Pulse of Western Progress.

032,500. This exceeds the next highest year, 032,550. This exceeds the next highest year, infet. I took up a claim of my own in this 1894, by nearly \$1,000,000, says the Billings vicinity on Whole island, and in less than Recorder. The secretary of the board has three hours, with three men, I one day handled during the year on account of strays washed out \$38 uf gold.

"The Cook's inlet country is prac-\$179,721. The shipments of cattle during the year 1895 aggregated 246,460 head, the slaughter for home consumption being about 60,000 head, making the total output 306,460 head. The average price for the year was a trifle over \$26 per head. Thus it will be seen that the cattle industry brought more than \$11,-900,000 into Montana during 1855. The report of the state veterinarian shows there were brought into Montana in 1895 70,000

Referring to the new bounty law, the commissioner's report says it is the most bone-ficial law for the protection of the stock in-terests ever enacted in Montana. Wolves are fast disappearing, and on some slopes are becoming scarce. The report says it is a question of a few years when the wolves will be wiped out. While feed is reported short on almost all of the ranges, cattle are in good condition. Up to this time the winter has been an ideal one for range cattle. As to shipments next season, they will not be far behind the past year. Some of the big shippers who did not sell in 1895 will sell in 1896, so that the average will be maintained. RICH PLACERS NEAR BLAINE.

George Webber, a United States customs inspector, tells of a great excitement among the people at Blaine, Wash., and across the British Columbia line over a "gold find." Mr. Webber's story sounds like a tale of ficwhile there is nothing romantic and dirt in the hills in the neighborhood cessfully to find the coin.

of the canneries of the Alaska Packers' arso
Mr. Morris claims that he has derived tical experience as a miner, at last consented, and hiring a team, accompanied by Goodfellow, made the fourteen-mile drive to Point Roberts. He procured a pan and went to the hills, directed by the excited rancher. Goodfellow pointed out the place where he had first made his discoveries, and Mr. Webber seconing up a pan of the dirt went to the construction of the had been washed out Mr. Webber states he could hardly believe his eyes, for the bottom of the pan was covered with shot gold. Having in mind several "sulting" propositions, Mr. Webber again took up a pan of earth at a considerable distance from the place where Goodfellow claimed to have made his

discoveries. This second pan was even more rollific of the yellow metal than the first, and upon convincing himself that Goodfellow had told the truth, he jumped into his buggy and as fast as possible made for Blaine, from which place he proceeded to Whatcom, where he recorded two mining claims and then returned to Point Roberts. In the meantime Goodfellow, who is not a citizen of the United States, had started his son to Whatcom to take out his naturalization papers in order to be able to file upon claims for himself. When passing through Blaine young Good-fellow told the story and in less than half an hour half the population of that town

was on its way to the new Eldorado. "Not only is Blaine represented in the mines," said Mr. Webber, "but the majority of the men from Ladner's Landing, across the British Columbia border, are pouring across and panning out the dirt of the Point

SANTA FE EXTENSOINS

Unless all plans and preparations are abandoned, the Santa Fe Railroad company in the present year than it has done altogether in the last eight years, says the San Francisco Examiner. Since the recent reorganization of the

Santa Fe system, some 100 miles of new railroad in southern California has been decided upon by that company. For the past year the Southern Pacific company has been extending its line into the heart of the most prosperous crange growing portion of the state, and now the Santa Fe company upon the Southern Pacific in the construction of feeders to the Santa Fe system in the same territory.

The work of building the Pomona and Elsinore railroad by the Santa Fe company will be begun in less than twenty days. Surveyors are now in the field and over fifty condemnation suits have been begun in Riverside county. Santa Fe officers say they have ample means on hand and are now going to Klamath River Railroad company, has re-do in railroad work what they have long ceived its first setback, says a Eureka spe-

The Pomona and Elsinore branch will be run from near North Pomona station on the its rival, the Arcata & Mad River railroad, main Santa Fe road southward through Pomain Santa Fe road southward through Po-mona valley to the beet sugar town of Chino, thence to the Riverside line of the Santa Fe track. company and on to Elsinore, where there is a rich mineral deposit, and where a large area of very valuable pottery clay has been slightly worked since last November. GOLD AT CORK'S INLET.

