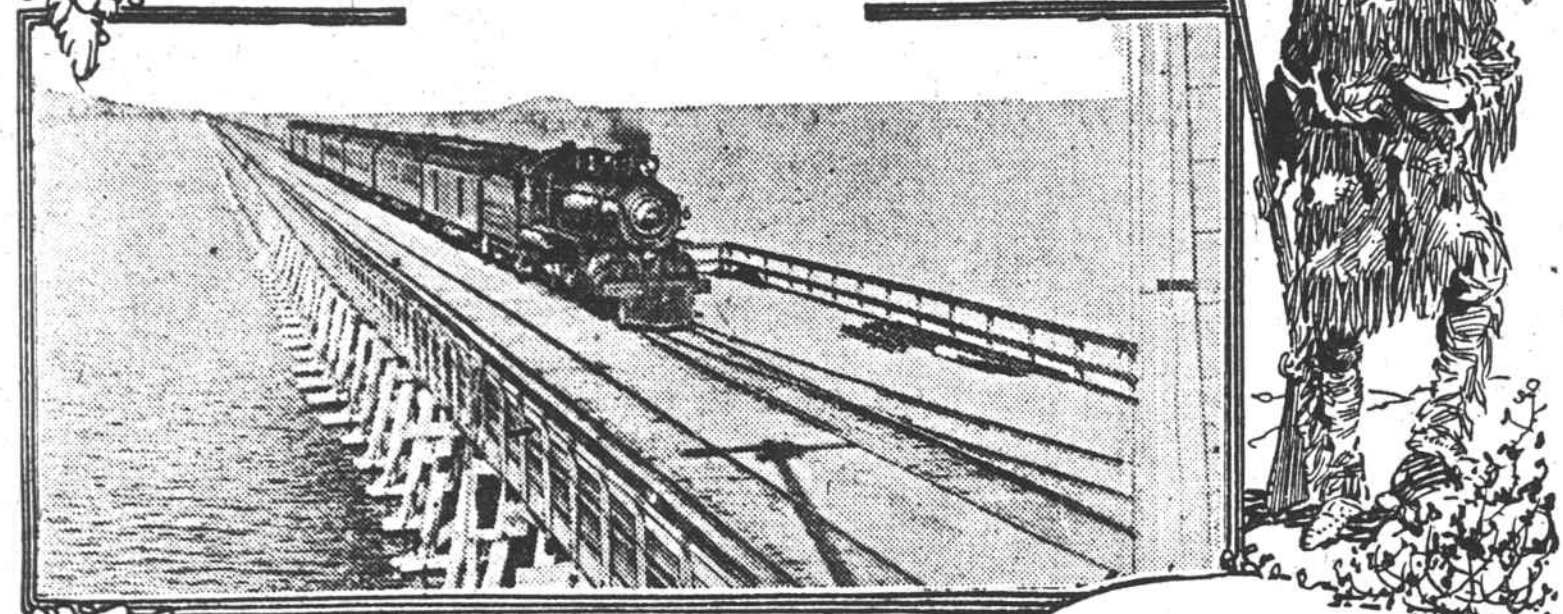
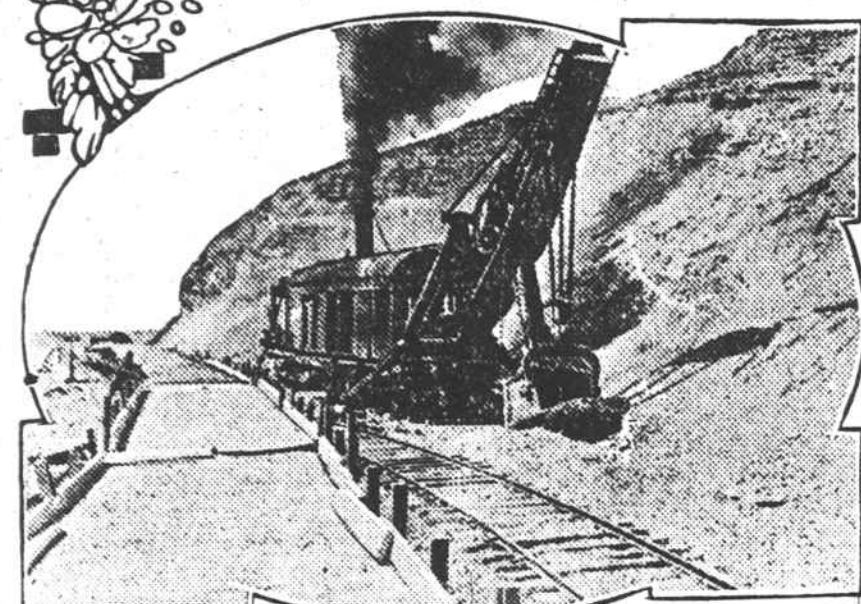


