An Improved Skating Chair.
The exercise of skating has within a few years become very popular in this latitude, and perhaps deservedly so ; at least it is "the rage" during the frozen months, and has partially usurped the place of the old-fashioned sleighing parties as a recreation for out-of-doors. It may be it is too violent for some, and that the practice necessary to perfection entails many a hard knock, and therefore the inventor, whose device is exhibited in the accompanying engraving, has designed a contrivance which shall be an assistance to the skate learner, and a help to those whose age or weakness prohibits the practice of this graceful but laborious art.
As may be seen it consists simply of a pair of magnified skate irons braced together in the form of a cutter or sled, and provided with devices for securing an ordinary chair upoo them. The legs of the chair rest in pivoted sockets attached to the skate irons, the rear ones being adjustable by means of longitudinal slots in the runners and secured by thumb or other nuts. To the back of the chair is attached a guiding bar supported by arms. This contrivance may be secured in any desirable manner, so as to be detached as required. Of course any fanciful form may be employed to give grace and beauty to the contrivance.

The advantages of this device are to be seen in the fact that the runners may be either smooth and without engaging edges, as the ordinary sled yunners, or may be bona fide skate irons, capable of adhering to the glassy surface. For the conveyance of children, feeble persons, or ladies, it may be used either as a drawn sled or a pushed chair, and for those just learning to skate it affords a certain support and guide. For the latter purpose it will be, we think, invaluable, diminishing the risks and adding to the confidence of learners.

The patent is dated March 5, 1867, granted to Alexander Adamson, 506 Ninth street, Washington, D. C., whom ad dress for information. Rights for sale

## Champagne Country.

Robert Tomes, an American resident at Rheims-pronounced Rans-for sometime, has written a very instructive and entertaining book on the champagne growth, manufacture, and trade of that great wine-producing province. And that is not all. He cautions the public against the use of the most pop ular brands and tells them how to select a good wine, and how to drink it. It is full of useful hints to champagne drinkers. We copy as follows
" The champagne which explodes the loudest and flows out the frothiest, is like a great many other things in this world of sound and show, by no means the best. It is, in fact, a proof of its inferiority. Good wine absorbs largely the carbonic acid gas generated in the course of its manufacture. In bad wine the gas, instead of being absorbed, accumulates in the vacant space above the liquid, and thus, when the bottle is opened, the cork explodes with great violence, fol lowed by a cataract of froth. When this escapes the wine remains comparatively flat. In good wine, on the other hand the cork may require a great effort to draw, and when drawn there may be little or no froth, but the liquid will be seen to parkle full with those minute gems of brightness tossed up and down by the juggling spirit of the ethereal element The explosive force and effervescence of poor champagne great as they may be, soon vanish like those of soda water but the sparkle of good wine will continue, even if uncorked for twenty-four hours."

