

Assaying of Bullion and Local Settlements With Owners Important Considerations.

## EXPLAINS COMPLETE PROCESS

### Course of Gold from Receipt to Sale Entertainingly Described for The Layman.

L. S. Kerfoot, of the United States treasury department who is superintending the installment of a federal assay office in Salt Lake, said this morning that the general public and even those interested in the installment of the assay office hardly realize the great advantages to the state and district of this new move of the treas. ury department. It is planned to open the office Jan. 1, 1909.

The gold and silver bullion which is produced in this district will be taken to the assay office and after being assayed, the mint, through the local assay office, will pay for the buillon the day after the assay is made. The money will be paid out in Salt Lake and will be deposited in Salt Lake banks and as it is given out here much of it will be spent here. To give an idea of the amount of money handled by an assay office of this type, Mr. Kerfoot said that on the establishment of the Seattle federal assay office it was caluculated that the oupput would be approximately \$2,000,000. One year after the office had been in operation it was found that instead of \$2,000, 000 the output amounted to \$20,000, 000. Therefore even an approxima-tion of the amount to be handled by the new office would be impossible but it will climb into large figures according to the productiveness of the

district. ONLY FIRST MOVE.

The establishment of a federal assay office here is also the first move to-ward having a United States gold refinery here. Mr. Kerfoot said that he did not know that such would be the case but, as it had proven in other

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cities, it might mean in Salt Lake, in time, the location of a federal re-

finery Another and not an insignificent advantage of having an assay office here is the saving to mine owners and banks of the freight and insurance in

banks of the freight and insurance in shipping bullion. At present the bul-lion is shipped to Denver, where the nearest assay office is now located. The freight on each \$1,000 amounts to about \$2, and the insurance the same. When large shipments of bul-lion are made the time in traveling between Sait Lake and Denver is con-siderable and the interest upon the gold shipped goes up fast. A government assay office is a re-A government assay office is a re-ceiving depot of the mint and the employes of such an office hold quite as responsible positions as do the em-ployes of the mint. All in connec-tion with the local office will be re-

### quired to put up a heavy bond. THE WORK DONE.

Following is the process to be used and the arrangement of the work as explained by Mr. Kerfoot,

Seven members of the office staff, those who do the practical work of assaying, will be civil service men, who have taken and passed the civil service examinations. The superinten-dent and cashier will be appointed by

the president. No\_builton will be received with more than 800 parts to the 1,000 parts of base; that is, more than eight-tenths foreign material. Any quantity of builton will be received sufficient in value to pay the assaying charges.

The charge will be \$1 per assay re-gardless of the size of the bar or quantity of bullion. An additional charge of 4 cents per ounce for refining will be charged and in particular cases an alloy tariff will be charged. The of-fice will be arranged so that the pub-le or ouncer of builting construction lic or owners of bullion can watch their bullion through the entire pro-cess until the cashier writes a check to their order on a New York bank.

GUARD AGAINST DECEPTION.

Two clerks will receive the bullion and each weigh it independently of the other; they will then compare their respective weights in the presence of the owner of the bullion. The metal will then be taken to the melting room where it will be melted in a ber Thie white it will be melted in a bar. This is to see that the metals in the bar are thoroughly mixed. Mr. Kerfoot cited a case in San Francisco where silver nuggets had been gold plated with the object of deceiving the mint of-ficials. The melting is done to guard against such decentions. The samples against such deceptions. The samples will then be taken by two assayers. One will take a sample from the top

will then be taken by two assayers. One will take a sample from the top of the bar and the other from the bottom of the bar. Each assayer will make a test of the sample independ-ent of the other and they will not be allowed to compare notes. Each assayer will weigh out a given amount of the gold shavings or gold filing which will constitute the sample. the sample will be wrapped in lead foil and two-thirds the amount of silver that there is gold will be added. The sample will then be fused in a gas furnace and the lead, copper or whatever base metals the sample may contain will be oxidized and thus driven off or will be absorbed in a cupel of bone-ash. The silver and gold will re-main in this cupel in a small round button. This button will then be rolled into a thick foil and placed in a flask with dilute nitric acid which will dis-solve the silver and leave the gold in the bottom of the flask as a black the bottom of the flask as a black spongy mass. This mass will be re-moved to a small porcelain crucible and again put in the furnace when the black portion of the sediment, carbon will be burnt up and leave the gold bright and shining. This is called the annealing process.