"I have never known a country to come forward so rapidly as Alaska," said E. A. Gardner of the Cook's Inlet Mining, Trading Transportation company to a Tacoma Leader reporter. Mr. Gardner spent last summer in western Alaska, establishing trading posts for his company, and is now on the gound for the winter. He will go back to

western Alaska in the spring.
"While north last season," Mr. Gardner continued, "I made thorough investigations of the mineral resources of that country, as well as of the opportunities for selling goods. From what I learned I am convinced that the territory of Alaska and especially the undeveloped region about Cook's inlet and to the westward is marvelously rich. It is a fact little known that the Alaska Commercial company is now and has been for a long time operating a mine on Unga island, the output of which is \$69,000 a month. The output is shipped monthly to San Francisco by the company's steamers. A large stamp mill on the island reduces the ore. The whole island has been prospected and

Montana has had, so far as total receipts from sales are concerned. Revised figures of the basiness done during the year, prepared in the office of the Montana Board of Stock Commissioners, give the total receipts at \$11,002,500. This exceeds the next highest year, left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this left. I took on a claim of any own in this

tieslly tically unexplored, but enough has already been discovered to prove it rich beyond compare. The men who left the inlet before July 15 last felt discouraged. They did not remain until the storms had abated and the streams subsided. The men who remained until conditions allowed them to prospect, without one exception, did well. Their success was almost phenomenal. Not a man failed to make good wages and a number came down with \$3,000 or \$4,000 to show for their season's work. On the injet most of the work has been done at Six Mile creek and Canyon creek, but Resurrection creek at Turnagain arm in the inlet is still a good camp. No prospects have been made in the other streams.

IN SEARCH OF BURIED GOLD. A large party of men are digging for hidden tre-sure in a canyon in Elysian park, says a Los Angeles dispatch to the San Francisco

Examiner. R. D Morris, an American scout, is at the head of the company.

The treasure they are after was buried by a wealthy Spaniard, Francisco Avila, when Pio Pico was governor. It is said he accu-mulated about \$100,000 in com and jowels. and, fearing bandits, decided to bury it, se-lecting a canyon in what is now the park. He pointed out the spot one day to his wife, but omitted to tell her its exact loaction, and died soon after.

The only other person who knew the place was an Indian peon, who helped the Don conceal the treasure, which was packed in about it, there are exciting suggestions of ten ollas. Singularly, the Indian died a wealth to be gotten from the earth. Mr. Webber says that a rancher named James Goodfellow, whose acquaintance the inspector made will on diving a local state of the control of while on duty at Point Roberts, came find the treasure, and then failed. to Blaine and asked him to return to Point died after telling the story to a young girl. Roberts with him and pass an opinion on who, some time ago, informed an Arizona what Goodfollow considered gold in the sand miner of the matter, and he tried unsuc

clation. Mr. Webber, who was at first skep-positive information and is sure of success. tical, having had a number of years' prac-His party has been working for six weeks

ber, scooping up a pan of the dirt, went to a creek near the place and began washing it. The first thing after the soil and surface dirt had been removed was a black sand lying at the bottom of the pan. After this had been washed out Mr. Webber states had been washed out Mr. Webber states had since fallen, burying the treasure.

Rillman has been here six months working on the matter, and at last located the

cave on the ranch of Mrs. Narbonne, four miles east of San Pedro. While most peomiles east of San Pedro. While most peo-ple think he is deluded or a fakir, a number of old-timers say that there is evidence that some such occurrence as he describes did take place about the time he mentions near San Pedro.

EXTENSIVE LINE OF BOATS. The Yukon Transportation company is the name chosen by an association of eastern capitalists who will operate freight and passenger boats on the Yukon river and its tributary streams and lakes, the entire run extending from Seattle to Circle City. organizers are men of experience in various enterprises in Stiffwater, Minneapolis and Chicago, and the head office of the new company will be opened in Seattle on February 10, says a Seattle dispatch to the San Fran-

