SIMPLY TRUSTING

SIMPLY trusting whil linger
Yet a little longer ce
Though my path n le in shadow
And the way be dark and drear.
Though temptations round me gather
Though beset with doubt and fear
I may walk in perfect safety
While I trust Thee, Savior dear.

Simply trusting Him who ever
Faithful will his promise keep
And I know he ne'er will fail me
For his love is broad and deep.
He hath trod the path before me
And he knows how rough the way
He will lead through death's dark valley
Into everlasting day.

Simply trusting, watching, waiting
For the dawn to follow night,
When my spirit freed from earth-ties
Shall to heaven wing its flight.
There with Thee to dwell forever
Where earth's sorrows all are e'er
There to greet friends and loved ones
Where we meet to part no more.

FRED LOCKLEY JR.

Salem, Or.

A Reminiscence of 1842-3.

IN the fall and winter of 1842 and '43 I was living with my father's family in Andrew county, Mo., about seven miles northeast of St. Joseph, a new town just laid out on the Missouri river at the old trading place of Joe Roubideaux, who was one of the first settlers of that country. St. Joe was in the northwest corner of Buchanan county and had just been selected as county seat, I believe. During this winter there were numerous accounts given in the newspapers about the famous Willamette valley, and Oregon in general, but more particularly accounts were given about the former, of its beauty and adaptability to agricultural pursuits and stock raising, its grand mountains and snow-capped peaks, its many beautiful rivers filled with salmon and trout and all other kinds of good eating fish, its many kinds of game and fur animals, besides the many kinds of game birds, all of which had a tendency to arouse the sensibilities of any western pioneer, this country having been mostly settled up by this class of citizens. While the whole country seemed to be in this state of excitement we received the startling news that Senator Lewis F. Linn of Missouri had presented a bill in the senate of the United States, the provisions of which were commented upon by our newspapers in general and all persons having any knowledge about the bill were free to express their opinions about the great probability of its passage through congress and becoming a law of the land. The provisions of said bill as well as I can remember were that every man, woman and child who would move to and settle in Oregon should have 640 acres of this beautiful land for a home. Quite a number of our neighbors and friends began to talk of moving to this far off Willamette valley, and it was not long until some of them sold out their property and began in earnest to fix for the trip. By this time spring had come and every family that was going on this long journey had their arrangements about made. The next thing that seemed to call their attention was a leader who knew something about the country through which they would have to pass in order to reach the "goal" of their imaginations; and in order to more fully understand each other there was a meeting called at which there were present many persons who intended to try to make this perilous journey through a trackless wilderness that but few if any knew anything about. It was agreed, however, that they should all rendezvous on the west side of the Missouri river as soon as possible. I think this rendezvous was somewhere near Independence, Jackson county, or it may be that it was Ft. Leavenworth—at any rate, the main emigration met and organized by electing Judge Peter H. Burnett their captain. He was from Clay county, Mo. Judge Burnett was a very sensible and consistent man, yet he was not informed on the question that most interested this band of Western pioneers who were about to make this leap in the dark with their wives and little children, and therefore they began to look out for some person or persons who could conduct them through to Oregon; but there were none to be found that could conduct them to their destination, yet there were several persons who had been to the top of the Rocky mountains, but no farther West and they had mostly been over the road on horseback accompanied with pack animals. Some few perhaps had been over the road with carts and there may have been some among them that had been over the mountains and down to Ft. Hall, a Hudson Bay trading establishment. Just at this time when they were in the greatest strait of mind what to do there came a stranger among them who had made the trip to Oregon in 1836, and returned from there in the fall and winter of 1842 to attend to some business in the East connected with missions with which he and his estimable wife were connected. This was none other persen than Dr. Marcus Whitman, who, after attending to his business, had made a trip to Washington City and had been of incalculable value to our government in helping to save this beautiful country from the grasp of the British lion. Dr. Whitman immediately took charge and conducted this emigration through to Oregon in safety with but little trouble. However, when the trains arrived at Fort Hall there was a strong effort made by the agents of the Hudson Bay company to persuade the doctor and his comrades that wagons could not be taken through to his mission or to Oregon, but all this talk was overcome by the doctor's determination and the emigration moved on under the vigilant care of their great leader with a determination to succeed, that none seem to have save those that have made this trip across the great plains that intervened between their starting point and their destination, to-wit: the Willamette valley. At this point the agents of the Hudson's Bay Co. and Great Britain had always been able to turn all Americans and in fact all other travelers to California, always stating to those desirous to go to Oregon that it was a worthless country only for fish and game and that California was a good agricultural country and well adapted to that kind of pursuits; so with this kind of sophistry they had been able to turn all travelers with any kind of vehicles to the latter country. The missionaries, Dr. Marcus Whitman and wife, Rev. H. H. Spaulding and wife, and W. H. Gray, who had gone this way in 1836 with their carts filled with their household goods and a few presents and stores for the Indians, were the only exceptions. Dr. Whitman and lady had stopped on the Walla Walla river near where Walla Walla city now stands, and formed a mission and named it Wallatpu, among the Cayuse Indians; and Rev. Henry H. Spaulding and wife and W. H. Gray formed a mission on the Clearwater, now in the state of Idaho, and named the mission Lapwai, among the Nes Perce Indians. This was all done in the fall and winter of 1836. And now to return to the thread of my story I will further say that in 1840 there were several trappers and mountain men who came to this valley, some of them Americans, and in 1842 a train of wagons or carts came through to Ft. Hall and were persuaded by the agents of the Hudson Bay Co. to leave their wagons at Ft. Hall and come through with pack animals. This they did and several persons of the company settled in Marion county. And now as to the immigrants of 1843, I will say that they continued on their journey down the Snake river and crossing said river about a day's drive from the great Salmon falls thence on over the sage plains to old Ft. Boise. Here they had to cross Snake river again, thence on to the Grand Ronde and over the Blue mountains into the Umatilla valley and down said river to the Columbia river; thence on down said river to The Dalles, where the wagon road ended. Here they had to take water on Hudson's Bay boats sent up by some of their comrades who had preceded them on horseback and pack animals. Their wagons were shipped down the river on rafts and their stock was driven down on the trail to Vancouver and thence over to Linten, at the head of Columbia slough, and when the wagons and stock arrived all moved on out to Washington county or Tualitan plains. Thus with energy and push the 1843 immigration made the trip across the plains into this country in pretty good season, with comparatively small loss in person or property, and took possession thereof, and soon began to erect for themselves and families homes such as they could provide with their own hands. This grand stroke of policy no doubt had a great deal to do with the final settlement of the question as to who was the rightful owner of the country.

