

BRIDGE BUILDING AND ITS RESULTS.

What It Has Done for Utah and
Adjoining States Since Arrival
Of the Pioneers,
EARLY SETTLER'S EXPERIENCES.

Timely Suggestions on the Best Way
To Make Durable and Effective
Culverts.

At the Good Roads' convention held
in this city on Wednesday last, a num-
ber of valuable papers were presented.
Among them was one on "Bridges and
Culverts," by Commissioner Joseph
Stanford of Weber county, who spoke
as follows:

The subject of subjects of bridges
and culverts upon which I have been
requested to address the convention is
one of considerable importance. To
treat these subjects from a civil engi-
neer's standpoint I am wholly incap-
able, not being either theoretically or
practically a member of that profes-
sion. My remarks therefore, will be
based upon observation associated with
some practical experience obtained
through the force of circumstances in
connection with municipal and county
affairs.

It is now about 25 years since Utah
was first settled. The situation of the
pioneers or colonists of that early pe-
riod is well known to those who have
made themselves familiar with the his-
tory of the past. The only source of
wealth enjoyed by the pioneer was his
power, enterprise and thrift, backed by
muscular strength and physical endur-
ance. Rivers and mountain streams
had to be crossed to enable them to
explore and locate in different sections
of the country. This was generally ac-
complished by ferrying and fording.
Bridges were built to cross the most
turbulent streams, often at a great loss
of time in travel, besides much incon-
venience.

Through lack of money and other
available means these structures were
necessarily rudely built or constructed.
In many instances rough logs spanned
the embankments. Heavy logs, poles or
slabs were frequently used for the top
covering. In some instances abutments
were built of logs to protect the
bridges against the force of the strong
currents, but however strongly built
these structures frequently failed to re-
sist the powerful pressure of the wa-
ters and many bridges were carried
down the streams.

EARLY DAYS IN UTAH.

Where the roads were of a solid,
rocky formation, fords took the place
of bridges or culverts. Upon my ad-
vent into the territory in the fall of
1841, I walked from Salt Lake City to
Cachup Valley. En route as I passed
through Boxelder canyon I came upon
the little settlement of Copenhagen,
then a small village of dugouts. Ere I
entered the precincts of this settlement,
I came across a deep stream, too wide
for the pedestrian to span by jumping.
Necessity compelled me to change the
position of my clothing and I waded to
the opposite shore. This chilly event
will never fade from my memory. In
1844 I well remember being ferried
across several streams on my way to
Sanpete.

Up to and including this period in
the history of bridge building, natu-
ral wood used but seldom, or merely
including hardware, of every descrip-
tion, was freighted across the plains by
ox teams. Nails were then worth \$1
per pound. Foss or nails made of wood
were of necessity most generally used.
As time improved by the opening up
of mining interests in Montana, trade
and barter gave way by degrees to the
circulation of money, or greenback cur-
rency, and a substantial, costly
bridges were erected. Much difficulty
was experienced at times in finding
suitable foundations for abutments.
The first substantial truss bridge that
spanned the Weber river within the
limits of Ogden city corporation was
built in 1880 jointly by city and county.
Piles had to be driven to a great depth
and upon them a table of heavy plank
was laid, upon which to place the rock
masonry abutments. At the present
this treacherous, turbulent stream is
spanned by a substantial steel struc-
ture. At intervals of a few years, three
other steel bridges were made to adorn
the crossing of this river, the last be-
ing built about four years ago near the
site of Plain City. A like experience
attended the erection of bridges over
the Ogden river in Weber county. The
board of county commissioners of We-
ber are now under contract with A. M.
Hodgett, a bridge builder of Kansas
City, for the erection of five steel
bridges at different points crossing the
Ogden river and its tributaries in Og-
den valley.

For many years the wooden truss
bridge proved to be the most service-
able and durable when constructed by
competent mechanics. Sixteen years
ago one of this class was erected near
the mouth of Weber canyon on the
boundary line between Weber and Da-
vis counties. An examination of this
structure last season gave evidence of
some decay in the cord at the founda-
tions. Slight repairs being made, this
bridge will probably last for two or
three years longer. Where funds cannot
be commanded to erect the steel or
concrete structures, this make of
bridge has been demonstrated to be the
most enduring.

STEEL TUBULAR ABUTMENTS.

