market at from two to ten dollars per acre. Many of these charming little valleys are ad-mirably adapted to colonizing and dairving

Many of these charming little valleys are ad-mirably sdapted to colonizing and dairying under the factory system, where it is desirable to prolong the season to ten months by soiling with green corn fodder, sorghum, beets and squashes, each of which may be made to yield from 25 to 40 tons per scre.

A New Homestead Plan. Those vast ranchos often containing 40,000 acress can only be purchased by colonies or companies in consequence of the large amount of capital required. A homestead association tormed in October last has located in this county on Lompoe (Lompoke) rancho in the ertile valley of Santa Ynez near Point Concep-

tion. We are to pay \$500,000 in ten annual instal-ments for about 47,000, acres of land, the valley portion of which has been carefully surveyed into 5, 10, 20, 40 and 80 acre lots and sold to he high t bidder, members of the association having the preference, for which the company has already realized about \$700,000 and have three-fourths of the raucho remaining unsold. A town site was selected in the valley and 640 acres cut into house lots, one-tenth of which brought about \$70,000 under the hammer. With proper management it is expected that the town lots alone will self for enough to pay for the whole rancho so that the agricultural stock-holder will ultimately get his farm for his descent the stock of the stock of the form arising from the sale of town lots has, by reso-lution of the stockholders, been set apart as an endowment fund likely to amount to \$100,000 which is to be used for the maintainance of an

#### Economic Use of Fuel.

The following interesting summary is from an address recently delivered before the Royal School of Mines, at Berlin, by G. F. Becker : School of Mines, at Berlin, by G. F. Becker: The progress in the economical consumption of fuel in the last fifty years has been enor-mous, and has been effected in great part by metallurgists; and here again we find the cientific men taking the lead. In the econ-omical application of the heat developed by fuel, the Bessemer process is enormously effec-tive, not more than ten pounds of coal being requisite for the /production of a hundred weight of steel from pig iron by this method, while in the older process, still in use for fine qualities of steel, two hundred and fifty pounds are needed. Siemens, by making the heat are needed. Siemens, by making the heat which would escape through the chimney of an ordinary furnace warm the fuel and the air becessary to combustion, obtains an economy of two-thirds the weight of fuel. It was Faber du Faur, an accomplished Bavarian metallurgist, who first made practical use of the gases which formerly escaped in immense quantities from the tops of blast furnaces and the enorfrom the tops of blast furnaces and the enor-mous blast engines, the hoisting engines, pumps and bot blast stores, even the roasting kilns of such establishments now-a-days re-quire no fuel except this long-neglected waste product. quire no fuel except tons long-neglectcu wante product. Bischof, another German engineer and metallulgical author was the first to pro-duce gas artificially for smelting purposes, and this was certainly one of the greatest advances ever made in our art. By first turning it into gas, fuel can be much more perfectly consumed than in the solid form, and hence can be made than in the solid form, and hence can be made to give us, as in the Siemens furnace, in which only gas is used, a much higher temperature than is practically attained by the combusion of coal in the ordinary way, but perhaps the greatest advantage of gas is that substances, in general scarcely regarded as fuel at all, can be employed for the production of gas with the most brilliant results, a matter of the greates importance, especially in a region destitute of true coal, like California. Lundin, a noted and thoroughly educated Swedish metallurgist, has taught us how to produce gas from wet saw-dust, entirely without preparation, of such power that wrought iron may be melted with it, and the great difficulty is to find any mate-rial infusible enough to snewer as a lining in the furnaces where it is consumed. You will the furnaces where it is consumed. You will receive some idea of the importance of these improvements from the fact that the «conomy

in fuel effected in Eugland alone in the year 1872, as compared with 1871, by the progress made in the introduction of more perfect ap-paratus, represented more than four millions of tons of coal.