T. C. SHAW.

A Pioneer of the 40's.

THE decade of 1840 was of the greatest importance to Oregon, and the pioneers of that period were an extraordinary collection of men and women. In fact it seems at present as if they were selected from the great class of American people for a certain purpose. The western tier of states and territories was settled by a class of people who had been brought up amid the alarms of Indian war and the hard and rugged life of conquering a wilderness and preparing a home for their children and others who followed closely along their trails or rudely constructed wagon roads through great bodies of woods or across wide expanse of then Western prairies. Onward and still onward they pushed Westward toward the land of the setting sun, until they had settled Illinois, Iowa and Missouri. For a time the tide rested, filling up the intermediate space they had passed and gathering strength for the final and grandest achievement of all—the crossing of the remainder of the continent and settling the shores of the Pacific.

Vague rumors came of the delectable land to be occupied and enjoyed by those possessing the courage and energy to accomplish the journey. This land was Oregon, lying on the border of the great Pacific. Vague and uncertain was most of the information obtained. In fact it might, in most cases, be called mythical, but still enough was learned to arouse the interest of a class of men and women endowed by nature to attempt, and succeed in the undertaking to reach and permanently settle that country.

The first who attempted the trip were equally as intrepid as Columbus as he sailed for the first time from the harbor of Palos on the morning of Aug. 3, 1492. He did not however carry his family and all his property along expecting to settle and lay the foundation of a home and future state, but rather left them expecting to return and report on what he had found. But how was it with the bold pioneer who loaded his wagon with his family, household goods and provisions enough for a six months' journey to reach that far distant land, and if reached, was the subsistence to be obtained to support his family? A grave question. To explore a route and make a road, to stand guard every night for self preservation and preserve their stock from an ever hostile Indian who would both murder and steal? Surely a man would think twice before deciding to attempt such a journey; he would indeed even then be a man of iron nerve to make the endeavor. The occasion had come and he was the one to make and accomplish the allotted task, the finger of destiny pointed that way, and he unhesitatingly yoked up his team and started.

It is impossible now to impress upon those who are now carried in 3½ days in palace cars in ease and comfort, the toil, dangers, sufferings and hardships of the six months' journey across the plains, mountains, desert and the crossing of dangerous streams of the emigrants of the 40's. When we, who endured those hardships, tell of them, many will look with incredibility, and by the expression, if not by words, tell us that we are lying. But they are true, and the record of their deeds have passed into history and will never be repeated.

There is a characteristic in the American character that went far towards assisting them in this great undertaking, and that was organization. No company of emigrants ever started to cross the border without they first perfected an organization—electing a captain, whose word was respected and obeyed, guards were kept up very generally throughout the journey. The loose stock were driven by the boys who were old enough to ride and guide a horse, but unable to do other work. Everyone who was able to do anything had their allotted duties while on the march or in camp; the march was continuous, no loitering along, but day after day they toiled, whether the weather was stormy or fair, and thus gradually they drew nearer to the goal of their ambition. this reached they unyoked the remnants of the fine teams with which they started, and the good, faithful and patient ox was turned out to recuperate himself on the abundant grazing the Willamette valley at that time afforded. The home-seeker had arrived and he immediately set about to build a home and cultivate the soil to support his family and supply those that he knew would come the following year.