In the building of bridges, due regard
and special attention must be paid to
the abutments. Our experience favors
the steel tubular abutments. In these
tubes, three piles are driven down to
bedrock, and then filled with cement
concrete. A deep solid foundation must
be obtained. Where the force of the
current will not admit of this class
of abutments, then use heavy rock
work.

This connection let me say that at
Bentley or Port Costa on the line of the
Southern Pacific railway, where trains
are ferried across the bay, skillful en-
gineers have been investigating the al-
titude, as heretofore it has been
deemed impracticable to place abut-
ments in this stream sufficiently dura-
ble to resist the great pressure of the
moving current. These engineers re-
ported that in their investigation it has
been demonstrated that a good, solid
foundation can be obtained and a
bridge can be successfully erected by
driving down large steel tubes, so con-
structed as to resist the force of the
water currents. They should be built
sufficiently strong and durable to bear
the weight of traffic passing over them.



ANGEL CHILDREN.

Is there any happier
woman in this world than
that mother whose each
successive little one seems
to her but one more dar-
ling angel to continually
lift her thoughts toward
the sunshine of perfect
happiness? But sorry is
the lot of that poor moth-
er to whom motherhood
has ceased to be a cause
of rejoicing, but has be-
come a burden to be de-
plored and looked for-
ward to with melancholy
and apprehension.

About three
months before our
last baby was born
(which is our
fourth), writes
Mrs. Nellie Carl, of
Myrtlepoint, Coos
Co., Oregon, "my health was very poor,
I had been troubled for about eight years with female
disease. I doctored with good physicians but
obtained no relief, so I wrote to the World's Dis-
eased Medical Association and was advised
to take Dr. Pierce's Favorite Prescription and
"Golden Medical Discovery." I did so and am
happy to say my health began to improve and I
did my work up to the last, and fell dead."

"I got along finely during confinement, and
have the healthiest baby I ever saw. When he
was three months old he weighed eighteen
pounds, he is now seven months old and weighs
twenty-four pounds. I can say I have had no
trouble in my old troubles. I thank you very
much for the good you have done me."

Any woman may write to Dr. R. V.
Pierce, of Buffalo, N. Y., a statement of
her case, which will be considered in ab-
solute confidence by the physician who
stands among the foremost specialists of
the century in the treatment of women's
diseases. He will send her (in a plain,
sealed envelope) sound, sensible, valu-
able advice free of all charge.

Dr. Pierce's great thousand-page, il-
lustrated Common Sense Medical Ad-
vice will be sent free, paper-bound, for
21 one-cent stamps, to pay the cost of
mailing only, or cloth-bound for 31
cents.

AS TO CULVERTS.

Culverts are most generally made of
lumber. Experience has proven that
native red pine, free from knots, is the
most durable and lasting. On roads
ways from four to six rods wide, cul-
verts should be at least 20 feet in
length, especially so where the culverts
connect with water ditches one foot or
more both in depth and width. Regard
must be had to the location of the cul-
vert, being large enough and so imbedded
in the ground at an angle to readily con-
vey the water without any obstruction.
They should be placed as nearly as
possible on a level with the roadway.
Where it becomes necessary to have
them raised above the level of the road-
way, the approaches should be gradually
graded up, so as to protect the cul-
vert from the friction and wear of
passing travel.

In localities where tile piling is
manufactured, it has been satisfactori-
ly proven that more lasting and bene-
ficial results can be obtained by its use
than by the use of lumber. In all cases,
however, this tile piling must be placed
from 12 to 18 inches below the surface
of the ground. Where large deep fills
are made in roadways crossing a
stream of water, the use of this piling
from one to two feet in diameter is ex-
tremely beneficial, although the first
cost is much greater than that of lum-
ber. It is by far more satisfactory and
very durable in the end, because
of its long wearing durability.

However, experience has demonstrat-
ed that waterways in crossing public
roads, where the volume of water justifi-
ably requires a substantial, costly
bridge, the use of culverts, with a
top covering of flat slab rock is by far
the most solid and lasting. Where cul-
verts of this class have been placed and
heavy fills of earth cover them, they
will last for years, if not for all time,
unless disturbed by unavailability of the
earth caused by seismic or earth-
quake disturbances.

By sustaining us you enrich the west.
By enriching the west you enrich your-
self.