Two lines will be operated, one for gers from Juneau, via Linn canal, the Chil-koot pass and the upper lakes, and the other via the Yukon river, over the route usually taken by miners to Circle City, over the di-vide (Chilkoot pass), a distance of twentyeight miles. Refreshment and lodging stations will be established at intervals of from five to ten miles. Steam launches will be put on Lake Lindeman to the half-mile por-tage at the head of Lake Bennett. From this portage to Three-mile portage, at Miles canyon, about nine miles, a steamer will make daily trips. From Miles canyon to Sixty-mile post, Forty-mile post and Circle City two light-draft steamers will run. The construction of these boats is now under

contract. The second line will operate from the mouth of the river and will be used principally for freight. One large, four medium sized and one small-sized steamer will be put on this part of the river and will make at least one trip this peason. It is the intention of the company not to do any trading, and hence it will accept and handle all freight

by whomsoever offered. ANOTHER COAST RAILROAD. The Vance Mill and Lumber company's raild extension now being constructed from Mad river to Eureka, via Arcata, and incor-porated on January 3 as the Eureka & Klamath River Railroad company, has recial to the San Francisco Chronicle. This is in the nature of an Infunction asked for by restrain the new road from crossing their

At the point where the new road crosses Mad river to the Arcata side the old road follows the river bank, and numerous side tracks and switches are maintained there. The new road will cross there tracks twice in a distance of 200 feet and again at a point on a steep grade on the old road.

The building of the new road is being pushed rapidly, two crews being at work between Arcata and Mad river, working in op-posite directions. It is expected that the road will be completed to Vance's mill at Samoa, opposite Eureka, by April have been hunting during November and De-of this year. Vance's big bay cember and it is estimated that they killed steamer Antelope is now being fitted up for nearly 1,000 head of deer in the north and ferry service between Eureka and Samoa, a eastern sections of Wyoming.

distance of one mile. According to the articles of incorporation the terminal will be Eureka. It is the plan to extend the road up the coast to the mouth of Klamath river, on the Del Norte county line. Branches will be run from the main line to the mills and towns on Mad river, be-yend Arcata, now tapped by the Arcata & Mad River railroad, and still another branch is contemplated to connect Arcata and Eureka by a road around the opposite side of the bay from the Samoa route

The capital stock of the read, which has been fully subscribed by the Vances exclu-

General Manager Dickinson of the Union Pacific is reported to have visited Boise last week. The object of his visit was to bring information to the committee of Boise business men from the receivers concerning the proposed road from Nampa to Silver City and Delamar. The committee asked the re-ceivers for terminal facilities, rates of transportation for construction material, etc. The rates fixed by the receivers was satisfactory to the committee, and after a few more de-tails have been attended to the work of build-ing the road will be commenced. The men who are back of it are confident of carrying out their plans. The statement that the Union Pacific is back of the road is without foundation. The Union Pacific will, however, give the road every encouragement possible, the receivers having agreed on a policy of building up and fostering local business. The road, as proposed, will be one of the best feeders on the system.

THE DAKOTAS. Five hundred thousand bushels of wheat have been marketed already this season, and 306,000 bushels are yet unsold in Rolette county.

Stokes Bros. struck a good flow of water in an artesian well five miles northeast of Britton, S. D.—200 gallons per minute. The success of this well assures a dozen more in his county soon.

There are rumors that the Milwaukee will extend its line to Wessington Springs, seventeen miles west of Woonsocket. Wes-sington is the county seat of Jerauld county, with 250 population. It has one of the largest colleges in the state, and is greatly in need of a road.

The Deadwood Terra mine has resumed payment of monthly dividends after a lapse of ten years. A body of high silicious ore was recently found in the mine which had heretofore been thrown aside as waste rock because it could not be treated by the free milling process or stamp mills of the company. The free milling ore runs \$4.50 per ton, while the new find goes from \$40 to \$50. Prof. Kaufman of Fargo, member of the faculty of the North Dakota Agricultural college, gave a lengthy account of the dairy in-dustry in that state before the South Dakota dairy convention held at Huron. North Dakota has twenty-eight creameries, and these factories last year made 300,000 pounds of butter and 350,000 pounds of cheese, as against 120,000 pounds of butter and 200,000

pcunds of cheese in 1894. One firm at Miller, S. D., has shipped east this winter 1,000 jack rabbits. Presuming that the other towns on this line of the Northwestern, including Huron and Pierre, have done as well, the total would be 10,000 rabbits. They have brought 10 cents apiece which gives a grand total of \$1,000 to these towns for this strictly Dakota product. It is believed that the wolf pelts taken this winter in the same territory will net nearly the same amount.

COLORADO. A dispatch from Creede announces the discovery of an eighteen inch vein of ore on Rat Creek.