These emigrants of the 40's were intelligent and active men, not one out of a hundred but were able to read and write, and all were noted for their good hard sense. There was another class of emigrants who filled a very important position in the affairs that came in the decade of the 40's. They were the missionaries who sailed 17,000 miles from New York around Cape Horn, into and up the Columbia river. These men and women came to assist in settling the country, establish schools and give the consolation of religion to all, whether native or emigrant. All were well educated and several above the average ability. These two classes soon discovered that it would be to their interest to organize a government of some sort, if only temporary, for the protection of society and themselves. The greatest and most immediate incentive for so doing, was the death of the wealthiest American citizen, Ewing Young, which occurred Feb. 15, 1841, whose funeral nearly all the American settlers attended; and here while they were still about the grave, the question was asked, "What will be done with his property?" He had left neither heirs nor will, and even if he had there was no way of probating the same. A meeting was immediately held which was in time followed by others, until a form of government known as the "Provisional government" was organized which was maintained until the federal government organized a territorial government on March 3, 1849.

These men of the 40's not only established their own and sustained the territorial government, but helped to develop the same into and take an active part in the state organization. The galaxy of names of those days will compare with those of this or any other period or country. Some of whom prominent among them were Jesse Applegate, J. W. Nesmith, Gov. Abernethy, Geo. L. Curry, A. L. Lovejoy, Rev. J. L. Parrish, H. A. J. Lee, Geo. W. LeBreton, P. H. Burnett, Dr. John McBride, Joseph Meek, F. X. Mathieu, Alanson Beers, W. G. T. Vault, Jeol Palmers, Col. C. Gilliam, J. Q. Thornton, S. R. Thurston, C. Lancaster, John Minto, R. M. Morrison, W. H. Gray, and a great many others which to give would make this article too prolix. Some of these men went to congress as delegates, representatives and senators; others were governors, judges, and members of the legislature, in fact filling any and all positions in the territory or state with credit to themselves and their constituents.

But these men having fulfilled their destiny, are rapidly disappearing and their like will never appear again. Of course the occasion will never occur, as the continent is practically explored and comparatively settled. The toils and hardships through which they have passed will never be fully appreciated.

J. HENRY BROWN.

The Financial Situation.

WE are confronted with a condition and not a theory. The ages past have tested theories and history teems with disastrous experiments of wisdom to intelligently of wisdom to intelligently ments. It is not the part note present conditions and from the lessons of the past weave a system of enduring prosperity.

There is in circulation in this country over $1,800,000,000, exclusive of the minor coins, every dollar of which is practically a legal tender for all debts, public and private, except where by specific contract otherwise provided, the gold and silver are legal tender, in fact, and the paper, so accepted, because of its convertibility into gold.

Of this sum $625,000,000 is full legal tender silver dollars, $150,000,000 silver certificates, $210,000,000 national bank notes, $347,000,000 U. S. greenbacks and all kept at parity with the highest standard of values in the civilized world. It is in evidence then, that there is no scarcity of money, in fact there is more per capita than ever before. Much of this money is not in active circulation. The greater portion of this stagnant fund is on deposit in the banks, not the property of the banks or bankers but of the many thousand depositors; held in trust, awaiting suitable opportunity for investment.

The great industries of the country are in a large measure paralyzed, commerce dormant and labor idle. These are the conditions and why? It cannot be said, "It is for lack of money," since there is more now than when times were at their best; it is not because the money has not been good and stable for no creditor has refused to accept, at its nominal value, any of the monies of the United States; when presented in payment of matured demands, and no laborer or dealer in merchandise has discounted any of the money of the realm, and yet it is true that the country is in a condition of nervous prostration and it is also true that, in the business transactions of the day, there is abroad in the land a seeming distrust and evident purpose to provide against possible loss. The promises to pay are made specific, not in dollars but in "gold coin;" investments are being disposed of and the proceeds converted into gold or its equivalent; holders of silver certificates are presenting their promises to pay to the treasurer of the United States and demanding gold and that too when the promise to pay calls for coin but the law makes it the duty of the treasurer to redeem them on presentation in coin, gold or silver, at his option; yet his option is limited, by his higher duty to keep the two at parity and this can only be done by meeting the demands of the holders of certificates. If gold is wanted and silver is tendered it creates a disparity; thus in the struggle to keep up the parity, the gold has been drawn out of the treasury while the silver accumulates. The careful student of political economy will inquire, why is this? The answer comes, "It is the fiat of commercial law." Domestic and foreign commerce dominates all civilized nations; beginning, so far as we know, with the Arabs, who traversed the deserts with their caravans and the Phoenicians, who "went down in ships." Foreign commerce gradually developed until Venice negotiated bills of exchange, reduced Finance to a science and made Bookkeeping and Art. Since when, domestic and foreign commerce have with increased momentum, taken on gigantic proportions, until they know no state and national boundaries, their sails whiten our seas, their iron highways checker the continents, they scale the mountains and they delve in the mines, they dictate statutory laws and establish values.