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216-8 Des. News Bldg.,
Salt Lake City, Utah.

PROSECUTION FOLLOWS ABUSE OF PRIVILEGE.

To the Editor:
At Oak Glen on Thirteenth East street
near Westminster College grounds, the
quail have been quite abundant and
very tame until the middle of this month.
Since that time the hunters have been
making inroads and shooting quail in-
discriminately. The sportsmen seem to
think that because the last Legislature
gave them the privilege to shoot quail
between the 30th of Sept. and the 15th
of October, this carries with it the
right to enter private premises and
take the birds at will as also to com-
mit other depredations.

The owner of Oak Glen has hitherto
been very lenient with the gunners and
public in general in permitting them
to pass over the place and take the
game at their pleasure, though he does
not favor the privilege of any one but
those of his own household. Since the be-
ginning of the month, however, hunters
have been quite numerous, there having been
as many as ten at a time on the place.
They have been trespassing on the prop-
erty of the owner, and in the process of
quest of quail, discharging their guns
indiscriminately, or otherwise, some of
the leaden contents of the guns finding
their way into the waving of clothes
hanging on the line not far in the rear
of the dwelling houses. Numerous
shots had gone through the clothing on
the line and others lodged therein.

There was a nice patch of watermelons
on the place, which were for the
most part green. The invaders snuck
up and carried off the majority of the
largest and nicest melons some of them
weighing from 15 to 20 pounds near by
this morning. Had those who helped
themselves waited till the melons were
ripe and then made proper application,
the owner would have gladly divided
up with them.

By the abuse of privileges we for-
feit them. The owner has now com-
menced to legally prosecute all trespass-
ing, hunting and shooting on his prem-
ises. S. SCHUBERT.
Salt Lake City, Oct. 5, 1905.

TEA

One can't describe good
tea; you must taste it, drink
it, feel it, think of it.

Your grocer returns your money if you don't like
Schilling's tea.

CHURCH NOTICES.

The general conference of Religion
classes will be held in Barratt hall at
4.30 p. m. Saturday, Oct. 7. All state
officers and Religion class workers are
expected to be present.
ANTHONY H. LUND,
RUDGER CLAWSON,
JOSEPH M. TANNER,
General Superintendency.

There will be a meeting of the gen-
eral, state and local officers of the Mu-
tual Improvement Association held
Monday, Oct. 9, 1905, in the Fourteenth
ward assembly hall at 10 a. m. All in-
terested in M. I. A. work are cordially
invited.

MARTHA H. TINGEY, Pres.
ANN M. CANNON, Secy.
A meeting of the general, state and
local officers of the Primary associa-
tions will be held in the Salt Lake As-
sembly Hall, Saturday, Oct. 7, at 4 p. m.
All interested are cordially invited.
LAURIE R. FELT, Pres.
MAY ANDERSON, Secy.

The regular meeting of the Relief so-
ciety officers of Liberty stake has been
postponed for one month on account of
conference.
ANNA W. MUSSER, Pres.

On account of the general conference,
the Stake Priesthood meeting of the
Salt Lake stake has been postponed
from Friday, Oct. 6, to Friday, Oct. 13,
1905.

NEPHI L. MORRIS,
GEORGE R. EMERY,
EDWARD J. WHITON,
Stake Presidency.

The regular Primary officers meet-
ing of the Salt Lake Stake, will be
held on account of conference un-
til Saturday, Oct. 14, 1905, at 2 o'clock,
in the Sixteenth ward meetinghouse.
ELEANOR R. JEREMY,
President.

SARAH W. DAVIS,
Secretary.

A Scandinavian meeting will be held
in the Assembly Hall on Sunday af-
ternoon immediately after the general
conference. All Scandinavians are cor-
dially invited.

J. LAWRENCE,
C. M. NEILSEN,
H. P. NEILSEN.

Friday, Oct. 6.—Reunion of Northern
States Missionary society, Pioneer
stake hall, Fifth South between West
Temple and First West streets,
from 5 to 11 p. m.; reunion of
Gothenburg Missionary so-
ciety, Fourteenth ward hall, 8.15 p. m.
Reunion of Hawaiian Missionary so-
ciety, Twenty-second ward meeting-
house, Third North, between Third and
Fourth West, 7.30 p. m.; Norwich con-
ference reunion, Twelfth ward hall, 8
p. m.; Newcastle conference reunion,
Barratt Hall 8 p. m.; reunion of Scottish
Missionary society, Seventh ward as-
sembly hall, Fifth South between West
Temple and First West streets, 8
p. m.; Sheffield conference reunion,
Thirteenth ward meetinghouse, Second
South between State and Second East
streets, 8 p. m.; Reunion of Southern
States Missionary society, Fifteenth
ward amusement hall, corner Eighth
West and First South streets, 8 p. m.