#### Remarkable Tree Growth in San Bernardino.

We give the following from the Santa Bar-bara Guardian of December 12, 1874: "We are not going to exaggerate. We went into Dr. Barton's champion nursery with a pole in one hand and a tape in the other. We made the measurements; can youch for their correctness; and invite the skeptical to go and satisfy them-elves, that we simply give the bare facts. In which have grown from bud since last spring, nine feet seven inches high each and three inches in circumferance. And yet those trees have been "clipped" off over two feet of "top" each. In the orange nursery we measured seveach. In the orange nursery we measured sev-eral trees over five feet high and three inches in circumference, each. And, in general vigor and luxuriance of limb, we know those trees are unequaled for their age. Fig trees budded on other fig stocks last March show an astonon other ng stocks last March show an aston-i-hing, nay, incredible growth. Scores of them are each over six feet high, with splendid yield of figs, and good figs too. The two year old fig trees average about nine feet in hight, and ten and a half inches in circumference. lanted fro m six inch cuttings. Slips planted ast March have borne excellent figs-we tasted ast March have borne excellent hgs-we tasted them-and average probably about five feet six inches in hight and three inches in circum-ference. These from eight inch cuttings. Several are over seven feet in hight. Pear trees are of this year's growth, many of them seven feet high, each. Almond buds grafted on yearling peaches have since last spring pro-duced trees many of which are each over six inches in circumference, with from seven to ten strong limbs in proportion. Hundreds of almond trees from seed last spring are each over eight fact high and about three and a half inches in circumference. There are 2,500 of these splendid trees in all. We were shown a peach budded on another peach last spring.

#### Geological Puzzle.

Prof. R. Weiser, of Georgetown, Colorado. contributes the following to the Journal of Science and Arts: Geologists have been not a little perplexed with the frozen rocks found in some of our silver mines in Clear Creek county. some of our silver mines in their trees to daily. Colorado. I will first give a statement of the facts in the case, and then a theory for their explanation. There is a silver mine high up on McCiellan mountain called the Stevens mine. The altitude of this mine is 12,500 feet. At the depth of from 60 to 200 feet, the crevice matter, consisting of silica, calcite and one together will rocks. ore, together with the surrounding wall-rocks, is found to be in a solid, frozen mass. Mc-Clellan mountain is one of the highest eastern spurs of the Snowy range; it has the form of a horseshoe, with a bold escarpment of felds-pathic rock, near 2,000 feet high, which in some places is nearly perpendicular. The Ste-vens mine is situated in the southwestern bed vens mine is situated in the southweatern bed of the great horseshoe; it opens from the north-western. A tunnel is driven into the mountain on the lode, where the rock is almost perpen-dicular. Nothing unusual occurred until a distance of some 80 or 90 feet was made; and then the frozen territory was reached, and it has continued for over 200 feet. There are no whole frozen territory is surrounded by hard, massive rock, and the lode itself is as hard and solid as the rock. The miners being unable to excavate the frozen material by pick unable to extra the force in a transformed by blue or drill, to get out the ore, (for it is a rich lode, running argentiferous galena from 5 to 1,200 ounces to the ton), found the only way was to kindle a large wood fire at night against the back end of the tunnel, and thus thaw the frozen material, and in the morning take out the disintegrated ore. This has been the mode of mining for more than two years. The tunnel is over 200 feet deep, and there is n , diminution of the frost; it seems to be rather increas ing. There is, so far as we can see, no open-ing or channel through which the frost could possibly have reached such a depth from the surface. There are other mines in the same vicinity in a like frozen state.

From what we know of the depth to which frost usually penetrates into the earth, it does not appear probable that it could have reached the depth of 200 feet through the solid rock in the depth of 200 feet through the solid rock in the Stevens mine, nor even through the crevice matter of the lode, which as we have stated, is as hard as the rock itself. The idea, then, of the frost reaching such a depth from the out-side, being utterly untenable, I can do no other way than to fall back upon the Glacial era of the Quaternary. Evidences of the Glacial period are found all over the Rocky mountains. Just above the Stevens mine there are the sust above the Stevens mine there are the remains of a moraine nearly a mile long, and half a mile wide. The debris of this moraine consists of small square and angular stones, clearly showing that they have not come from any great distance. And just over the range, on the Pacific slope, there are the remains of the largest moraine I have ever seen, consist-ing of fields bould be hard are so immense size. ing of field-pathic boulders of immense size I conclude, therefore, that it was during that period of intense cold that the frost penetrated so far down into these rocks, and that it has been there ever since, and bids fair to remain for a long time to come.