The commerce of the world, limited by the law of supply and demand, regulate all values. Statutes may fix weights and measures but not values Statutes may fix the nominal value of legal tender, in the discharge of debts but not the freedom of contract in legitimate business. The days of Buster are past; now we buy and sell. "Wampum" is no longer a medium of exchange. The grind of centuries has more clearly defined channels and established fixed and certain mediums of exchange and these are gold and silver, not upon coin but upon metallic values, rated each independent of the other and measured by the law of supply and demand, without reference to statutory ratios or legal fiat. The history of financial legislation running through the centuries, has fully established the utter inability of legal enactments to maintain parity on any fixed ratio, only so long as paralleled by the supply and demand. Whenever the ratio fixed by the law of supply and demand varies from the coin ratio parity can only be maintained upon a basis of credit and credit is made up of two factors, ability and honesty. If the government has the ability through its current income and established reserves sufficient to make them interchangeable by some form of redemption, backed by an honest and persistent effort to keep faith with all creditors, parity may be preserved, but not otherwise.

The proposition that government "fiat" can create values or make money out of paper or anything else of less value than the nominal value given by the fiat without a promise of redemption, can only be entertained by concerted theorists, unacquainted with the facts of history.

The repeated failures of England France and the United States are sufficient to convince all who can learn from the school of experience, without the personal experience. The deductions then, are, that national prosperity, in matters financial, depends on a statute policy founded upon principles of honest dealing; recognizing the potent power of domestic and foreign commerce, in the regulation of values and fixing the mediums of exchange.

The answer then to the question why are the great industries partially paralyzed, commerce dormant and labor idle? may be found in three words, "threatened fiscal legislation." The threatened, and partially accomplished, tariff legislation—unsettled values paralyzed commerce and closed factories reduced the current income of the government below the current expenses; hence a depleted treasury. This threatened legislation caused dealers to quit placing orders for new stock and sacrifices were made on the old to meet the probable new conditions; without new orders the factories were compelled to close and idleness followed as a forced result; creditors became anxious to call in loans because of the shrinkage in securities; all resulting in a general financial panic more disastrous, in the shrinkage of values and financial loss, within eighteen months after November 8th, 1892, than that of the war of the Rebellion, including the national debt. With the growth of public sentiment looking towards debased currency in silver monomentalism and populistic fiat ther has come prostration to the minds of creditors in the credit of the government, hence the wild scramble for gold. As before stated this nervous financial prostration is not due to the lack of money since there is more now than ever before and it is not due to the so-called crime of 1873 since during the eighty years previous to 1873, under free coinage only about $8,000,000 in silver dollars had been coined and that had gone out of circulation, for since 1873 with only five years of suspension of silver coinage into silver dollars and without any breach in the legal tender value of the silver dollar there has been put in circulation silver dollars and silver certificates over $500,000,000 of silver all at parity with gold because of its basis of credit upon gold reserve and the integrity of the government.

Today there is a larger percentage of silver in the money of this government than in any of the bimetallic nations of the earth. This government is today bimetallic in its financial policy and it is the policy of the republican party to maintain bimetalism in the future which can only be done by international bimetalism or if this aid cannot be had then by wise restrictions.

With such a financial policy firmly established and honestly adhered to and with republican protection to home labor and proper restriction on objectionable foreign immigration, enduring prosperity would be assured.

W. H. ODELL.

BUT A FLASH OF LIGHT

Yet It Brings Hope to the Mariner.

The Lighthouse Service of Uncle Sam.

A Government Bureau in Touch with the March of Progress Marvels of Mechanical Skill.

It is only a light flashing out on the waste of waters, but the landsman who has never gone down to the sea in ships, cannot appreciate the emotions to which it gives birth in the breasts of those who have been far from the sight of land and friendly faces. He is unable to understand the joy of the mariner who, on the verge of shipwreck and destruction, is saved from death by the light that issues from the lighthouse tower. He knows not of the keen, vigilant and often fatiguing vigil of the keeper who sits silently in the dead watches of the night when the deep roar of the horn or the vibrant clang of the bell, in fog and storm, brings hope to the heart of the sailor man. He is a stranger to the knowledge of lives, merchandise and gallant ships saved by the brave men who are enrolled in the service of the United States Lighthouse department.

Ever since the days of Grace Darling, the lighthouse keeper has been invested with the halo of bravery, and the tribute is deserved. The men of the service, and, the women, too, for many monitors of the deep belong to the gentler sex, are courageous, loyal and vigilant.

The growth of the department has been in touch with the progress of the age. The lighthouse system of this country commenced with its commerce. The early colonists recognized the necessity for beacons with which to guide English and Dutch merchantmen and their own smaller craft, making landfall at night, to a safe anchorage.