## The Hoosac Tunnel Disaster.

From the Troy Times we gather the following particular respecting the terrible accident at the central shaft of the Hoosac Tunnel on the 19th of October, which resulted in the oss of thirteen lives.
The central shaft is located at a point equidistant from the two portals of the tunnel, in a valley on the summit of Hoosac mountain and is in the shape of an ellipse, designed primarily to enable the work to be carried on from additional faces in the center of the tunnel, and secondarily, when the great bore is completed, to admit fresh air and light into the work. The distance from the opening of the shaft to the bed of the tunnel below is 1,040 feet, about 700 feet of which have al ready been sunk. Arranged around the mouth of the shaft were a series of buildings, consisting of an office, machine and blacksmith shop and sawmill, and also tanks wherein naphtha was confined and manufactured into gas for the'pur pose of illuminating the work below. Timbers, with plat forms sixty feet apart, were placed in upright positions around the shaft from top to bottom, and within these a bucket, sup ported by wire rope, ascended and descended the slaft as oc casion required, bringing up the debris from below and carry ing the operatives up or down as each relief went on or cam off duty.
The naphtha gas was introduced on Friday last-the day
before the accident-for the first time. The contractors ha made, as they supposed, every preparation to guard against any disaster from theignition of the dangerous material ; but on Saturday at 4 o'clock a lighted candle, standing about twenty feet from the tank, communicated a flame to the gase ous substance, and in a moment almost, the tanks, the build ings, and the timbers in the shaft were all on fire. The men at work in the surrounding shafts barely had time to escape with their lives, the engineer making his way out only after his shirt had been burned off his back and his person con siderably scorched.
At the time of the accident there were seventeen men work in the shaft, four of them near the mouth and the re mainder in the bottom of the pit. The four escaped-the others were all suffocated. Not the slightest assistance could be rendered them. The men above had to flee for their live
bottom. This improvement was patented, and was sustained in suits against parties who in any way elevated fire from the bottom, In Hoxie's cooking stove the fire was made above and upon the oven, and he was the first who made any stove in which the flame was made to descend from the top to the bottom of the oven. In 1815, William T. James, of Lan ingburgh, afterward of Troy, made the stove known as th "James' Stove," which not only continued a leading cook ing stove for nearly a quarter of a century, but may yet be seen on board of small eastern coasting vessels, where, be ing cheap and durable, it supplies the place of a caboose James' stove is probably better known as the "Saddle bags Stove."
"The first heating of houses by flues, from anthracite coal, was accomplishyd by a Professor Johnson, of Pbiladelphia about 1825. The Professor succeeded in heating a large house by means of a furnace in a cellar, surrounded by an air cham ber of brick work, whence the gaseous products of the com bustion were carried through the building, passing through cylindrical drums, on the first and third floor, and out at the top. This mode of warming buildings rapidly grew into favor as our people came to be well acquainted with coal.
The ample supply of wood in the country was for many vears in the way of the successful introduction of stoves This fuel was at every man's door, and houses were all sup plied with ample fire-places. The cost of preparing wood for stoves was an item which quite offset any economic advan tages they had otherwise. And, besides, the people were loth to give up the cheerful open fire-place for " a little black box in the corner," as the stove was disparagingly called. Even now, the West uses few stoves compared with the East ; and Eastern manufactures make stoves adjusted to wood for the Western market, while those for the market of the Central and Middle States are nearly all coal-burners."

## Celitarial \$xumary.

Sewing Machine Statistics.--During the year 1866 Wheeler \& Wilson sold upward of 50,000 sewing machines, and during the past five years their sales have averaged twelve thousand machines per annum more than any other company's.

Wheeler \& Wilson,
1863. 1864.1865.
$\begin{array}{lllll}\text { 29,778 } & 40,062 & 39,157 & 50,132 & 159,129 \\ 20,790 & 29,237 & 23,917 & 06,20 & 110,192\end{array}$ Singer,

Difference,
$\begin{array}{llllll}8,988 & \overline{10,825} & \overline{15,240} & \overline{13,912} & \overline{48,965}\end{array}$
 oll of merit No. 1, the Singer machine (exhibited by Mr. Cal lebaut) No. II.
In reference to the highest premium-the Gold Medal re. cently awarded Wheeler \& Wilson at the Paris Expositionthe Independent well says: "That modern wonder, the Atlantic cable, seldom flashes messages between the two hemispheres fraught with more pleasing, as well as important intelligence, than was the announcement that a magnificent tribute of merit had been awarded to one of the most enterprising firms -the Wheeler \& Wilson Manufacturing Company. This is the only Gold Medal a warded for sewing machines and buttonhole machines. There were eighty-two competitors. That which has long been claimed by the Wheeler \& Wilson Company, and which those who are acquainted with the superior qualities of the sewing machines have never hesitated to ac knowledge as a rightful claim, must now be universally con-conceded-namely, that the Wheeler \& Wilson machines are par excellence the most desirable. To the perfecters of these machines their reward is in truth well deserved."-Express.

Experimenting with the Chassepot Gun.-Dr. Sarazin, of Strasbourg, placed five dead bodies, one behind another, at certain distances apart, as targets in firing one of these guns. The result was that the hole made by the ball as it entered the corpse was exactly the size of the projectile, while the orifice made by the ball as it passed out of the body was from seven to thirteen times larger than the bullet. The arteries, veins, and muscles were literally reduced to a sort of pulp. The bones were crushed to an immense extent all over the body, and the ball after accomplishing these results pierced a two.inch board, finally lodging in the wall behind.