There are said to be more than 1,000 ormining companies in the Cripple Creek district.

A number of discoveries of rich quartz are reported between the Freeland and Larmartine mines, near Idaho Springs. These lodes are to be opened up at once. An important strike on the Chesapeake, at

Yankee Hill is reported. An eighteen inch streak is said to have been reached which assays \$100 to the ton. It is smelting ore. The Newhouse tunnel in the Cripple Creek district has reached about 4,750 feet. It is being driven to reach the mines of Seaton Mountain, Russell Gulch and Nevadaville at greater depth and give them drainage and transportation, thus saving holsting and haul-The tunnel is twelve feet high and

The uncovering of a clearly defined teninch vein in the Midnight lode, an inch and one-half streak of which assays \$1,600 in gold per ton, and the vein matter three ounces gold, is the talk of the camp at Buena Vista, and has drawn many miners from Aspen to their properties in that

Another important strike is reported in the McQuiety hill section, on the north side of South Lightner. Ore samples were brought in from an eighteen-inch vein in the Little Annie of a high grade gold character, containing silver and a precentage of lead. Prospectors and miners at Durango attach great importance to this discovery, the ore body of which has not all been cut yet.

A miner who is operating on the new placer fields at Palisade writes as follows: "In our new placer mining district, the Great Bonanza, four miles northwest of Palisade, the claims of Pawell, Stewart, Stannert and Baum have shown well. They received an assey of \$26.35 per ton. It s no trouble to show from fifty to 100 colors from two pounds of gravel and sand. Claims are being staked off very rapidly, and this camp will be a gold producer in sixty days. Cabins are being erected and work will commence in great earnest soon

WYOMING. A new coal mine has been opened near Hilliard, Uinta county. Casper is to have a new business block of stone, estimated to cost \$25,000.

The citizens of Otto, Big Horn county, are agitating the question of the establishment of a daily mail line from Casper to Meeteetse. Cosgriff Bros., the sheepmen of Fort Steele, have commenced the construction of a bridge across the North Platte river at that point. A gold mining excitement has just been started in Sheridan county over the reported discoveries on the Piney. The ore is in a coment deposit similar to that at Baid moun-

The Indians from the Pine Ridge agency April have been hunting during November and De-

> The new "find" on Tepes creek, within seven miles of Big Horn city, is causing a great deal of excitement in the basin coun-try. Prospectors are flocking in by the dozen and the entire country is being located.

> A discovery of cement has been made in the Big Horn mountains, seven miles from Big Horn City. The deposit is similar in appearance and character to the Bald mountain cement and assays \$30 to the ton. All work on the Cody ditch has been closed for the winter on account of the snow and cold weather. The company will keep a force of men at work in the mountains cutting logs and building a new saw mill, which to furnish themselves with lumber.

Green river is to have a saw mill, planing mill and sash and door factory. It is the intention of the promoters to cut the timber for use in the mills from the large forest on Upper Green river and float it down the river to the mills. Fifty thousand dollars is to be expended in the enterprise.

A teamster has just reached the city from North park and reports that a town site has been laid out near the Red Elephant claim in the Independence mountain district. Logs are being cut and hauled to build two hotels. two salms and a livery barn. A number of houses are being built, but the work is progressing slowly on account of the scarcity of men in the camp. Every man that comes along is hired and put to work on these buildings. Another town site is to be laid out in the same district as soon as men can be procured to do the work.

OREGON. A herd of cows is said to be starving to death at Seaside, Clatsop county. The Chronicle says that for wool alone \$600,000 was disbursed by The Dalles banks

R. D. Wilson killed two large white swans on Moss lake, near Oregon City. They measured eight and a half feet from tip to tip. Stock Inspector Turner of Harney county reports 116,000 sheep in the county, free from any disease, an increase for the year

Hood river has been declared a public highway by the county commissioners of Wasco. They will give any one the right to float

C. B. Trowbridge of Grant county has a 3½-year-old half-Percheron horse that tips the hay scales at 1,840 pounds. The horse never ate more than 260 pounds of grain

during his whole life, his principal means of subsistence being the fine punchgrass on the hills and good timothy hay and pure

water from the mountains. Robert Walters, who lives on Dutch Flat, brought to The Dalles a baid cagle, which he caught in a trap. The bird, which is not yet full grown, measures seven feet from

tip to tip Owing to the mildness of the winter, says the Princyllie Review, considerable stock has been driven to the desert to shift for them-

selves. It is reported that the stock on the desert is in fair condition.

