

Correspondence.

SALT LAKE CITY, Mar. 22, 1871.

Editor Deseret News:—Having called attention to the advisability of laying the C. & E. R. R., with wood rails, I now propose to present some items in relation to their history, efficiency and relative cost.

Speaking of the first railways, Smiles says, "Still further to facilitate the haulage of the wagons, pieces of planking were laid parallel upon wooden sleepers or imbedded in the ordinary track. It is said that these wooden rails were first employed by Mr. Beaumont, a gentleman from the south in about the year 1630."

"The use of wooden rails gradually extended and they were laid down between most of the collieries on the Tyne and the places at which the coal was shipped. Roger North, in 1676, found the practice had become extensively adopted, and he speaks of the large sums then paid for way—leave—that is, the permission granted by the owners of lands lying between the coal pits and the river side to lay down a tramway for the purpose of connecting the one with the other."

"A century later, Arthur Young observed that not only had these roads become greatly multiplied, but formidable works had been constructed to carry them along upon the same level. 'The coal wagon roads from the pits to the water' he says 'are great works carried over all sorts of inequalities of the ground so far as the distance of nine or ten miles. The tracks of the wheels are marked with pieces of wood let into the road for the wheels of the wagons to run on, by which one horse is enabled to draw, and that with ease, fifty or sixty bushels of coal.'"

"St. Fond, the French traveler who visited Newcastle in 1791, described the colliery wagon ways in that neighborhood as superior to anything of the kind he had seen. The wooden rails were formed with rounded upper surface, like a projecting moulding, and the wagon wheels being made of cast iron and hollowed in the manner of a metal pulley readily fitted the rounded surface of the rails. The economy with which the coal was thus hauled to the shipping places was urged by St. Fond as an inducement to his own countrymen to adopt a like method of transit."

The first wooden railway in the States was constructed in 1860 by private enterprise, to facilitate transportation to and from a lumber mill on the Black River Railroad and canal. Since then another line, twenty-four miles long, has been laid from the Clifton iron ore beds, in St. Lawrence county, N. Y., to the Ogdensburg Railroad. Companies have been formed for the purpose of constructing similar roads, one of twenty-five miles in length from Houghton to Hancock through the mineral range or the Portage Lake, and another forty-seven and one half miles long, from Carthage, Jefferson county, via Harrisville, to St. Lawrence county, and designed to open up the rich iron ore beds in that section. Aside from their moderate first cost, which makes them available where iron rails would be too expensive, these wooden rails have the merit of necessitating no work which will not be of use in case it should be necessary to convert the tramway into a road with an iron track.

The Clifton road cost about seven thousand dollars per mile, and the expense of the Carthage road is expected to be about five thousand dollars per mile. The greater cost of the former was due to the mountainous nature of the region traversed and the numerous bridges necessary.

The manner in which the road is laid down is this: The ties, about twelve inches thick, are bedded in the grade at a distance apart of three or four feet. The rails are laid in notches formed in the ties to receive them, and are held in place by wooden pegs driven at the outer side of the rails.

One of the proposed methods of construction consists in the use of wood rails supported on cross ties recessed for their reception and placed two feet apart. The rails are keyed in place by wooden wedges, and are four inches wide by seven high, the cost being estimated at one thousand three hundred dollars per mile; or they are made in two thicknesses, spiked or bolted together and breaking joints with each other, costing about eight hundred dollars more per mile.

An experimental line was laid down near Vauxhall Bridge (near London) of 174 yards with gradients of 1 in 95—1 in 22 and 1 in 9 and a curve of 720 feet radius. The bite of the wheels on the

wooden rails was so much superior to what it would have been on iron ones, that in such a short distance they obtained a speed of twenty-four miles an hour and readily stopped in twenty-four yards.

The engine employed for the experiment weighed about six tons; it passed over the rails in two months about 8,000 times in every variety of weather. The rails were of Scotch fir, about six inches square, and upon examining them, when they were taken up, they exhibited no appearance of wear as the saw marks were not effaced.

It has been repeatedly demonstrated that an engine weighing ten tons will have more tractive power on wood than one weighing eighteen tons will on iron, and it is considered definitely settled that double the tractive power can, in most cases, be depended upon.

In some parts of Canada, where wooden tracks are employed, the rails are first boiled in hot pitch or resin which greatly promotes their durability as well as the adhesive surface for the driving wheels of the engine. This system of railway has been tried in the province of Quebec on a small scale.

The following estimate is for rails and ties at States' prices for materials:

Iron Rail, 56 lbs. per yard.....	\$5,000 per mile.
Blockwood, (End Grain).....	2,100 "
Double Rail, (Maple,) before mentioned.....	1,420 "
Single Rail.....	1,390 "

BY ANOTHER ENGINEER:

2,640 Ties, notched, at 20c.....	\$ 528 per mile.
25,000 feet Rails, at 10c.....	250 "
1,510 Wedges.....	50 "
Tracklaying.....	250 "
Total.....	\$1078

Of course it requires no very expert financier to tell us that an amount of traffic which would pay a respectable interest on an investment of \$1,500 per mile would only return a very fractional per centage on an outlay of \$5,000 per mile, and allowing iron rails to require renewing in fifteen years, and wood rails in three years, there is still a large per centage in favor of the wood.