The Expense of Daily Papers.-The Evening Gazette informs its readers that the editorial, reporter, and correspondent staff on the New Fork Herald number more than two hundred persons, that the sum paid Thos. W. King on his return from his around-the-world voyage was $\$ 5,000$ in gold, and that only ten of his letters were ever published, making the cost of each letter $\$ 500$ in gold. During the war Messrs. the cost of each letter $\$ 000$ in gold. During the war Messrs. Tribune, were captured and for some time imprisoned. They Tribune, were captured and for some time imprisoned. They
received $\$ 3,500$ each on their release, and for which they received $\$ 3,500$ each on their release, and for which they
wrote about three columns, costing the Tribune Association wrote about three columns, costing
about $\$ 1,200$ currency per column.
Uniformity of Shape in Weights.-Pending theadoption of some uniform system of weights, M. Sequier has suggested the adoption of uniformity of form, which will cause the different weights to be easily recognized by the eye, from their sizes. A cylinder; the hight of which is half the diam eter, he thinks will be found the most convenient form for the smaller weights, but the larger should be made of cast iron with a hemispherical depression at one end, through which is carried a round bar for the hand to grasp. A groove on the upper surface can be filled with lead for adjustment of the weight.
Two slight shocks of earthquakes werefelt in Malta on Thursday and Friday, the 20th and 21 st ult.

An Analysis of Food.-It is stated that a hungry man whosits down before a pound of beefsteak, tender, juicy, and an inch thick, and eats it, will find upon analysis that 65 per cent of his steak was water; that 18 per cent will go to give him an aldermanic fieshness; and that 14 per cent is assigned to warm him, and make him feel comfortable on a cold day. Of the fiesh-forming ingredients, according to Dr. Playfair, every one, on an average, requires 92 pounds annually to keep up a proper bodily condition. If it is not obtained from steaks, then it must be secured from .something else. Cheese is a great fiesh former ( 30 per cent), and, taken with beer, speedily conceals all traces of unsightly bones, Two ounces of fiesh formers per diem will keep a man alive if he is not forced to labor, but hard labor req body will run short of starch and sugar, and go benindian in health and strength. In 100 parts of wheat there are 10
pounds of fiesh, but there is nearly double the amount in the pounds of fiesh, but there is nearly double the an
same quantity of oatmeal.-Philadelphia Ledger.

Khling the Cholera by Artillery.-It is a well known fact that the presence of ozone is fatal to the existence of chol era. Telegraph operators are rarely attacked with this disease for this reason, and thie accumulation of atmospheric electricity during thunder showers exerts a salutary infiuence in infected districts. Depending on this fact, Dr. Zantedeschi of Padua, Italy, has proposed a plan for the destruction of he poison of cholera, by the explosion of gunpowder mixed with common salt and the chloride of lime and of sulphur The Doctor suggests the placing of cannon loaded with the disinfecting mixture on towers or ligh eminences in the locality where cholera exists, then at every discharge the air would be cleared of its poison by the combustion of the sul phur generated by the sulphurous vapors, and the consequent formation of ozone. Caution must be practiced, by closing doors and windows, as the descending gasenus substances are very irritating if inhaled

Native Sugar Cane in Nevada.-In the tules along the uanks of the Humboldt river, the wild sugar cane grows lux uriantly and abundantly. Though sheltered by the tules from the wind, the surface receives some small breaks, and from them the rich juice exudes and drying in the atmosphere as it comes to the surface, forms along the stalk little balls of sugar which increase in size according to the length of time the wound remains open. The Indian squaws go through the brakes equipped with large grass baskets, and by collect ing the sugar balls, obtain their family saccharine supply at their convenience. This wild sugar is superior to sorghum n that it granulates so readily, and it is confidently asserted hat the cane will grow in any low lands in the United States.

The Mechanical Horse, at the Expcsition, to which we have already referred, bears no resemblance to his equine namesake, but consists of a box seven feet long and wide enough for a man to saddle, and about five feet high. This ody is mounted on five wheels. In a trial before the Enpe or, a mile race course was moderately passed over in tw minutes, twelve seconds. When at its fastest speed, the dis ance was made in fifty-eight seconds, and the inventor af rms that nearly this speed could be kept un for four hours What is the real motive power, is a secret which the invent or has imparted to the Emperor only, and in return for this
distinguished confidence, the inventor has been decorated distinguished confidence, the inventor
with the Cross of the Legion of Honor.