The work on Astoria's water system is nearly completed, says the Astorian. All but sixty-four feet of the tunnel is finished and the work thereon is progressing at the rate of sixteen feet a day. The Pacific Christian Advocate says that

son of John Brown lives in Salem, where he has a little butcher shop in the eastern part of the city. He is 59 years old, and came to Oregon in 1866. He was with his father in Kansas in 1855. A steam sawmill plant is being put in on the mountain about five miles cast of the Redford Coast Fork bridge in Linn county by

J. I. Jones of Cottage Grove. A flume will be built from the mill to the railroad at Redford. A planing mill will be built at the railroad and a lumber yard established. It is estimated the flume will cost about \$1,000 mile and that \$10,000 will be required to place the plant in operation WASHINGTON.

A team in Chehalis and one in Winlock have been playing whist by mail. The value of the ore shipped from Trail creek during 1895 was nearly \$1,000,000.

The cost to the federal government stocking Willapa harbor with oysters last year was \$1,044. Only about 150,000 feet of logs were lost from the boom in the Snohomish river during the recent freshet, and not 10,000,000 feet, as

reported. It is reported that large quantities of salmon are being taken from the Yakima and Natchez rivers, in Washington. The faorite way of getting them is with the spear. Richard Brown, a logger of Jefferson county, will try the experiment of using county, will try the experiment of the horses instead of oxen in his camps. Brown already has orders for 15,000,000 feet

of logs. The Bell Lumber company, capital \$100,000, has bought the Standard Lumber company's plant at Kirkland, and will move it to Everett, putting up a new mill of 75,000 feet daily capacity.

Wine making in the vineyards along the Columbia, in the vicinity of Waterville, will assume greater proportions this year than has before been attained by the vintage of the state, say grape growers who are watching the development of the river country.

All Washintonians are stuck on their state. If they don't see what they want, they go and find it. The latest discovery is a gum arabic mine, which the Spokane Chronicle says has been discovered in that large country known as eastern Washington. A logging deal has recently been consummated between the St. Paul & Tacoma Lumber company and McDougall & Jackson, a logging firm of Tacoma, by which the firm was awarded a contract for supplying the mill with 35,000,000 feet of fir logs. The timber is to be taken from the company's land in the timber district east of Carbon ado. The contract will require two years to complete, and the work of removing the begun at once.

MISCELLANEOUS. Riverside shipped 651 cars of oranges for the season up to January 11.

Rich free milling gold ore was brought into Phoenix, A. T., recently from the Salt river country, and it is said much rich float is picked up in that vicinity. The olive industry is taking quite a boom in the Bear and San Pasqual valleys in California. From 10,000 to 15,000 trees will be

planted in these valleys this season. The speedy completion of the electric road to Santa Monica may be anticipated, the contract for its construction having been awarded by the company back of the project. The Chino sugar factory has closed for this season. The sugar output of the factory for this year was about 20,000,000 pounds

of refined sugar, almost double last year's production A dispatch from Graham, N. M., says that gold is reported to have been found thirty-five miles to the north in the Blue Range Samples of gold bearing rock brought in run up to \$500 a ton.

What is called a callche gold ledge has There is a large ledge of porphyry, and lying against it is a deposit similar to caliche, carrying from \$50 to \$75 to the ton.

The best figures obtainable estimate the output of New Mexico at \$1,250,000 in gol and about \$300,000 in silver. Copper, lead and turquoise mining has been quite and the coming year bids a roseate hue for all the mines in this territory.

A number of Butte men recently became interested in some mining property a short distance above Bonner, and began prospecting it, with the result that they struck a rich copper lead. There are a number of other claims in that vicinity, but heretofore little or no development work or extensive prospecting has been done.

There will probably be a great rush early next spring to the Blackfoot Indian reserva-tion in the northwestern part of Montana, as the preliminaries have been arranged for opening up a large mineral district in the western part of the reservation, said to contain some of the most valuable ledges in the full of copper veins, rich in gold.