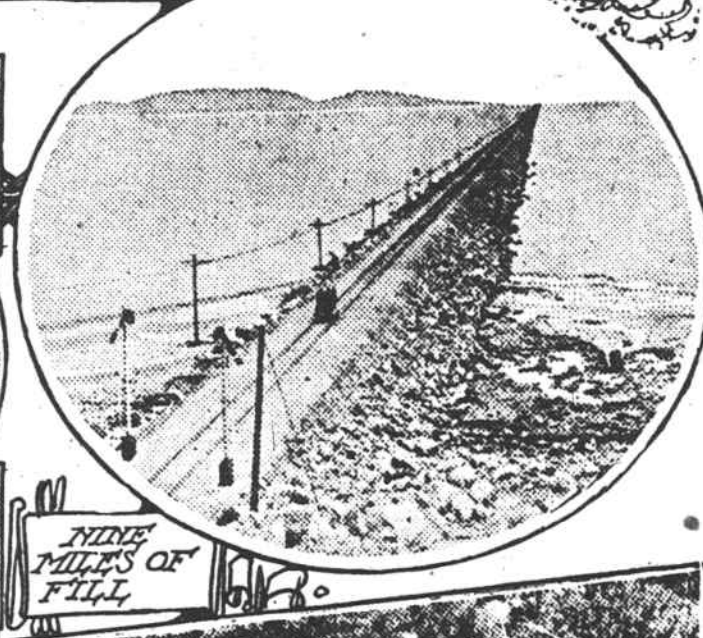
If "Old Jim" Bridger Came Back



TWENTY MILES OF TRESTLE



EARTH FOR THE BIG FILL



NINE MILES OF FILL

GREAT SALT LAKE AND ITS "LONGEST BRIDGE"



ISLAND PELICANS

WOULD HE KNOW IT?
If "Old Jim" Bridger came back to Great Salt Lake would he recognize it as the body of water he discovered in 1825? Just let your imagination travel up and down the century, during which the American has made the Utah desert to blossom like the rose. Would he know it? Or wouldn't he? What do you say?

By ROBERT H. MOULTON

AMES (otherwise known as "Old Jim") Bridger, plainsman, mountaineer, Indian trader, explorer, pathfinder, discovered Great Salt Lake in 1825. If he should come back now, he would be amazed to see the longest bridge ever constructed, where the tracks of the Southern Pacific railway cross the lake on a typical American timber trestle 20 miles in length. Originally this bridge was 28 miles in length, but eight miles of the trestle have been replaced by a fill.

Officially this bridge is called the Great Salt Lake cut-off of the Southern Pacific road. It is a railway line laid in an old lake bed from Lucin to Ogden, Utah, 103 miles. Part of this lake bed is dry, part is under water. The part under water is Great Salt Lake. The cut-off is as straight as the crow flies. It was built to save the greater grades and curves and distance of the old line. The curves the new line saves would turn a train around eleven times. The power saved in moving an average freight train because of lower grades, would lift an average man 8,500 miles.

Once upon a time, long ago, there was a great lake in Utah, far larger than the present Great Salt Lake. Roundabout was a lot of high land which looked like a saucer with mountains for its rim. This lake was a thousand feet deep. Its surface was just a mile higher than the face of the ocean. The lake was 346 miles long, 145 miles wide, and 2,250 miles around. It was almost as large as Lake Michigan, and much deeper.

The first man who wrote about it was Captain Bonneville, hero of one of Washington Irving's tales. In 1831 he saw the marks high on the cliffs where the waves once dashed. So the lake that once was has been named Lake Bonneville. But no one ever saw it, for it was all in prehistoric times.

Once a river ran from Lake Bonneville to the Pacific ocean. This river ran north through Red Rock Pass into the Snake river, and the Snake river runs into the Columbia, and the Columbia runs into the sea.