#### READY TO WEIGH.

The gold is then ready to weigh, as it has been separated from all base metals such as copper, iron, etc., and other foreign matter that might have

other foreign matter that might have been present. The weighing is done on very delicate scales which weigh to five-hundredths of one milligram. These scales are so fine that they will weigh a dot upon a piece of paper. The two assayers weigh the produce of their samples separately and when the re-sults are compared they must agree within four ten-thousandths in the scale of fineness ratio used in the original weighing of the sample. While the as-say is in the furnace, that none of the weighing of the sample. While the as-say is in the furnace, that none of the gold may be carried away with the volatilizing base metals, a small quan-tity of borax is added which floats upon the top of the molten metals. Upon pouring some of the gold remains in the borax in the form of small globules. This borax slag is then ground up and

COFFEE Don't be shy; if you don't like Schilling's Best, take back your money.

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be colonel of the Eighth infantry, nov panned and the amount of gold re-maining is calculated in with the first in the islands, so he will merely switch

maining is calculated in with one may weighing. Immediately the assay is completed the bullion seller can get a check for the value of his gold. The gold bullion will be stored in vaults pending shipment to the Denver or San Francisco mints. The vaults will have a double combination, one-half of which will be in the hands of each of two clerks, thus it requires the two men each with their half of the each of two clerks, thus it requires the two men each with their half of the combination to open the vaults in the presence of the night watchman who records each time the vaults are open-ed.

MUCH CREDIT DUE. "The Utah senators," said Mr. Ker-foot, "deserve very much credit for ob-taining the assay office for Sait Lake and, in fact, the bill appropriating for its establishment was the only one of its kind which went through. Every thing was cut last year and the treas-ury department fought the appropria-tion but to no avail. The only reason, which proved sufficient, for opening up an office here was that Sait Lake was the only center of a large mining district which had no federal assay of-fice. There are at present seven such offices in the country. I have figured that the cost of running the office for the first six months installments, ma-terial and salarles will amount to \$13,000 per vear." MUCH CREDIT DUE. of salaries will amount to \$13,000 per

Civil service examinations will be held in Salt Lake Dec. 2 for the seven civil service positions connected with the office. J. U. Eldredge has been re-commended as assayer in charge. Ores or minerals of any kind will not be assayed at the federal office. Only bullion offered for sale to the mint will be tested.

will be tested.

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LAR. "We have in stock many colic and diarrhoea medicines," says R. M. White, a prominent merchant of Turtle Bayou, Tex., "but sell more of Chamberlain's Colic, Cholera and Diarrhoea Remedy than of all others put together." For sale by all druggists.

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Five cars choice Idaho potatoes

be colonel of the Eighth infantry, now in the islands, so he will merely switch stations, as the Twenty-ninth is in tho Philippines also. Then Maj. Reuben B. Turner of the Eighth infantry, sta-tioned as quartermaster of construction at Boise, and formerly lleutenant and later captain in the Sixteenth infantry stationed at Fort Douglas, has been made lieutenant-colonel of the Twenty' ninth infantry, to fill Col. Mason's place Captain Samuel V. Ham of the quar-termaster's department, who was sta-tioned in this city, during the recon-struction era at Fort Douglas, has been transferred back to the line, and is captain in the Tweitth infantry. The death is noted of First Lieut. George R. Burdett, retired, at Lincoh, Neb. The deceased was stationed at Fort Douglas for a short time late in the 'eighties but afterwards, for some time, at Fort Duchesne as an officer of the Ninth cavalry, under Lieut.-Col. Randlett. It was Lieut. Burdett who led a troop of colored cav-alry by forced marches into Rout county, Colo., where he rescued from annihilation the green Colorado militia, who had been sent into the field against Colorow and his big gand of renegade Indians, ready for a repetition of the Thornburg massacre. This ride brought about physical disorders which in 1891 necessitated the lieutenant's retirement from active service. He was never given proper credit for his feat; and from active service. He was never given proper credit for his feat; and the Colorado militia, after being saved from a second Custer-wipe-out, when from a second Custer-wipe-out, when the regulars had driven the Indians back into Utah, marched back to Den-ver to receive "the plaudits of the mul-titude as the heroes of the day."