Saturday, Oct. 7.—Reunion of Stock-
holm Missionary society, Fourteenth
ward hall, 8 p. m.; reunion of Colorado
Missionary association, B. Y. Memorial
building, 8 p. m.; Nottingham Confer-
ence reunion, Room 21, B. Y. Memorial
building, 8 p. m.; general, state and lo-
cal officers of the Primary associations,
in the Salt Lake Assembly hall, at 4
p. m. All interested are cordially in-
vited; Manchester Conference reunion,
Ninth ward annex, Fourth South and
First East, 8 p. m.; Samoan Missionary
reunion, B. Y. Memorial building, 4
p. m.; Business meeting Southern States
Missionary society, Assembly Hall, 4
p. m.; Norwegian missionary reunion,
Thirteenth ward hall, 7.30 p. m.; North-
western States reunion, Eighth ward
meetinghouse, 8 p. m.

Sunday, Oct. 8.—Reunion of Holland
Society, room 21, B. Y. Memorial build-
ing, 4 p. m.; reunion of California mis-
sionaries, room 33, B. Y. Memorial build-
ing, 4 p. m.

TEMPLE NOTICES.

The Salt Lake Temple will close on
Thursday evening, Oct. 5, 1905, and re-
open on Tuesday, Oct. 10, 1905.

JOSEPH F. SMITH.

The Logan Temple will close on
Wednesday evening, October 4, and re-
open on Tuesday morning, Oct. 10, 1905.
W. W. MEIKLELL, Pres.

Manth, Utah, Sept. 22.—Notice: The
Manth Temple will be closed Sept. 20,
1905, and will reopen for ordinance work
Oct. 11, 1905.

JOHN D. T. McALLISTER.

"That Good Coal," 2,000 lbs. in Every
Ton.

RAMBERGER,
161 Meighn Street.

WESTERN MARKET LETTER

Special Correspondence.

Kansas City Mo., Monday, Oct. 2, 1905.—
Heavy cattle supplies and weak prices
have been the rule the past week.
Medium weight ranges steers, selling at
3.25 to 3.50, suitable for packers and
for the country, had some advantage in
the competition, and held steady, but
common steers and rough feeders de-
clined to 2.75 to 3.25. Killers also sold lower at
2.50 to 2.75 mainly, and cows sold at
2.25 to 2.50, with a few bunches up
to 3.00. Immense receipts of calves keep
coming, receipts more than 6,000 in the
past three weeks, 25 per cent more than
over before in a like period at Kansas
City. Nice light calves are scarce, and sell
at 3.00 to 4.00, but heavy calves averaged
medium to poor in quality, and sold at 2.00
to 3.00. Demand from the country was
better than anything in the line of calves
seen already, and everything, cows strong
and corn fed cattle in cents higher. Next
week is the American Royal Livestock
show and sales, but the event hereafter
brings a large attendance of feeders, buy-
ers looking for high class stuff.

Sheep, cows and calves last week 25,000 head,
run today 7,000. Prices declined 10 to 25
cents on killing sheep and lambs last
week, but from the country demand was
large enough to hold prices nearly steady
on that kind. A consignment of 25 dou-
bles of breeding ewes from Idaho sold
last week at 4.25, weighing 102
pounds. Feeding lambs sold at 3.50 to 6.00.
Market today is strong, lambs for slaugh-
ter at 4.00 to 5.50, weathers and yearlings
1.00 to 2.00, ewes 1.00 to 1.50. Demand is
plenty large enough to absorb any runs
likely to come, and prices will be gov-
erned by volume of receipts, as on that
will depend the amount of competition
aroused. That is to say, there is no dan-
ger of the market becoming demoralized.

ORCH STRAS.