The decay of "Chinatown" is one of the most remarkable features of San Francisco Five years ago Chinatown had 25,000 inhabitants and trade was lively, many of the large merchants doing an extensive business. Rents were higher in Chinatown than n other parts of the city. Now rents have fallen more than one-half in this quarter, real estate is unsalable and the population has shrunk to 15,000. The last China steamer carried 700 Chinamen back to their homethe greater part of whom will not return. At the present rate, Chinatown in six months will not have 10,000 inhabitants.

The Farmers' Union Ditch company Star, Idaho, has been in existence about a year and a half, and was organized for the purpose of constructing and maintaining an rrigation ditch twenty-six miles in length having a capacity of 10,000 inches, and to cost about \$40,000. The ditch will water \$,000 acres of land situated in Ada county. At the head of the ditch, near the Soldiers' home, has been constructed, at a cost of nearly \$3,000, one of the best headgates in the county. Altogether about \$10,000 has been expended in cash and labor, and water will be running through the ditch to Dry creck, a distance of about nine miles, by July 1.

THE STATE OF PIKE.

Missouri's Famous County and Its The county of Pike, says the St. Louis Republic, is older than the state of Missouri itself, having been laid out by the territorial legislature in 1819, before Missouri was ad-mitted to the sisterhood of states. The town

of Louisiana was laid out in the same year the county was organized by Shaw & Cald-well, the proprietors of the land upon which the town now stands, so that Louisiana and the "state of Pike" came into history at

When the territorial government estab-lished Pike county "its southern boundary was the northern line of St. Charles county. The western line was along the ridge divid-ing the waters of the Mississippi and Missouri rivers, to the extreme northern bound-ary line of the territory of Upper Louisiana. At that time the dividing line between the At that time the dividing line between the Spanish and French possessions was claimed by Spain to run along the summit of the Rocky mountains to the 49th degree of north latitude, while France claimed the whole of the territory now embraced by the states of Oregon and Washington. This question was finally settled between the United States and Spain by the treaty of 1819, which was not made and ratified at the date of the passage of the act creating this county.

If the French claim was correct, then the county of Pike extended to the Pacific ocean on the west and to the 49th degree of north latitude. The wonderful area of the county

latitude. The wonderful area of the county the territorial legislature was creating struck one of the early-day Solons so forcibly that, rising in his seat while the bill was up for consideration, he exclaimed: "The county of Pike! Why, gentlemen, it is not a county we are creating; it's the biggest state in the union." And so Pike county has gone down in history as the 'State of Pike."

Not excelled by any high-priced liniment Salvation Oil, twenty-five cents a bottle.

Edison's Latest Contribution to the World of Invention.

RESULT OF YEARS OF EXPERIMENT

An Important Mechanism for Handling Certain Iron Ores-Separation of the Metal from the Rock by Magnets.

The idea of using magnets to assist in the

sparation of iron from the rock with which it is sometimes associated in the earth has been made the basis of a good deal of experiment and invention during the last few years. Several devices embodying this principle have already been patented and put in operation more or less successfully. The most conspicuous worker in this field, says the New York Tribune, has been Thomas A. Edison, who has been busily engaged in perfecting the process in the vicinity of a large deposit of iron ore in northern New Jersey. At a place formerly known as Ogden, but now called Edison, operations have been conducted on a large scale. An extensive assortment of machinery for drilling and blasting the rock to a depth of thirty feet below the surface, scooping out the material thus loosened and crushing it until it is as fine as granulated sugar, has been set up there. It is possible to take out at least 2,500 or 3,000 tons there a day, and the crushing, conveying and separating apparatus is said to have a capacity of 10,000

In a vague way it has been known that Mr. Edison had encountered certain difficulties in the application of his theories, but these are now reported to have been overcome. Some of them grew out of the enormous quantities of dust developed during the preliminary treatment of the ore. So filled was the air with minute particles grit and dirt that the workmen could not breathe without wearing mufflers over their faces. They continue to do so, but the nuisance has been largely abated by sur-rounding the buckets carrying the pulverized ore with the coarse bagging commonly called burlaps. Another problem related to the lubricating of the bearings of the great crushing rollers, some of the latter being de-signed to chew up rocks weighing ten tons each. Mr. Edison, in this and other parts of his establishment would tear out very expensive appliances which did not work expensive appliances which right and replace them with different ones, and it is said that a plant which could, with his present knowledge, be reproduced for), has cost him up to date about five or six times that amount