The Caen Stone of France has a rival in the stratified imestone which underlies the whole of the high prairie land of Kansas. A correspondent describes it as white, cream colored, pink, yellow, and red, lying horizontally, and requir ing no other quarrying than the use of a crowbar to lift it in blocks from its bed. So easily worked is it that he has seen it hewn into shape with a common wood-ax, and mortised with carpenter's chisel as easily and quickly as a pine beam; he has also seen it planed with a jack plane, sawed with a scrol saw into brackets and ornamental door and windons, and ut with a buzz saw into blocks for street pavements or and becomes as impenetrable as Tennessee marble.

Mastic Cements.-Böttger has recently published some account of these cements, and states that they are mixture of one hundred parts of sand, limestone, and litharge, with even parts of linseed oil. These ingredients carefully mixed and well worked together will have the consistency of mois sand, and at first but little coherence. When pressed, how ever, the mixture gradually acquires the hardness of ordinary sandstone, and in six months time will emit sparks when
struck with steel. The binding agents in such cements are struck with steel. The binding agents in such cements ar
the litharge and oil, the sand giving the body, and limeston or chalk filling up the interstices.

Prootechnics for the Savages.-The Magnesium Meta Company, of London, have received an order for the manu facture of $50-\mathrm{lb}$ 's. weight of magnesium to be used for signal ing purposes in the Abyssinian expedition. The metal wil be burnt as a powder and mixed with resin and lycopodium, the light being produced at will by blowing, by means of pair of bellows, a portion of the compound through a fiame.

Exhibitors of articles, at the Paris Exposition, will have one month, or until the first day of December, to pack up and emove their products. All articles not removed by that date will be transferred by authority to the public stores of Paris, at the risk and expense of the exhibitrrs, and if not called for by the 30 th of June, 1868,'will be sold and the net pro ceeds applied to charities.

Artificial Oil of Bitter Aimonds is manufactured from the benzine of coal tar. A fine stream of benzine and another of smoking nitric acid are allowed to run together in a worm kept well cooled. The liquids react on each other on coming in contact, heat is disengaged, and the artificial oil ollected at the end of the worm is first washed with water then with a solution of carbonate of soda, and lastly, again with water.

Sulphoric Acdin Living Mollusca.-At the last meeting the Academy of Sciences, M. Dumas communicated a cu ous note by which M. de Luca determined, in the liquid contained in living mollusca the presence of a thirtieth part or about three per cent of pure sulphuric acid; and stated, furthermore, that the same mollusca, plunged in water, dis engages a considerable quantity of carbonic acid

A New Lubricant.-From specimens of the Chinese tallow tree transplanted into Northern India, Dr. Jameson has made everal hundred weight of grease, and hasforwarded on trial portion of it to the Punjaub railway to have its qualities tested as a lubricant. The grease thus obtained forms an excellent tallow, and burns with a clear, brilliant, and white light, emitting no unpleasant odor or smoke.

MUNTCH boasts of possessing the largest bronze statue in he world. The colossal figure represents the protectress of Bavaria, with a huge lion by her side. The hight of the figure is 63 feet; weight 230,000 pounds. It stands on a granite pedestal 30 feet in hight, through which a spiral stairway leads to the head of the figure where are seats pro vided for eight persons.

A Generous Burglar, who is said to have been recently ransported to Australia for breaking open a safe, made draft of a model safe which he believes thief proof, and sent it to one of his victims as a compensation for the injury which he had inficted upon him.