#### Cutting and Pickling Pork.

L. W. Babbitt, of Council Bluffs, Iowa, in a communication to the Western Rural, says the first essential in pickling pork is a good, sweet bar el-not a molasses barrel, but a new barrel made from well-seasoned, white oak staves, without any sap in them. If there is any sap in the staves the brine will leak through, and

in the staves the brine will leak through, and the pork will be spoiled with rast. Good salt is another requisite for pickling pork. When the hogs are killed and the flesh per-fectly cold, lay the hog on his side and cut straight down the center of the back until the knife strikes the bone. Then turn him on his back and cut through the ribs close to the back-bone, so as to meet the cut made from the other side. Cut off the head and your pig will be in halves; cut the leaf lard from the ribs; cut off the shoulder and ham; cut out all the leam meat from the side; th-n cut the side the lean meat from the side; then cut the side in strips about three inches wide, cutting across from back to belly. When you have your sides all cat in this way, take your barrel and cover the bottom three-fourths of an inch deep with salt; then take your pieces of pork and set them on edge, the skin next to the barrel, mak-ing the circle smaller and smaller, until you have a perfect layer, and as close together as have a perfect layer, and as close together as you can well press each piece with the hand; then fill all open spaces with salt. Then, with a square-ended stick, or maul, pound the pork down until it is smooth on the top. Then cover with salt about for-eighths of an inch deep. Then proceed with another bounds peach budded on another peach last spring, which has grown from the ground, to the in-credible hight of eight feet and two inches, and cover with salt about five-eighths of an inch deep. Then proceed with another layer as before, and so on till the barrel is filled to within three or four inches of the top. Then make a brine as strong as can be made with salt and boiling aoft water; skim the brine and let it cool. When cold pour it on the meat until the barrel is filled to within two inches of the top. Bot a bord with the dist the inches of inclut the barrel is inled to within two indees of the top. Put a board, cut to fit the inside of the barrel, on top of the pork, and lay upon it a rock weighing about forty pounds. Keep the barrel in a cool place, if you have one; if not, keep it a lmoat anywhere out of the sun, and you will have good pickled pork as long as you keep it completely covered with brine. I have neared tost any mork ont no in this way and I never lost any pork put up in this way, and I have kept it in cellars, on the first floor and in the garret.

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Remittances of money, made by individual in-ventors to the Government, sometimes misventors to the Government, sometimes mis-carry, and it has repeatedly happened that applicants have not only lost their money but their inventions also, from this cause and consequent delay. We hold ourselves re-sponsible for all fees entrusted to our agency. The principal portion of the patent business of this cause that been done and is still being

The principal portion of the patent business of this coast has been done, and is still being done, through our agency. We are familiar with, and have full records, of all former with, and have full records, of all former cases, and can more directly judge of the value and patentability of inventions discov-ered here than any other agents. Situated so remote from the seat of government, delays are even more dangerous to the invent-ors of the Pacific Coast than to applicants in the Eastern States. Valuable natents may be

ors of the Pacine Coast than to applicants in the Eastern States. Valuable patents may be lost by the extra time consumed in transmit-ting specifications from Eastern agencies back to this coast for the signature of the inventor.

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IMPROVEMENT IN MAP MAXING.—Lloyd, the famous map man, who made all the maps for General Grant and the Union army, has in-vented a way of getting a relief plate from steel so as to print a map 40250 inches in size on a fast working powe press. This will so much cheapen the price of map-maknig as to enable him to furnish an unmounted map of the above size on bank note paper, plain and unvarnished for 10 cants, or 25 cents colored and varnished.

Entaune dried and out in alips make very ng belt lasin

which is to be used for the maintainance of an agricultural college and experimental farm. Another fund, which will probably amount to \$30,000 has been provided, for the erection of a modern, el-gant, commodius, substantial public school building quite as good as people gener-ally enjoy at the cast after the labor of genera-tions.

Thus, in a week we have arranged for one of Thus, in a week we have arranged for one of the most liberal, enterprising, educational, tem-perance towns that can be desired by the most re-fined and fastidious, where they may rear and educate their families and where the snares and

fined and fastidious, where they may rear and educate their families and where the snares and vices of the dram shop will never endanger the habits and morals of their children. Instead of paying two or three hundred dol-lars per acre for land near the town in valleys already settled the immigrant can join with others, purchase a rancho in an unsettled valley at five or ten dollars per acre, start a new town in harmony with the most advanced principles of modern society, divide and settle the valley lands and dispose of the remainder to the grazier, and in this manner with a small capital secure social advantages that are usually en-joyed alone by the affuent. Already the people of Los Angeles have formed a company and are about to subdivide one or more of their choicest ranchos, and the same thing will be repeated here until these obsvines, become the foral gardens of hundreds of thousands who fiee from their frozen homes to dwell where they can enjoy the vise, fig. apple, dive, almond, and the orange in a fairy land where December is as pleasant as May. At the last annual meeting of our State orange a Committee on Immigration was ap-pointed and organized for the purpose of alding those who desire our assistance in selecting and securing homes. Bersons writing letters of inquiry should be careful to give their name and postoffice ad-dress. Barts Barbars, Cal.

dress. Santa Barbars, Cal.