The first lighthouse on this continent was built at the entrance to Boston Harbor, on Little Brewster island, in 1715-'16, at a cost of $11,925. It was erected by the order and at the expense of the general court of the province of Massachusetts bay, and it was supported by light-dues of two cents per ton on all incoming and outgoing vessels, except coasters, levied by the collector of imports of Boston. The maritime colonies followed the example of Massachusetts, and when the United States, by the act of August 7, 1789, accepted the cession of the title to, and joint jurisdiction over, the lighthouses on the coasts, and agreed to maintain them thereafter, they were eight in number, and comprised the following lights, all of which are still in existence, though so greatly improved that they are the same only in purpose and in site:

Portsmouth, New Hampshire, Harbor Light; Boston Light, on Little Brewster Island; the Gurnet Light, near Plymouth, Mass.; Brant Point Light on Nantucket, Massachusetts; Beaver Tail Light, on Cononicut Island, Rhode Island, in Long Island sound; Sandy Hook Light, New Jersey, entrance to New York harbor; Cape Henlopen, Delaware, at the entrance to Delaware bay; Charleston Main Light, on Morris Island, entrance to the harbor of Charleston, S. C.

When the lights came into the possession of the general government, they were placed under the direction of the secretary of the treasury.

With the creation of the position of commissioner of the revenue the duties of superintendent of lights was transferred to this officer. Upon the abolition of the former office, in 1802, the lighthouse service reverted to the control of the treasury department, where it has since remained.

In the early days complaints of defects in the lighthouse system were continually pouring in on congress and the secretary of the treasury. The lights were feeble and inadequate, the buoys were always out of position, the methods of inspection were crude and unsatisfactory; in short, it was a system without a system.

Congress, roused to the necessity of action by frequent complaints, and spurred on, no doubt, by the fact that voters in those days had a disagreeable habit of relegating artful dodgers to private life, appointed committee after committee to investigate these grievances and report remedial measures, but nothing valuable came of the efforts until March 3, 1851, when an act of congress was approved, in which the secretary of the treasury was authorized to put the Fresnel illuminating apparatus into lighthouses as rapidly as he thought best; to appoint a board of proper persons to inquire into the condition of the establishment, and make a detailed report and programme to guide legislation in extending and improving the system of construction, illumination, inspection and superintendence, and to detail engineer officers from the army to superintend the construction and renovation of future lighthouses. On May 21, 1851, Mr. Corwin, the secretary of the treasury, constituted and instructed this board.

On January 30, 1852, the board made an elaborate report of 700 pages, illustrated by 40 plates, and with numerous wood cuts, embodying the scientific and practical information necessary to a clear understanding of the lighthouse system. The examinations extended into the construction of towers, dwellings, and illuminating apparatus, included a careful investigation of the manner in which keepers performed their duties; of the ability and fidelity of the inspectors; of the mode of supplying the establishment with oil and other stores, and of the method of making contracts and testing supplies. It contrasted our methods with the lighthouse administration of Great Britain and France. Every source of reliable information seems to have been explored to reach a true estimate of the merits and defects of our system. The board recommended that the lights be classified, after the French method, in orders, to be followed by a system of designation. The orders running from one to six would indicate the magnitude or intensity of the light—the first order being the largest. The designation would define its characteristic, as fixed, flashing, revolving, red, white, or a combination of those qualities. Then it recommended the general adoption of the Fresnel lenticular system of illuminating apparatus, in place of the old system of illumination by the Argand lamp and parabolic reflector. And it also recommended a more vigorous administration of the establishment, and to that end the erection of a board much after the French plan, which should combine in it all the scientific experience necessary to the highest success in illumination, construction, hydrography, engineering, knowledge of the needs of commerce, and especially of administration.

Under the supervision of the lighthouse board the service has expanded until today it is recognized as the most complete and comprehensive system in the world.

There are sixteen inspection districts. An inspector, who is a navy officer, and an engineer officer from the army are assigned to each lighthouse district. The inspectors, under the control of the naval secretary, who also has charge, in the absence of the chairman, of the office of the board, are charged with the maintenance of the lights and lighthouses and with the discipline of the lightkeepers. The district engineers, under the direction of the engineer secretary, are charged with building the lighthouses, with keeping them in repair, and with the purchase, the setting up, and the repairs of the illuminating apparatus. Both inspectors and engineers make regular and special reports to the board, acting always under its direction, and the board makes a full annual report to the secretary of the treasury, who, in turn, makes a full annual report to congress.

The increase in the amount of work devolving upon the inspectors has necessitated the appointment of assistant inspectors, especially in the larger districts, selections being made from the junior ranks in the navy. The most important district is the third, with headquarters at Tompkinsville, S. I.

Here all the supplies for the department are kept, here also the many experiments for the perfection of light and buoy service are made, and here are constructed the great lamps which illumine the path of the sailor man. The magnificent lenses are imported from Paris, as our countrymen have not yet mastered the problem of making perfect prisms. A stroll through the well kept grounds, an inspection of the vast oil cells, lamp shop and other divisions would well repay the visitor. A separate article would be required to give this establishment adequate treatment. Experiments have been made recently with electricity for lighting purposes and as a potent force in the service has not yet been rendered, final verdict has not yet been rendered, but it is safe to predict that electricity will take the place of mineral oil as completely as the latter drove out sperm and lard oil as factors in lighthouse illumination, and that the electric buoy will displace the cumbersome and always uncertain automatic fog buoy. Experiments are now under way to establish a system of lighted buoys, in connection with the application of electricity, and experts declare that the beacon buoy is only a question of time.