The place where Salt Lake City now stands was then 900 feet under water. But by and by there was less rain. Lake Bonneville grew smaller and smaller until it was no larger than Lake Erie. No stream now ran from it, for its surface was lower than the pass to the north.

Now, if you pour water into a pan, and set it out into the warm sunshine, by and by the water will be gone. It will have evaporated. But if there were ever so little salt in the water, the salt will still be in the pan after the water is gone.

Thus it was with Lake Bonneville. The rivers that ran into it had a little salt in them. So long as a river ran out of Lake Bonneville it carried this salt away as fast as it came in. But when no river flowed from it, and the water went up in the air by evaporation, the salt remained.

In time Lake Bonneville grew very salty. The seasons grew drier and drier until one hot summer day Lake Bonneville was no longer a lake of water, but just a lake of salt. No one knows how long Lake Bonneville was dry. Eventually, however, another change came. The seasons grew colder. The water did not evaporate so fast. Perhaps more rain fell and the rivers that ran into the saucer grew larger. At any rate, a new lake came where the old one had been. It was not so large as Lake Bonneville. At present this lake is very salty, and it is called Great Salt Lake.

Great Salt Lake covers 2,000 square miles, is 75 miles long, 31 miles wide and, in the deepest places, 30 feet deep. It is the most salty sea on earth except the Dead sea. In every five pounds of water is one pound of salts, of which 13 ounces are common salt. Geologists have estimated that Great Salt Lake is at least 23,000 years old. They calculate, moreover, that there are 400,000,000 tons of salt in its waters.

Every three years and a half the sun draws up from the lake as much water as is now in it. But the streams flowing into the lake keep it pretty well filled, just the same. The water in the lake is so heavy that one cannot sink in it. There are no fish in Great Salt Lake. A shrimp rarely exceeding one-third of an inch in length lives there. Certain young flies live in the lake before they get their wings. Seagulls make their home along the shore, and thousands of pelicans have their homes on the islands of Great Salt Lake. It is said that no one knows where they came from.

Fifty years ago and more, some very enterprising and able men said they would build a railroad across the country. They did so. They built the Union Pacific east from San Francisco. In 1868 they came to the flat, broad bed of Lake Bonneville. But Great Salt Lake lay in the center and

barred the way. So they built the track around the lake to the north. A third of a century later there was much more business. Engines were five times as large. Freight cars would carry five times as much weight. Between Ogden and Lucin was a fine, level roadbed made by Lake Bonneville. Only Great Salt Lake, 30 feet deep, lay in the way. And so every day trains were lifted in curves 1,500 feet higher and carried 34 miles farther than would be necessary if a road were built straight across the lake.

So the Southern Pacific railroad men looked at the old grade over the mountain and then at the level way across Great Salt Lake and they said: "Let us build a cut-off, a straight, level line, over land, through water from Lucin to Ogden."

They did so. And thus came into being the longest bridge in the world. The aim of the chief engineer was to build a mile and a quarter of trestle a week—over a thousand feet for each working day. In June, 1902, trainloads of steel rails reached the lake. In July came the first piles. Many of the latter were so long that three cars had to be chained together as one to carry them. Three thousand men were at work. In the cold of winter and the heat of summer there was no stopping. Steadily the great pathway grew. Each day the pile drivers made hundreds of yards. Each day the pit men loaded hundreds of cars of gravel—sometimes 400 cars.

It was an army at work in a salt desert. Sixteen hundred and eighty tons of fresh water were used each day. All of it was brought many miles by train—some of it 80 miles, some 130 miles.

More piles came. All told, 36,256 trees were cut down to make the great trestle. A forest of two square miles was transplanted into Great Salt Lake. Placed end to end these piles would make a great tree that, fallen, would reach from Chicago to Buffalo. On several occasions the piles were driven so fast that the trestle grew at the rate of 1,140 feet per day. Every 15 feet five piles are driven in a row crosswise to the track. They are fastened together on their sides with heavy timbers four and eight inches thick. Across their tops and joining them together is a heavy beam 18 feet long and a foot square. Connecting this beam with the next set of piles 15 feet away are 11 heavy timbers (stringers) laid lengthwise with the track. Above these stringers is a plank floor three inches thick. Above that is a coat of asphalt, then a foot or more of rock ballast, in which the track and rails are laid. The floor of the trestle is 16 feet wide, and the lumber above the piling would make a boardwalk four feet wide and an inch thick from Boston to Buffalo.

able time. It will not only deal with trophies which are of high material value, but it will bring in many a tale of romance; for no Indian jewel of the first order is without its story of adventure.