Tan Brooklyn tower of the East river Brook-lyn bridge was completed on the 16th of December. Its total hight is 368 feet 48 feet higher than Bunker Hill monument. It pre-sents a very imposing appearance; we hope it will not prove a tower of folly.

strong and vigorous, too. Of the two years' walnut trees many of them are each over 13 walnut trees many of them are taken over to feet high and about ten inches in circumfer-ence. This year alone, hundreds of them av-erage 11 feet six inches in hight. There are about 4.000 in the nursery. We have not about 4.000 in the nursery. We have space to notice the remaining varieties in tail, but we can honestly say with Baillie Sampson, that their general growth is prodi-gious. Alt gether, we doubt if there is a nurs-ery in Southern California can inake such a splendid showing, by rule and tape.

The Mysteries of the Human Throat.

Dr. Frederick Fieber, of Vienna, like the little boy with his drum, not content with en-joying the melody of Madam Pauline Lucca, has made a close scrutiny of the throat whence

nitie boy with his dram, not content with en-joying the melody of Madam Pauline Lucca, has made a close scrutiny of the throat whence the sweet sounds issue, and publishes the re-sult of his investigations. The mechanical apparatus which is the instrument of the men-tal faculty, appears, in Madame Lucca's case, to be beautifully perfect, the result to some er-tent, perhaps of congenital fitness,<sup>8</sup> but also doubtless, partly of the scientific training to which the artiste has been subjected in early youth. Examined under the laryngoscope, the larynt appears small and well shaped, its ser-eral parts being marvelously developed and perfect. The true strings are pare snow white and posess none of the buish tinge common among women. Although shorter than usual among vocalists they are stronger in proportion and amply provided with muscle. When at rest they are partially screened by the false strings; but Dr. Feber, who watched Madame Lucca's throat through his instrument whilst else was struck, they displayed themselves in their full breadth and strength. The aid given by a suitable form of mouth to the production of vocal music is a povel and interesting point brought out by Dr. Fieber. On being admitted to a view of the artiste's mouth he was at once struck with the spaciousness and symmetry of its hollow, the otherwise perfect symmetry being impaired only by the absence of a tonall, which has been removed, as well as with the vigor with which every tone produced raised the "mill" of he palate. Dr. Freber is of opinion that the atarge measure for the wonderful power Madame Lucce appearsately. The sound waves are natu-rally strengthesed in so favorably shaped a space, while the muscles of the palate appeared to have agouired exceptional strength and phi-chellity by long practice.

DRATHS FROM PARENE.- Accounts from Asia Minor show that distress from the famine is in-creasing, and that many deaths occur daily.

TERNIBLE EXPLOSION. -- Two miners were in-stantly killed in the Satro tunnel on the 30th ult., and a number of others seriously injured -- one fatally. The accident was of quite a sin-gular nature, and should be studied and borne in mind by all persons using nitro-glycerine: It happened at the time of changing shifts, and a blast was about to be exploded in the face, or header, of the tunnel. The men retreated back about aix hundred feat, where the battery nearcor, or the tunnel. The men retreated back about six hundred feet, where the battery used in exploding blasts was situated. Several boxes of giaut powder had been left near the battery, and when the blast in the header was touched off, the powder near the battery also exploded, by what means is not fully under-stood. stood.

CHIMENE FIAN HATCHING.—A curious mode of Bub-instching is said to be followed in China. Having collected the necessary spawn from the water's edge, the fishermen place a certain quantity in an empty hen's egg, which is sealed up with wax and put under the sitting hen. After some days they break the egg, and empty the fry into water well warmed by the sun, and here nurse them until they are sufficiently strong to be turned into a lake or river.

THE MAGIC LANTERN IN DISEASE .- Dr. Bal THE MAGIO LAWFERS IN DISEASE. - Dr. Bal-mano, a London surgeon, has successfully ap-phied the magic lantern to the study of diseases of the skin. A transporent photograph of the skin is taken and then placed is a magic lantern. A strong hydro-oxygen light casts the picture enlarged on a white sheet, and in this way the smallest details are brought out with astonishing minuteness.

Hor Warms.-The water succuntered in the main east drift of the 9000-foot level of the Im-perial mine, is the hottest on the Comstock. The temperature, carefully noted, was found to be 150% degrees.

#### Engravings.

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