## Minerals of the Pacific Coast

One of our California exchanges thus speaks of the unex Spled richness of the
" The variety as well as the richness of the mineral resoures of the American States on the Pacific appear to be without example. No other district of equal extent can boast the ossession of such an abundance and multitude of valuable metals. The colony of Victoria, in Australia, for a short time surpassed California in the production of gold, but our State has resumed its supremacy. As a gold mining country we are in advance of any other State of either the past or the present. Brazil and Spain may have had places of equal richness and extent, but the laborers were not so skillful, nor he production so large; and their diggings are apparently exhausted, while ours are still turning out millions every month.
"In silver, Nevada is not the equal of Mexico, but it is superior to any State of Mexico, and the Virginia district produces annually more silver than any other district does now, or ever did produce. Neither Guanajuato, Zacatecas, Cerro Pasco, Potosi, nor Chanarcillo can show a yield of $\$ 12,000,000$ a year; and in their best days that figure was never reached by any of them. All those districts had a wealth equal to hat of the Comstock lode, perhaps greater, but they had ot the steam power to hoist, and crush, and amalgamate the ore, and to pump out the water. Many of our silver districts are yet unopened. Kearsarge, Owen River Valley, Co-
so, Cortez, Toyabe, White Mountain, Montgomery, Excelsior, nd dozens of other argentiferous regions have only been seen near the surface. The expense of cutting roads, fighting In dians, proving the extent of the veins, and erecting mills is oo much for the prospectors, and years may pass before the ecessarycapital is obtained. The silver exists in the rocks, nd in time it must come out
"In quicksilver, California is richer than Spain, and our production now considerably exceeds that of any other country. The New Almaden is now yielding, according to pub lished reports, at the rate of 400,000 pounds annually, sur passing old Almaden considerably. Discoveries of ore have een made lately at various points, promising a large addition o the production.
"It is the opinion of many miners that in five years Cali ornia will be at the head of the copper producing States. Our copper mines are rich, extensive, and numerous. Large lodes, containing ore varying from ten to twenty per cent, are found in not less than a dozen counties, from Del Norte to San Diego-lodes that in England would be worth millions, but now lying idle and aimost worthless, simply because of the high cost of freight, the dearness of fuel, or the lack of skilled labor. The Union, which ships about a hun dred tuns per day, is one of the best copper mines in the world. If our ores could now be sent from our mines to Swansea for $\$ 10$ per tun, we could ship 500 tuns every day. Railroads must be built through the copper regions, and the will have a vast infiuence to stimulate the production
Gold, silver, quicksilver, and copper, are the only metals which the coast now yields in any considerable quantity. A little platinum is obtained, and there are rich veins of iron, lead, antimony and tin, in the State, but they are not worked. Of the non-metallic minerals, coal is the most important, and of that the annual production is about 80,000 tuns, all of it rom Monte Diablo. The borax lakes, in Lake county, are the richest sources of that mineral known, and the production of refined borax is becoming important. The porcelain clay, of Michigan Bar, is of a very fine and valuable quality. The felspar, of Calaveras is considered equal to any for fine
ceramic uses. The plumbago, of Columbia, according to the report of experts, is as good as that of the best English mine, which is opened for only a few days in the year, and is a source of vast profit to its owners. The steatite, or soapstone, of El Dorado, is excellent in quality. Rumor says that marble, as white as that of Carrara, is found in Tuolumne and Chasta counties, and the variegated gray marble of Indian Diggings is unsurpassed in beauty of color and susceptibility of polish. Beautiful alabaster is found in Placer, El Dorado, Los Angeles, and Solano counties. There is a manganese mine on Red Rock. Vast beds of sulphur are found in various parts of the State, and the business of refining it has been established in Lake county. Our deposits of asphaltum are extensive, and large quantities of it are sent to market. Petroleum exists in the rocks from Humboldt to San Diego, and the production is slowly but steadily increasing. An opal mine, near Mokelumne Hill, is regularly worked; and diamonds, emeralds, and rubies have been obtained in the placers. There is alum in Santa Clara county, sulphate of magnesia in Lake county, and crude soda, in vast quantities, in the Colorado and Mohave deserts. Common salt is made from the sea water in considerable quantities in Alameda and Santa Barbara counties. Yellow ochre, sienna, and umber, and an iron ore that can readily be made into Venitian red, are among the resources of California. Numerous other minerals might be added, but they are either found in very small quantities, or little importance is attached to them. The list, however, as we have given it, is surely remarkable for its variety, and mineralogists will seek in vain for its like in any other country of equal area.'

## NEW PUBLICATIONS.

Atlantic Monthly. Boston: Ticknor \& Fields.
The November number of this popular monthly is just out, fraught as ever withinteresting articles by the best
by all periodical and news dealers.
Modern Palmistry. New York: American News Company, 121 Nassau street.
This is a very curious book, full of illusitations of various shaped hands, Which, fiom the lines denoted the:eon, are presumed to indicate extraordi-
nary developments of character, when found dellineated in the human hand. The book we have not read, but believers in astrology, and fortune tellers ander every digguise, will be interested in it.