A Man's Woman.
The Woman hadn't seen her since schoolhood days spent together. Rapidly they hurled questions at each other. The Woman heard she had married a splendid man and the Woman rejoiced, for such a girl should

have married happily. She had always had so much attention; so many had craved the lifetime job of making her happy.
"And so you've two big boys now," the Woman repeated.
"Yes," her friend replied, "and a baby, too."
"The baby is a little girl, I suppose," the Woman said.
"Oh, no!" answered her friend, "the baby is a boy, too. You know, I always was a man's woman!"—Chicago Journal.

The Kitchen Cabinet

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It never troubles the sun that some of his rays fall wide and vain into ungrateful space, and only a small part on the reflected planet. Thou art enlarged by thine own smiling.—Emerson.

GOODIES THAT WILL KEEP

Stuffed dates, figs and prunes are always a dainty enjoyed by young and old.

Ginger Dates.—Remove the stones from large dates and fill with equal quantities of chopped ginger and nuts, using the preserved ginger and moisten with a little of the ginger sirup. After filling the dates, roll them in granulated sugar and pack in boxes, covering with waxed paper.

Fruit Rocks.—Cream two-thirds of a cupful of butter with one cupful of sugar, add two beaten eggs and when well mixed add one and one-half cupful of flour which has been sifted with one teaspoonful each of cinnamon and cloves. Add one pound of walnuts, one pound each of raisins and dates. When all are well mixed add a teaspoonful of soda dissolved in one and one-half tablespoonfuls of hot water. Stir well and drop on buttered tins by half teaspoonfuls. Bake in a moderate oven.

Tutti-Frutti Candy.—Dissolve one-half pound of granulated sugar in three-fourths of a cupful of water, bring to the boiling point and boil to the soft-ball stage. Chop one-fourth pound of crystallized fruit and add with one teaspoonful of vanilla. Beat until creamy, pour into a buttered tin and when cool cut into squares.

Cinnamon Cakes.—Take one-half cupful of butter; work until creamy; add one-half pound of sugar and gradually three beaten eggs. Add flour to make a mixture to roll; add cinnamon until brown and work it into the dough. Let stand in a cool place over night. Roll out in the morning as thin as possible, cut into shapes and brush with the yolk of egg; sprinkle with sugar. Bake in a quick oven.

Sea Foam.—Take two cupfuls of sugar, one-half cupful of corn sirup and one-half cupful of water. Boil to the soft-ball stage, add almond flavoring and pour over two stiffly beaten egg whites; beat until stiff, add chopped almonds and finely-minced candied cherries. When stiff, drop by small spoonfuls on a waxed paper.

Nut Cookies.—Cream one-half cupful of butter with two cupfuls of sugar; add one cupful of sweet milk, three eggs, two teaspoonfuls of baking powder, one-half teaspoonful of salt, one cupful of walnut meats, broken in bits. Mix with as little flour as possible; chill before rolling out. Roll out and sprinkle with sugar before baking.

The man who is ever seeking to do his best is the one who is keen, active, wide awake and aggressive. He is ever watchful of himself in trifles. His standard is not "What will the world say?" but "What is worthy of me?"

SEASONABLE DAINTIES

During the winter months when fruit, such as oranges, lemons and grapefruit are plentiful, most delicious candied sweets may be prepared from the peel.

Candied Orange Peel.—Cover the peel of four oranges with two quarts of water, bring slowly to a boil and simmer until the peel is tender. Drain and let stand for two hours. Remove all the white inner skin and when the peel is dry cut into strips. Boil two cupfuls of sugar with one-half cupful of water until it spins a thread. Put in part of the peel and boil for five minutes; remove with a fork and roll in granulated sugar. Grapefruit or lemon peeling may be treated in the same way; a mixture of the three makes a very nice confection to serve with a cup of tea.