PLAN OF SEPARATION. The general plan of separation by means of magnets is to let the powdered ore fall so as o pass very close to the ends (or poles) of several horizontal magnets. Those grains, which are made up chiefly of iron, will be which are made up chiefly of fron, will be attracted by the magnets and drawn an inch or two to one side of the path which they would otherwise follow, and will be held temperarily, sticking to the poles, while the purely stone matter, insensible to the influence of the magnets continue to draw. ence of the magnets, continues to drop. ence of the magnets, continues to dop, perform this service electro-magnets are used—pieces of iron which derive their magnetic qualities from a current of electricity sent through coils of wire encircling them and devoid of any attractive power as soon as the current ceases. In Mr. Edison's arrangement the downpour of ore is checked every five seconds, and then the current is shut off, so that the particles of iron temporarily attracted to the poles of the magnets are released. They fall on the other side of a thin partition from the nonmetallic refuse, and the two go out through different chutes and are carried off by separate conveying machinery. Inasmuch as the first treatment by this method does not extract all the iron from the ore, the refuse is exposed a second and a third time to the influences of the magnets, the three operations being conducted on separate floors. The amount of iron (or rather oxide of iron) originallyin the rock and remaining uncollected by the magnets is estimated at less than 5 per cent. great variety of shapes.

An electro-magnet may be made in been discovered in the Oro Blanco, A. T., has seen the long, flat strip of wood around which, from end times winds his line. Mr. Edison, for reasons which will be apparent on reflection. adopts this design for his separating magnets.

HIS SEPARATING MAGNETS. He takes a slab of cast iron four inches thick, twelve inches wide and nine feet long, cuts a notch in each end, and then winds his insulated copper wire on it lengthwise. The ordinary bar or horseshoe magnet attracts only at the end, not along its side; but by his method of winding Mr. Edsion makes the whole nine-foot edge of his slab a "pole." That is to say, it will possess attractive power along its whole length so long as the wire carries a current. This is much the most economical use of the iron in the core, of copper in the coils and of current that could be made for the particular kind of work done. Four or five such magnets are mounted all horizontally, and one above mother, and the powdered ore falls in a another, and the powdered ofe tails in a thin sheet from a properly arranged trough in front of the edges of the whole set. It is said that no less than 500 of these nine-foot magnets are used for the first separation. For the second and third processes magnets of the same general design are employed, except that the second set have a width of only about eight inches instead of twelve, and the third set are only four and

half inches wide. The stony refuse, or sand, left by this system of treating the ore is sold to the rail, way companies for balkest. The oxide is then ready to go to a smelting furnace. In-stead of shipping it thither in a pulverized stead of shipping it thither in a pulverized form, Mr. Edison mixes it with various plastic materials that will facilitate smelting, and shapes it into bricks, which are pressed and dried. This latter process, invented by Mr. Edison, is said to render the product more salable. It should be remarked that Mr. Edison's method of separation is not salable for all iron ores but only for a available for all iron ores, but only for a certain class called "magnetic" iron which are sometimes actually magnetic, but not always so, but in which the oxide is free from various impurities found in other ores. Even were the new system applied no-where else in the country, it promises to be a great thing for New Jersey. The extent of the iron deposits in this state are not fully known, but the great electrician controls 8,000 acres, or about fourteen square miles. A great deal of the labor performed in the works at Ed'son will be done by machinery. but there will be employment for hundreds of men, nevertheless, when the establishment is in full blast. It is probable that in time manufacturing industries may be started in this vicinity, to make use of the iron pro-duced. At the present time operations have been suspended for the winter, and both skilled workmen and ordinary day laborers have been laid off. The inventor's prime object was to perfect the apparatus, and this

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his time for resuming business for purely commercial purposes.

A SOURCE OF GREAT PROFIT.

MUNYON'S

Mr. Edison is said to take great pride in this latest achievement. Indeed, he is reported as claiming that it is "the greatest effort of his life." So completely in love is he with everything that he undertakes, and so closely does he concentrate his whole thought, time and energy upon it, that it is natural for him to exteem his most recen success as the most useful of all his contr butions to civilization. If he realizes his own expectations, no doubt the magnetic separator will be a source of great profit to him and his business associates. Gree economies are effected by his process an methods. In the first place, he excavates only on the surface, and to a depth of thirty feet, thus avoiding the great cost of sink-

ing deep shafts, hoisting ore from them and pumping the water out. Two temporary and parallel railways, about 500 feet spart, are made to carry the onds of an immense traveling crane, by means of which the "skips," or buckets, are lifted from the shallow excavation between, and deposited on cars for transportation to the crushers. And, as already intimated, a good deal of the apparatus used thereafter is au-tomatic. It is evident that a great deal of ore which would be considered worthless, here and elsewhere, can thus be turned to account and made to pay, just as the invention of the so-called "basic" process permitted the employment of non-Bessemer ores which had formerly been unmarketable.