## MANUFACTORING, MINING, AND RAILROAD ITEMS.

The $\Delta$ msterdam Canal works consists in the digging a ship canal 213 feet
wide, and 18 feet deep to open a commanication between Amsterdam and the wide, and 18 feet deep to open a communication between Amsterdam and the
North Sea, and avoid the circuitous route through the North Holland canal which for many years has formed the only approach to the city navigable by large vessels.
A number of railroad enterprises are now being pushed forward in Connec ticut with an earnestness that indicates success. The citizensof Middletown to the east bank of the Connectic the building of a road it will await the action of the next Legislature for permission to bridge the river when the great air line from New York to Boston, will be speedily completed. The
Boston and Erie railroad have secured a union with the Erie rallroad by the Boston and Erie railroad have secured a union with the Erie rallroad by the
election of its president, as president of that company, and the guarantee ot its,bonds to the amonnt of $\$ 3,000.000$. Thisought to insure the extension of
ithe the line from Waterbury to Newburgh, N. Y., thus developing the resources of Litchfild county. The Connecticut Western road, from Springfield to Collinsville, and thence to the Hudson, is in strong hands and the extension of the Collinsville branch of t
garded as almost certain.

## The whole number of

mines; 249 iron mines, and 337 in France, is now 1,184 of which 598 are coal mines; 249 iron mines, and 337 mines of other minerals. The production of
the coal minesand iron works lastyear reached the value of $472,000,000$ francs. During September the heading at the East end of Hoosac tunnel was carried forward one hundred and eleven feet, and sizteen hundred and nine cu
bic yards of rock were excavated from the enlargent at the East end. bic yards of rock were excavated from the enlargement at the East end.
At the plumbago mines near Senora, Cal., from twenty to twenty five tuns are dails prepared ready for market, In the Chollar Potosi, Nevada, mines, a rich strike is announced at the
depth of eight-hundred and sixty-five feet from the surface. This is the
deepest shafton the Comstock lode and the success in finding rich ore at deepest shaft on the Comstock lode and the success in finding rich ore at thatdep
ledge.
The old Greek silver and lead mines of which the had the management, and regarding which he has left a memoir or State pacompany, at Port Mandri, are diligently smelting down the old scorix, slag and refuse from them, and extracting as much as 30 tuns of metal a day. The workis said to pay well, and the lead goes to England in Newcastle ships which bring out coal for the furnaces. The value or the daily produce of the
works averages 15,000 francs and it is calculated that there is a sumfient works averages 15,000 francs and it is calculated that there is a sumcient
quantity of scorixe between Port Colonna and Port Mandri, to supply the worksfor fifteen years to come. The yield is between 7 and 12 per cento good metal.
The new law providing for the wearing of distinguishing uniforms by all
persons employed by railway companies in this State, goes into effect on the 22d inst.
Pennsylvania takes the lead among the states, in the annual amount of iron mined; Michigan ranks next, New Jersey, New York, Missourl, Massa chusetts, Connecticut, Maryland, New Hampshire, and Ohio, follow in this
order. New Hampshire and New Jersey produce mainly the magnetic ores; New York, the magnetic and hematites; Connecticut, hermatites; Pennsy vaniazand Ohio furnish the argillaceous ores of the coal measures, and Misouri and Michigan mine the compact red and black oxides.
The correspondent of an exchangeassertstat the "De Witt Clinton" was the frstlocomotive built in this country, and in 1831 it ran on theAlbanyand
Schenectady railway. The engine weighed lessthan five tans: its cylinders were nearly vertical, were on the outside of the boiler, and the driving wheels were made with light wrought iron spokes. Being so light it re-
puired heavy repairs every trip. quired heavy repairs every trip.
The United States commissioners havefnished the inspection of a section
of the Central Pacific Railroad west of Cisco, carefully examined the grades, culverts. bridgees, etc., and pronounce it to be twenty-five per cent better constructed than any portion of the road before accepted. Over the section there are alreaty four miles of roofing, and two and a half additional will be built this fall. The commissioners then commenced the primary inspection of the road two miles east of Cisco, at, Coburn Station. The
cars are running eight and one half miles east, and construction trains cars are running eight and one half miles east, and construction trains
are laying the track at the rate of one and one half miles daily. In thirty days the section will be completed. The intermediate section over the sumnit will not be completed for transportation purposes until spring, although the company expect to lay the track before winter. By August next the cars will he running to Trnckee river, near Crystal Peak,
erable portion of tne road will be graded towards Humboldt.