One suggestion, and a very good one, where the climate is favorable, is to lay the line with locust rails, and at the same time plant the margin of the road with locust, which would furnish a supply of rails and ties in perpetuity.

The relative cost of ordinary locomotives, light locomotives and traction engines, and the kind of cars most suitable for the traffic, I must defer to a future time.

W. J. S.

WOODSUM, TENNEY & CO.

Manufacturers of

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PITT'S IMPROVED

THRESHING MACHINE,

HORSE POWERS,

GRAIN DRILLS, &c.,

DAYTON, OHIO.

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We say to the friends of the Pitt's Machine to be sure and get one manufactured at the Dayton Threshing Machine Works, Dayton, Ohio.

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I.L. CRACIN & CO.

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144 State St., - - - Boston.

Gross Assets, Dec. 31, '70, nearly 45 Millions.
Increase in Net Assets, for the 7 1/4 Millions.
year.

STATEMENT
OF THE
MUTUAL
LIFE INSURANCE COMPANY

OF NEW YORK.

144 and 146 Broadway,

For its Twenty-Eighth Fiscal Year,
Being for the year ending Dec. 31, 1870.

Richard Goodhind

Offices:—Opposite Salt Lake House,
Agent for Utah Territory.

Net Assets, January 1, 1870.....\$35,211,583 71

RECEIPTS:

Premiums and Policy Fees.....	\$12,169,717 34
INTEREST:	
On Bonds and Mortgages.....	1,983,398 83
Stocks and Trust Companies.....	286,344 57
Premium on Gold and Rents.....	108,029 73
Total Cash Receipts.....	\$2,477,772 68
Total Cash Receipts.....	\$14,647,490 02

\$49,859,073 73

DISBURSEMENTS:

Claims by Death.....	\$1,982,724 62
Matured Endowments.....	27,500 00
Paid to Policy-holders—Additions to Death Claims and Matured Endowments and Post Mortem Dividends.....	\$2,010,224 62
Cash Dividends in Reduction of Premiums and Annuities.....	2,564,896 87
Surrendered Policies.....	1,256,111 86
Total Cash Disbursements.....	\$4,113,955 37

Commission to Agents.....\$284,609 15

Paid Agents for Purchase of Future Commissions.....440,456 87

Taxes, Law Expenses and Office Expenses.....224,997 39

Salaries.....221,845 72

Advertising, Printing and Stationary, Exchange and Postage.....132,271 69

Physicians' and Medical Examiners' Fees.....45,394 66

Total Cash Disbursements.....\$7,476,656 47

Net Assets December 31, 1870...\$42,382,417 56

INVESTED AS FOLLOWS:

Cash on hand in Bank and Trust Companies, at Interest.....	\$2,608,910 74
Bonds and Mortgages on Real Estate.....	33,999,421 62
United States Stocks—cost.....	4,203,108 75
New York Stocks—cost.....	570,000 00
Real Estate.....	945,383 07
Balances due by Agents in the course of transmission.....	55,593 38
Actual Cash Investments.....	42,382,417 56

Add:

Interest accrued, but not due.....\$324,542 00

Interest due and unpaid.....41,322 15

Premiums due, but not yet reported—chiefly for December.....\$12,676 39

Deferred—Quarterly and Semi-Annual Premiums.....1,119,573 77

Market value of Stocks in excess of cost.....428,624 00

Total.....\$47,226,735 22

I have carefully examined the foregoing statement, and find the same correct,
ISAAC F. LLOYD, Auditor.
New York, Jan. 18, 1871.

INSURANCE STATEMENTS:

Number of policies issued and restored during the year.....	11,463
Amount insured thereby.....	\$33,453,217 00
In force at the end of the year.....	71,271
policies, insuring.....	222,423,254 00
The foregoing is a statement taken from the Actuarial Records, SHEPPARD HOMANS, Actuary.	

The Board of Trustees have authorized a Dividend for the year of 1870 of two millions of dollars, CASH, which amount may be subsequently increased.
These Dividends will be paid to policy-holders as they may elect, in cash or in the purchase of additional insurance, as soon as the equitable portion of each can be determined.

THE MUTUAL

Life Insurance Co. of New York,

FREDERICK S. WINSTON.....President.
144 and 146 Broadway, Corner of Liberty St.

RICHARD GOODHIND,
Salt Lake City,
Agent for Utah Territory.

Mr. GOODHIND will visit Ogden and Corinne monthly, to receive applications.

EFFICIENT AGENTS WANTED.