The lighthouse board has had the services of some of the brightest and most active minds in the American navy. The lighthouse service has, like the coast survey, come to be regarded as a training school for young officers and as a field for the best efforts of those higher in rank. The roll of lighthouse inspectors contains the names of the flower of the navy; hence it is no source of wonder that a tour of lighthouse duty is sought by the more ambitious and studious of our naval officers, and that the service has its choice from among the best of them in times of peace.

The army has also been well represented in the lighthouse service. On the list of the lighthouse engineers will be found many of the names which have given our military establishment reputation if not fame, and such have been their victories in solving the problems of sub-aqueous structures, and in opposing successful resistance to the violent attacks of the elements under the most discouraging circumstances, that it is a question whether those names connected with the erection of certain lighthouses will not live when history has let die the memory of their brilliant military achievements.

Civil life has been well represented on the board by such men as Professors Bache, Pierce, Henry and Morton, who have acted as the scientific advisers of the service, and whose names are identified with the solution of problems in physics which have been worked out under their direction in methods for guiding mariners by light at night, and by sound when light was unavailable.

The lighthouses on the New England coast were constructed previous to 1840 in two forms, namely: conical towers of rubble-stone masonry and wooden frame towers erected upon the roofs of the keepers' dwellings. Many improvements in the methods of construction have been evolved since those days, and the distortion of the framing of the house roof by the swaying lateral motion has been overcome by the application of modern ideas in architecture.

Many of the lighthouses of the country are marvels of the engineer's and builder's art. There is none, however, more wonderful than the lighthouses at Fowey Rocks, Fla., which was commenced in 1875, and finished and lighted on June 15, 1878. It is on the extreme northern point of the Florida reefs. It is of iron, and rests on nine piles driven about ten feet into the live coral rock. The different parts were made by three different contractors, but they were fitted together and set up before the structure was shipped to its site. It was a constant battle with the elements, but human perseverance won.

Iron-skeleton towers are used on land where the soil affords an inadequate support for a masonry foundation and where great cheapness is required. That at the Southwest Pass of the Mississippi may be regarded as typical. Its foundation consists of a grillage of timber resting on piles and covered with concrete, on which are secured the iron socket disks from which start eight external and one central shaft of the skeleton. A two-story dwelling for the keepers was placed within the shafts, and a staircase was carried up to the lantern through a tube as in case of the similar lights on sub-aqueous foundations. These towers are found to meet the purpose for which they were intended, and are practicable where heavier structures would not answer, affording less resistance to the wind, and being much cheaper to build.

The use of iron plates for building lighthouses on dry foundations, though not uncommon abroad, met early with little favor in this country. But, in later years, when a greater knowledge of iron as a material for construction was obtained, it came into larger use. Among the more prominent of the iron towers are those at Cape Canaveral, Florida, one hundred and fifty feet high; that at Bolivar Point, Texas, one hundred and twenty feet high; that at Hunting Island, South Carolina, one hundred and thirty feet high, and the tower at Cape Henry, Virginia, one hundred and sixty-five feet high.

The lighthouse on Minot's Ledge is the most important engineering work that belongs to our lighthouse system; and indeed it ranks, by the engineering difficulties surmounted in its erection and by the skill and science shown in the details of its construction, among the chief of the great sea-rock lighthouses of the world.

Other remarkable instances of the union of the knowledge of the engineer and architect are the lighthouses at Penfield Reef, Long Island sound, and Tillamook, a picturesque rocky promontory in Oregon. There are other notable structures, but these come to mind. The most famous beacon in the world, however, is the Eddystone light in the English channel.

The Lighthouse board has some forty lightships under its control. Among the better known are the New South Shoals, Pollock Rip, Sandy Hook, Frying Pan Shoal and Winter Quarter Shoal.

The buoy is to the seaman by day what the light is at night, and what the fog signal is in thick weather. It tells him by its size, form, color and number how to avoid the rocks and shoals, and shows the way in and out of harbor.

Congress prescribed that red buoys, with even numbers, be placed on the right-hand side, and black buoys, with odd numbers, on the left-hand side of channels approached from seaward; that buoys placed on wrecks or other obstructions having a channel on each side, be painted with red and black horizontal stripes; that those buoys placed in mid-channel, and which indicate that they must be passed close to avoid danger, be painted with white and black perpendicular stripes; and finally, that perches, with balls, cages, etc., when placed on buoys, will indicate a turning point, the color and number of the buoy showing the side on which they are to be passed.

Buoys are exposed to many dangers, not the least of which is that of being run down and ripped open by passing steamers. As the iron buoys are made with compartments, they are rarely sunk, but their line of flotation is often lowered, and their usefulness accordingly decreased. Spar buoys frequently lose a portion of their length, which is cut off by strokes of colliding propeller blades. Despite state and national statutes forbidding it, vessels will sometimes make fast to buoys, thus gradually dragging them off their bearings. A buoy has sometimes been set adrift, that a reward may be obtained for its recovery; but this is not a profitable operation, as the reward paid is varied with the circumstances of each case. The buoy's worst enemy, however, is ice.