While wrestling with the problems involved

in magnetic separation, Mr. Edison has gone out to the mines every Monday morning and stayed there until Saturday evening, when he came back to Llewellyn Park, near West Orange, to spend Sunday with his family. He was inaccessible to the public, and even his charming wife had difficulty in communi-cating with him, so intense was the preoccu-pation and absorption of this strange genius. When possessed with a new idea, Mr. Edisor is oblivious of everything else in the world Even food and sleep are neglected; and he often falls to realize that his most helpful assistants have physical needs, too. So eager he to attain even a minor end, when one he sees his way clear, that he awaits the manufacture of the necessary devices breath-lessly, and is not happy until he can make a

Precisely what will be the next important work undertaken by Mr. Edison it is difficult to predict. He has been quoted as saying that he had retired from the field of inven tion, but the assiduity with which he fol lowed up the idea of a magnetic separator does not harmonize with such a theory. It has long been known that he had some noions about a new method of electric lighting, to which he could not find time to pay any attention. Possibly he will give that matter little thought during the new year.

The body must be well nourished now, to prevent sickness. If your appetite is poor take Hood's Sarsaparilla.

FAMOUS WAR TELEGRAM.

it Was Sent by President Lincoln to Fighting Joe Hooker. The writer in the Louisville Times in ooking over some old war records came across the following characteristic telegram from President Lincoln to General Joseph Hooker immediately after the battle of Chancellorsville.

To fully appreciate it it is necessary to explain the conditions under which the elegram was sent. The magnificent armies of Hooker and of Lee had rested all the winter of 1862-63-the first on the north bank of the Rappahannock at Fredericksourg and Lee on the south bank-both waiting for the spring to open so that the struggle might begin again. Finally the 1st of May, 1863, found the two contending armies on the eve of battle, and on Sunday, May 3, 1863, the battle of Chan-celloraville was fought. Jackson's strateric movement on the flank of Hocker's army, the death of Jackson, the defeat of Hooker's army, driven in disorder back across the Rappahannock, are all matters of history not now necessary to repeat General Hooker, to hide his mortification left somewhat of an impression through out the north that while he had not achieved all he set out to do he had really gained a victory, but the truth soon not the north that while he had not and its continued use for a few days effect a permanent cure.

TAKEN INWARDLY—A half to a teaspoonful in half a tumbler of water for stomach troubles, cold chilis, fever and ague, diarrhoea, sick bestache and all internal

ericksburg, and is in the lower part of the Shenandoah valley, but a few miles from the Price 50c per bottle. Sold by all Price 50c per bottle. tomac river. After Longstreet's and Ewell's corps had reached the Shenandeah valev and commenced tearing up the Baltimore & Ohio railroad the news, of course, soon reached Washington that the rebels were down in the valley. So the first telegram comes from President Lincoln to General Hooker: "Where is Lee's army?" General Hooker answers: "From the best informaion I can obtain the head of Lee's army is at Martineburg; there is quite a force front on the plank road between Fredericksburg and Chancellorsville." Now comes the famous telegram of Mr. Lincoln, so characteristic of the man, which contains a vein of humor, a little sarcasm and a very large amount of military strategic suggestion. This telegram will be found on page 39, series 1, volume 27, part 1: "WASHINGTON, June 14, 1863, 5:50 p. m Major General Hooker, Fredericksburg, Va.:

So far as we can make out here the enemy have Milroy surrounded at Winchester and Tyler at Martinsburg. If the head of Lee's army is at Martinsburg and the tail of i s on the plank road between Fredericksourg and Chancellorsville the animal must be oretty slim somewhere. Can't you breck im?
A. LINCOLN."
It only remains to be said that Hooker did not break him at that time, but in sixty days the great struggle at Gettysburg took place which decided the issue and resulte

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