HOW TO TREAT A SPRAIN.

Sprains, swellings and lanceess are promptly relieved by Chamberlain's Lin-iment. This liniment reduces inflamma-tion and soreness so that a sprain may be cured in about one-third the time required by the usual treatment, 25 and 50 cent sizes for sale by all druggists,

"The Guerilla"-"War is Hell"-Sherman. Crescent Theater, All Week.

PLAYLET PRODUCERS SUED.

Goss, Garrett and Howard Called to Account for Broken Contract.

Joseph F. Goss, James H. Garrett and W. H. Howard are made joint defend-

ants in a suit filed in the district court by Luke Cosgrave, wherein plain tiff asks for the sum of \$1,470 as dam-

experiences of early days. Mrs. Hanks is 83 years of age and had daughter of the late Isaac Decker, and wife of Ephraim Hanks whose name is closely associated with the ages for the alleged breaking of a con-

The complaint sets forth that on Sept. 20, 1908, an agreement was intered into between Mr. Cosgrave and the persons ract 20, 1905, and agreement of the persons named, whereby he was to be employed by them for a period of 42 weeks, at a salary of \$35 per week, to play the part of an Indian chief in a certain play upon the Orpheum theatrical elreuit, the engagement to begin Oct. 11, 1908. It is alleged that defendants refused to comply with their part of the con-tract and put an end to the same, not-withstanding that plaintiff was at all times ready to perform his part of the

times ready to perform his part of the agreement. SEVEN YEARS OF PROOF.

Electric Bitters in a case of acute in-digestion, prompts this testimonial. I am fully convinced that for stomach and liver troubles Electric Bitters is the best remedy on the market to-day." This great tonic and alterative medicine invigorates the system, puri-fies the blood and is especially help-ful in all forms of female weakness, 50c, as Z. C. M. I' Drug store, 112-114 Main street. SEVEN YEARS OF PROOF. "I have had seven years of proof that Dr. King's New Discovery is the best medicine to take for coughs and colds and for every diseased condition of throat, chest or lungs," says W. V. Henry, of Panama, Mo. The world has had thirty-eight years of proof that Dr. King's New Discovery is the best remedy for coughs and colds, la grippe, asthma, hay fever, bronchitis, hem-orrhage of the lungs, and the carly stages of consumption. Its timely use always prevents the development of pneumonia. Sold under guarantee at Z. C. M. I. Drug store, 112-114 Main street, 50c and \$1.00. Trial bottle free. Maln street. "The Guerilla"-"War is Hell"-Sherman. Crescent Theater, All Weck, CONFERENCE PAMPHLET NOW READY. NOW READY. Full proceedings of the seventy-ninta semi-annual conference of the Church of Jesus Christ of Latter-day Saints, held in the tabernacle and adjoining halls, Salt Lake City, Oct. 4, 5 and 6, are now ready. This was one of the most spirited and interesting conferences held in many years. These sermons and ad-dresses will not be printed in any other form. Price 25c post paid. DESERET NEWS BOOK STORE. 6 Main St.

FIRST AND LAST TO CROSS.

The demolition of the old Jordan bridge on Monday was marked by an interesting incident. Mrs. Harrie Decker Hanks, one of Utah's pioncer women, was the first woman to cross



being the last woman to cross by its way. Mrs. Hanks who is loyally proud of all pioneer memories and experienc-es, is justly congratulating herself on being the last woman to set foot on the landmark associated with many of her

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# DESERET EVENING NEWS SATURDAY NOVEMBER 14 1908 COLONEL MASON PROMOTED.

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Lieut. Col. Charles W. Mason of the

Twenty-ninth infantry, will learn with

interest that he has been promoted to

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42 inch wide Plain and fancy dress goods. A good range of fall and winter dress materials in new and staple colorings and the latest weaves Panamas, Batistes, Voiles, Mohairs, Serges, Scotch Plaids 59c and mixed suitings 85c to \$1.00 Sale.....