Telephone communication has just been established between Sandy Hook and the Scotland lightship. The cable runs from the electric buoy station at Sandy Hook to the mushroom anchors of the lightship, whence the fluid runs up the chain cable to the receiver of the telephone on board. The outer end of the cable is, so to speak, frayed out, thus forming a "gridiron" or "grid," as it is named, which, by diffusion, creates an "area of electrification." The vessel may swing any way she is driven, but if she does not get out of this area, connection is insured. The same system will probably be applied to every lightship in the service.

Fog horns and bells, operated by clock work and caloric engines, for many years obtained favor as a method of warning in fogs and storms, but in later years these gave way to the fog siren.

The principle of the siren is easily understood. A musical sound is produced when the tympanic membrane is struck periodically with sufficient rapidity. The production of these tympanic shocks by puffs of air was first realized by Dr. Robison, and his device was the first and simplest form of the siren. A stop-cock was so constructed that it opened and shut the passage of a pipe 720 times in a second. Air being allowed to pass intermittently along the pipe by the rotation of the cock, "a musical sound was most smoothly uttered." A great step was made in the construction of this instrument in Cagniard de la Tour, who gave it its present name. He employed a box with a perforated disk, capable of rotation. The perforations were oblique, so that when wind was driven through, it so impinged upon the apertures of the disk as to set it in motion. No separate mechanism aws therefore required to move the upper disk. When the perforations of the two disks coincided, a puff escaped; when they did not coincide, the current of air was cut off. In this way a succession of impulses was imparted to the air. The siren has been greatly improved by Dove, and specially so by Helmholtz. Even in its small form the instrument is capable of producing sounds of great intensity. These sirens are used on land and sea, even the lightships numbering them among their equipments. Many improvements in lights, buoys and fog sirens have been introduced during the past few years, and it need not tax credulity to believe that in a short time buoys will serve as a mark by day and a torch and danger signal by night; that electricity will take the place of oil as an illuminating agent, and that every effort will be put forth to maintain the well-earned reputation of this branch of the government for efficiency and progressiveness. The present lighthouse board is composed of able men, most of whom have devoted much time and thought to the interests of the service. Admiral Walker, a distinguished sailor and scholar, is the chairman of the board. If he has a hobby it is to keep the lighthouse service of the United States in the lead of the world.

POLYGAMY IN UTAH

ELI TALKS WITH THE PLURAL WIVES OF MORMON FARMERS.

They Say There Is No Love in It—No Love, No Jealousy.

SALT LAKE,—The Mormons never forget a kind word. When I was here, nineteen years ago, the great fight was going on between the Gentiles and the Mormons. Eastern newspapers were full of dispatches, saying Brigham Young was actually in rebellion, threatening the United States courts, and the actual safety of the Gentiles was in great danger. Grant dispatched several regiments of troops from the East. A handsome journalist by the name of Stillson was keeping the wires hot with anti-Mormon dispatches to the Herald. Just then I sent my biography of Artemus Ward to Brigham Young, marking some kind passages in the introduction about the Mormons and telling the prophet that I would be in Ogden on such a train and would write some letters to the New York Times. When I got to Ogden there stood the prophet's son, John W., and Hiram Clawson with a special car to take myself and wife to Salt Lake. During the next day and for a week afterward I had many talks with Brigham.

"Tell General Grant," he said in one of these talks, "that the Mormons are fighters, but when we fight it will be for the nation and under the old flag. Tell him when we Mormons can't live in our own Salt Lake in peace we will go to Mexico or Canada."

These assuring words and the several published interviews I had with Brigham, Cannon and Clawson quieted down the East and the excitement subsided.

At that time polygamy was everywhere in Utah. Hiram Clawson had married two daughters of the prophet and showed us twenty-seven children. Amelia Folsom occupied the big house opposite the Lion House, and Ann Eliza had fled to the East with Major Pond. Brigham's other wives were at the Lion House. One afternoon we were invited to tea by the prophet, when we met and talked en famille with all the women. Speaking of Ann Shea, Brigham said:

"No, I never lived with Ann Eliza. She was only sealed to me at the request of her father and mother, who were dear friends of mine. We never lived together a single day or night. We were not married."

"What was the matter with Ann Eliza," I asked.

"Well, she was separated from her husband, a worthless young lawyer, and as a grass widow was conducting herself improperly and scandalizing the church. Her father and mother came to me with tears in their eyes and begged me to throw the arms of the church around her. So she was sealed to me like several other Mormon women, but we were never married."

Brigham Young, Jr., told me in the presence of a grandson of the prophet yesterday, that he never saw his father with Ann Eliza. Amelia Folsom, who is now a handsome woman of 55, and who was the handsomest girl in Salt Lake, and highly connected, Mrs. President Cleveland being a near relation, was Brigham's favorite wife, and a wife that he really loved. I saw her today, and I do not see how the prophet could have helped loving her. His numerous other wives worked in the house, and were married to raise children and carry out the Mormon doctrine of polygamy, which they copied from Solomon. "Multiply and replenish the earth," was Brigham Young's motto.