N. G. F. Orchestra open for all en-
gagements. A. J. Elmer, Mgr. Phone
2625-2. Res. No. 321 So. 2nd East.

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during any season of the year, to all
points east, is via the Midland Route
for scenery service and equipment. The
line of more unique and interesting
mountain wonders than any other in
the world. It isn't so much WHERE
you go, it's HOW you go that counts.
Start right by seeing that your tick-
ets read via the Colorado Midland
Through Pullman Observation cars to
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Come in and talk it over, ticket office
77 Second South, Salt Lake. If you
are going east come in and see some
of our illustrated scenery books.



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The makers' guarantee, and ours, with every
garment bearing this label.
We are exclusive agents here.

Poulton, Madson, Owen & Co.
111-113 Main Street
"Where the Clothes Fit"

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CIGARETTE AND TOBACCO
HABITS CURED BY

TRIB

Guy Supinger writes:

In request of your letter that I re-
ceived at Valley, asking me how I
was getting along with "TRIB," I
must say it is fine. I began taking it
the next day after receiving it.
"TRIB" is all right and I recommend
it to all as a cure for liquor and to-
bacco. I remain

We give you an absolute guarantee
with every treatment. Price \$12.50.

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Come now before the railroad. This same
land will cost you next spring. Liber-
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The Season's Newest and Best in Clothing, Hats and Furnishings for Men and Boys
at Prices that will astonish you. It will pay you to see them.

WE MENTION A FEW OF OUR SPECIALS IN OUR MEN'S DEPARTMENT.

SHIRT SPECIALS

75c values at 49c
\$1.00 values at 69c
\$1.25 values at 98c
\$1.50 values at \$1.13
\$1.75 values at \$1.33

UNDERWEAR SPECIALS

\$1.25 values at 98c per Suit
\$1.50 values at \$1.19 per Suit
\$2.00 values at \$1.69 per Suit
\$3.00 values at \$2.49 per Suit

SUIT AND OVERCOAT SPECIALS.

\$10, \$12, \$13.50, \$15, \$17.50,
\$20.00 and 25.00 The best
values in the town for the money.
See them. Every Suit guaranteed.

HAT SPECIALS

\$2.00 values at \$1.45
\$2.50 values at \$1.95
\$3.00 values at \$2.35
\$3.50 values at \$2.45

DON'T MISS THESE SPECIALS

15c Hosiery at 8 1-3c
35c Linen Handkerchiefs at 19c
15c Handkerchiefs at 8 1-3c
50c Suspenders at 39c
35c Suspenders at 19c
50c Neckwear at 30c
35c Neckwear at 19c
75c Working Gloves at 49c
25c Boston Garters at 19c
50c Cuff Buttons at 39c
25c Cuff Buttons at 19c
Etc. Etc. Etc.

SPECIALS IN OUR BOYS' DEPARTMENT.

25c Stockings at 19c
50c Neckwear at 39c
50c Shirts at 39c
50c Caps at 30c
15c Handkerchiefs 8 1-3
35c Cuff Buttons 19c
Rubber Collars 19c

50c Knee Pants at 39c
75c Gloves at 48c
75c Underwear at 49c
\$1.00 Felt Hats at 85c
\$1.25 Underwear at \$1.00
\$1.50 Felt Hats at \$1.15

YOUR MONEY RETURNED IF NOT SATISFIED.

BARTON & CO.,
45-47 MAIN STREET.

CHEST AND LUNG PROTECTOR SALE.

A Chest Protector worn these cold
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air out of the lungs and may save
you a big drug bill. We carry the
Frost King and many other styles
in Silk, Felt and Chamol, 50c up,
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young and old, be wise and get
one before you catch cold. Both
phones 457. Remember the num-
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The First Thing We Have For Baby

Is the scales to weigh him on,
and we will send these free to
your address by one of our boys
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After we weigh the little
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thing for his needs while you
are raising him, and the princi-
pal ingredient in everything
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Onyx and Mahog- any Soda Fountain

Finest in the West.

HALLIDAY
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Opposite Salt Lake Theatre.
—STOP AND LOOK IN—

We Beg to Announce

That We Have Just Received a Shipment of the Re-
nowned

HAZELTON BROS. PIANOS

We Cheerfully Invite Your Inspection.

DAYNES & ROMNEY PIANO CO.,

EVAN STEPHENS, Prest. H. S. DAYNES, Mgr.</