Candied Cranberries.—Put two cupfuls of sugar on to boil with three-fourths of a cupful of water. Boil slowly for five minutes. Wash and dry two cupfuls of large, hard, dark red cranberries, place each with a darning needle, then spread the berries in a single layer on a granite pan. Pour the sirup over the berries and set them into a moderate oven until they are almost transparent. Remove and dust with powdered sugar if desired.

Fruit and Nut Paste.—Take two cupfuls of dates after stoning, one cupful of peanut butter, one teaspoonful of salt. Wash and dry the dates and put through a meat chopper, add the peanut butter and mix well with the salt. Take spoonfuls of the mixture, shape into small apples, put a currant for the blossom end and a piece of candied lemon or orange peel for the stem.

Raisin Pie.—Line a pie plate with pastry. To one cupful of seeded raisins add the grated rind and juice of a lemon; beat two egg yolks and mix with one-half cupful of sugar, add a cupful of water, a bit of salt and a few bits of butter. Put into the pastry shell, cover with a crust and bake thirty-five minutes.

Nellie Maxwell

COATS FOR THE CHILDREN;

TAILORED DRESSES POPULAR

WHILE the fancy of the designer of children's clothes lightly turns to thoughts of spring and he busies himself only with things for the new season ahead, the weather man continues to hand out a brand of temperature that discourages a belief in spring. But designers have a good record behind them. Their coats for children and misses are above criticism this winter and now is a good time to invest in them for present and for future use, for the holidays are past and merchandise must be closed out.

Models for little girls are made of warm, durable and attractive mate-

weather and fastened with a button. The time-honored two-piece tailored suit has strong rivals—or allies—in the wardrobe of the busy woman who spends much of her time in street clothes. The three-piece suit and the all-day dress (including the coat dress) prove a welcome change from the blouse and skirt combination, especially to business women. We appear to be gliding into a tailored mode for spring, and a tailored mode with a number of interesting innovations, as predicted by Paris.

Innovations are in evidence in the coat frock at the left of the two all-day dresses illustrated, appearing in



Simple Style in Child's Coat.

als, nearly all of them cut on straight lines to be worn with or without a belt. Fur, in collars or in bandings on collar and cuffs, is as universally used as on coats for grown-ups. For children they are of the inexpensive sorts and the plainer fabric furs or woven furs, are liked for them. As a decorative feature nothing is quite so well thought of as plaits, with box plaits in the lead on coats for juniors. A little simple embroidery, a few buttons and occasionally a sleeve, somewhat fancier than the plain coat sleeve, are allowed on models where the element of style is much considered and narrow patent leather belts add a snappy touch as shown in the coat pictured.

This pretty affair is fastened with two round buttons at the neck and is decorated with groups of small plaits. The sleeves are full and shaped into a narrowed cuff. A saucy

heightened waistline and fuller side panels. The skirt is short enough for convenience and the lengthened style feature by their shape and trimming of silk braid. This is an adaptation of the straight-line dress that will prove becoming to slender figures. Designers appear to be so engrossed with making slender clothes for stout women that her thin sisters are considerably neglected.

The straight-line frock at the right is flattering to full figures and is trimmed with narrow braid used lavishly and in a strong contrasting color. This color contrast is another innovation that is appealing in bands of printed silk or embroidery in Persian, Bulgarian and cashmere colorings on dark-colored dresses.

Serge, broadcloth and wool jersey are returning favorites that are fea-



Two Pretty Examples of Tailored Dresses.

felt hat with trimming of narrow ribbon and a chin strap tops off this smart coat.

For girls from eight or nine years to their mid-teens, plain straight coats, often decorated with box plaits, are popular. The body of the garment is often set on to a yoke. Fancy stitching in simple designs, usually provides the ornamentation that is sparingly used on them. They are nearly all provided with fur collars that may be brought up about the throat in cold

tured in street dress. They will do their capable part toward promoting a vogue for tailored clothes.

The three-piece suit, that is a suit with blouse and skirt joined together and worn under a coat, cape or jacket, is the center of interest in tailored clothes for spring.

Julia Bottomley

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The History of Jewels

The gawkwar of Baroda who has a fine record as an Indian ruler, and an upholder of British rule, is one of the best authorities in India on oriental gems and stones of historic interest and beauty. He has for years been collecting material on which to base a book about those treasures of the Orient. He has now got to work on it, and as he is a practiced author he hopes to complete it within a reason-