Have the Mormons given up polygamy? you ask.

I have asked this question today of Brigham Young, Jr., Bishop Hiram Clawson, ex-Congressman Cannon, and a grandson of Brigham. All these powerful successors of the prophet say polygamy is gone. The grandson says "it is a barbarian relic of the early Mormon faith," and Brigham Jr., says: "Polygamy is dead. We don't want it back any more than you want slavery back. We couldn't have it anyway. The respectable young Mormon women won't have it. Some old farmers out in the country who dress their wives in calico, might keep two wives to work in the field, but well-to-do Mormons can't afford to dress two wives. One sealskin sacque is enough for me."

Down at Provo I saw two poor Mormon wives on a little ten-acre farm. They were pale, haggard, and careworn. They wore cheap calico dresses and black sunbonnets, and talked a Cornish dialect.

"Do you get along well together," I asked.

"Yaas, we be very fond of each other. Indeed I would be very lonesome without Mary out here on the farm."

"And I should grieve to death if Liza should go," said the other, her eyes all moist.

"But do you both love the same man?" I asked.

"Pshaw!" said one, striking the air with her open left hand, "don't talk about love out here. The man we came away from England with treats us fair. We are quite contented—Liza and me."

There are many instances where old farmers have two or three wives They are taking care of them These women helped them clear up their farms. They cut the sage brush and helped plot the orchards. They are partners of the old farmer, but not wives. Their daughters would die before they would marry half a husband.

I asked two women at Brigham who used to be wives of a Mormon and still lived in the same house if a man could love two wives.

"Love two wives?" they said. "No, with one it might be love, but with the other it was lust."

"How did you happen to come here?" I asked.

"Well, we wanted a home. We did not come for love. So two of us in a lonely farmhouse are company for each other. Where there is no love there is no jealousy. But if a rich Mormon should have two wives in Salt Lake, with the windows full of Harper's Bazars and fashion plates, and the stores full of laces and silks, his home would be a perpetual hornet's nest.

So polygamy has gone out of fashion in Utah. It is safe enough to give her Statehood now, even though Mormons are in the majority.

ELI PERKINS.

WEALTH AND HAPPINESS

Riches Do Not Bring Content.

Remarkable Admissions by Millionaires.

Their Happiest Days Were When They Were Poor—Riches Are but Vain.

Does wealth bring happiness? This question was recently put by the New York World to a number of prominent American millionaires—men who have known both poverty and riches, and, having been the architects of their own fortunes, have in a practical way tested the matter for themselves. Their answers will be found below:

WEALTH A SACRED TRUST.

No American rich man ever had such a wonderful career as Andrew Carnegie, the Pittsburg iron and steel manufacturer. Mr. Carnegie has written and delivered addresses on wealth and its obligations. His reply was as follows:

"Wealth can only bring happiness in the sense that it brings us greater opportunities of making others happy. Great wealth is a sacred trust which the possessor should hold and administer to the best possible advantage for the benefit of his fellow-men. The truest happiness, indeed the only happiness, in this life worth the name is to make others happy, or at least improving their condition in some way to make them happier than they otherwise would be.

"When we have exhausted the other so-called pleasure, that of bringing the look of joyful surprise to the eye and the words of grateful thanks to the lips of others remains perennial.

"The ways in which a worthy man can produce such gratifying results are numerous and self-evident. Wealth will enable its possessor to feed the hungry, clothe the naked, endow institutions of learning, establish libraries, found hospitals, and countless other good works. It will enable him to entertain his friends and amid pleasurable surroundings help them to the enjoyment of such happy hours.

"With his riches he can purchase and give to those he loves the things of this world that their hearts may desire. In this way, and this only—in the power of making others happy that it confers—can wealth, per se, ever be happiness.

ANDREW CARNEGIE.

ROCKEFELLER SAYS NO.

John D. Rockefeller, the Standard Oil magnate, whose wealth is estimated at upwards of $100,000,000, replied:

"Wealth does not bring happiness for many reasons. One of them is that no man thinks himself wealthy. No man can ever be so rich that he will not be other wealthier than he, and the knowledge of that fact will make him feel poor, no matter how great his possessions. Practically then, there is no such thing as wealth. That is, there is no such thing as a wealthy man.

"Whether a man is rich or poor must always be determined by the relation of his desires and expectatures to his income. If a man believes himself rich, and has everything he desires and feels that he needs, he really is rich, no matter if he is worth only ten dollars. On the contrary, he is worth ten millions and yet if his desires and needs which he is unable or thinks himself unable to gratify exceed his supply, he is poor.

"You know Iago says:

"Poor and content is rich and rich enough,
But riches fineless is as poor as winter
To him that ever fears he shall be poor."

"A man's expenses usually bear the same relation to his income, whether he have $1,000,000 or