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All untrimmed shapes in felt and made-shapes, silk tops and velvet facings, which sell from \$3 to \$5, will be sold at half prices. Sale starts Monday.

TABLE CLOTHS, NAPKINS, TOWELS, ETC.72-inch Loom Dice Table Linen, 75c; Thanksgiving sale50c 50c 66-inch Bleached Table Linen, 69c 50c Thanksgiving sale50c 66-inch Bleached Table Linen, 69c 72-inch Cream Table Damask, every 79c Fancy Huck Toweling for scalloped and hem- stitched towels, 24 inches wide, Special price, 69c yard.Hemstitched hand-embroidered Bedspreads size 90x108 Inches. Special price for this sale as follows: Each, \$16.00, \$17.50, \$20.00, \$22.50 and \$30.00.5.500.00 worth of new fancy linens just re- roived. Retaissance, Japanese hand-drawn, French Cluny Lace and Irish Hand-embroidered Linens at special reductions for our Thanksgiving sale.	ODD PATTERN CLOTHS, No Napkins to match and must be closed out Size 2½32½ yards \$4.00 grade\$2.50 Size 2½32½ yards \$5.00 grade\$3.00 Size 2½32½ yards \$15.00 grade\$3.00 Size 2½32½ yards \$15.00 grade\$3.00 Size 2½32½ yards \$15.00 grade\$7.50 Size 2½32½ yards \$15.00 grade\$7.50 Size 2½32¼ yards \$15.00 grade\$7.50 Size 2½34 yards \$15.00 grade\$7.50 Size 2½34 yards \$15.00 grade\$7.50 Size 2½34 yards \$15.00 grade\$1.50 Cream Pattern Cloths, size 60x76 inches, Worth regular \$2.00 each. Special price	Moravian Damask Pattern Cloths and Napkins   Best values and most desirable designs of any known make of linens and absolutely guaranteed.   Size 2x2 yards, \$7.50 grade \$6.25   Size 2x3 yards, \$15.00 grade \$12.50   Size 2x42 yards, \$15.00 grade \$12.75   Size 21/4x24 yards, \$15.00 grade \$10.75   \$10.75 \$11.00   Size 21/4x24 yards, \$15.00 grade for \$11.50   Scalloped damask table cloths, beautiful designs and, very f ne quality.   Something entirely seen for see
72-inch silver bleached table linen, very fine quality. Reg. \$2, special \$1.29 Extra beavy Bleached Table Linen, 54 inches wide. Worth regular \$1.25 yard. Thanksgiving sale 9 - rd. 72-inch beached Table Linen. Regular price \$1.5. pecial, \$1.19. T2-inch bleached Table Linen. Very fine qual- ity. Worth regular \$2.60 yard. Special, \$1.29 yard. Bleached Table Napkins, size 22x22 inches Sell regular at \$1.50 dozen. Thanksgiving sale, \$25 dozen. Table Napkins, size 22x22 inches Sell regular at \$1.50 dozen. Thanksgiving sale, \$25 Silver Bleached Table Napkins, 24 inches square. Regular price \$4.00 dozen. This sale, \$3.00.		Something entirely new for round tables. Sizes 69x69 and 78x10 inches.   Reduced to \$12.50 and \$15 each. 20-inch napkins to match.   OUR ENTIRE STOCK OF PATTERN CLOTHS, WITH NAPKINS TO MATCH.   All new, desirable merchandise. A positive guarantee with every cloth and napkin.   Size 2x2 yards, \$5.00 grade \$3.15   Size 2x2 yards, \$5.00 grade \$3.19   Size 2x2 yards, \$5.00 grade \$3.19   Size 2x2 yards, \$5.00 grade \$3.19   Size 2x2 yards, \$5.00 grade \$3.50   Size 2x2 yards, \$5.00 grade \$5.50   Size 2x2 yards, \$5.00 grade \$5.50   Size 2x2 yards, \$10.00 grade \$5.50   Size 24x24 yards, \$10.00 grade \$5.50   \$10.00 grade for, dozen \$6.50   \$10.00 grade for, dozen \$6.50   \$10.00 grade for, dozen \$6.50   \$2-inch silver bleached table linen, regular priced \$1.50 a yard, 98c a yard
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