Song of Praise..... By Emily Hill.

[Composed at Conference assembled in G. S. L. City, April, 1857.

Rejoice ye gushing fountains!
Ye streams of pearly hue,
Ye tow'ring hills and mountains,
Ye lovely valleys too—
All nature, give fair greeting,
Rich melodies awake
And celebrate our meeting,
Our mutual joy partake!

Ye Saints! dispel all sadness
And high your voices raise
In songs of thrilling gladness,
In symphonies of praise;
Extol the King of glory
In strains of living fire,
Oh God, we would adore thee,
Do thou our souls inspire.

One spot upon this planet
Is dedicate to thee,
And those who dwell upon it,
Thine, only thine will be:
Tho' this resolve hath 'reft us
Of wealth and kindred too,
Thy Spirit hath not left us,
It loves the good and true.

Nor homes we've left behind us,
Nor friends in childhood dear,
Nor ties of blood could bind us—
Our sympathies are here:
Yes, here we've sisters, brothers,
Here we have husbands, wives,
Here we have fathers, mothers,
And keys of endless lives.

Here we have mighty princes
Of Israel's royal line,
Whose judgment e'er evinces
Authority divine:
Here's Brigham Young—the Lion
Who keeps the wolves at bay;
Through him God favors Zion
In this the latter day.

Oh ye who seek our ruin!
Believe God is our friend—
All things belong unto Him—
His people He'll defend;
In peace we will assemble
To learn the ways of God,
While thrones and empires tremble
At His Amighty word.

Arise from error's slumbers,
All ye whose aims are pure,
And swell our gathering numbers,
Make your salvation sure;
Haste! chant old Bab'lon's requiem
And unto Zion flee,
For in the vales of Ephraim
Deliverance shall be.

Rejoice, oh favored nation!
Whom God hath gathered out;
Praise Him for your salvation
With universal shout:
With songs of adoration,
With sweetest minstrelsy,
For Zion's restoration,
For truth, which makes us free.

G. S. L. City, April 9, 1857.

THE PATHS OF THE SEA.

Lieut. Maury delivered his interesting, instructive and novel lecture upon 'The Paths of the Sea,' in Dr. Hutton's church, Washington Square, on Monday evening. On being introduced to the audience by the chairman, he was greeted with loud applause, and proceeded to speak substantially as follows:—

The paths of the sea are very much the work of chance and circumstances. When gold was first discovered in California, and the tide of population began to pour from the East to the West, our vessels sailed all the way round Cape Horn; they were then upwards of one hundred and eighty days on their passage. They sailed through new seas and by a course as yet little known to navigation; but becoming acquainted with the winds and seas they made the passage in one hundred and twenty days. So it was with Columbus; he sailed to the south and west, skirting his way along till he reached the continent, and that route was continued up to our declaration of independence.

By that route Charleston was the half-way house between us and the Old World—our commerce flowed through South Carolina. The Carolinas were the chief commercial colonies; their exports were greater than the exports of all New England. Columbus left Spain and stood southward till he met the northwest trade winds, and wafted westward to them, he reached our shore. In 1775 Dr. Franklin crossed the ocean to England, and during that voyage discovered the difference of the temperature between the Gulf Stream and the surrounding sea.

He considered it of great importance, and would not, therefore, make it known, but kept it for political purposes. The influence of this stream had often been felt, but its nature had never before been known. When Cortez came from Mexico, he put himself upon the Gulf Stream and upon its current floated his ship out of the Gulf to the open sea.

But the temperature of the Stream had never been known before it was discovered by Dr. Franklin. The discovery was considered of great importance, for at that time the tables by which latitude and longitude were reckoned were very incorrect. A very large reward was offered by the British government for some correct and simple method for calculating the position of a ship at sea.

This stream which stretched along our coast like a bordering band of ribbon, would tell the navigator that he was approaching the shore of a new hemisphere: and so, when outward bound, as he passed beyond it, it would inform him that he was far from shore upon the broad Atlantic. The lecturer here traced the course of the Gulf Stream on the map, saying, the stream is so distinctly marked that the very line of its extent can be pointed out.

Sometimes you can see half of your ship lying in the Gulf Stream and half of it without. In comparing the paths of the sea used by a former age to the paths now used we should not forget the difficulty they had to contend with then.—Their ships were very clumsy and could not be well navigated or directed.

Such a thing as a barometer had never been conceived of—now we are able to tell when a storm is coming on, though it is yet a long way off, by the use of that delicate feeler of the atmosphere which not only forewarns the mariner of its approach, but frequently tells him whence it comes and at how rapid a speed, thus enabling him oftimes to get away from it entirely. One discovery, one invention, begets another, and none is begotten before it is wanted. Sea steamers would have been of no use in those times, when so little was known about navigation; but as soon as a correct system of circulation was established then the smoke of the steamers was seen upon the sea.

Indeed, vessels used to get so far out of the way as not to know whether they were on the Atlantic or Pacific Ocean. I have a well authenticated history where a vessel, having sailed a long time and been driven about by high winds, the captain thought she had reached the Pacific Ocean, and so turned north. The next day he met another ship and asked where he was. The answer was, 'if you keep south for a day you will reach Cape Horn.' (Laughter.) Columbus; sailed from Spaine in the month of August; if he had attempted it in winter he would not have discovered America—for instead of finding the trade winds to help him westward he would have found a strong northwesterly wind.

With that wind in large ships he never could have arrived here in January. Indeed, on returning in that month he was almost shipwrecked.—The vessels that went west, and those that went east both kept their own reckoning, and religiously noted their Sabbaths; but on meeting and comparing they found that paradox—two Sundays coming together. The Society Islands received their reckoning from Cape Horn and the Sandwich Islands from the east of Asia; so a ship in passing from one to the other must either hitch back their time one day or hitch it up a day.

If we had a telegraph line stretched from Manilla to California, thence to this city and another to India by the Persian Gulf—the Atlantic line being also completed—then if you should send a telegraph message to a correspondent in Manilla by the California and Pacific line, and another to your friend in China by the Atlantic line, and request them to inform you of the exact time at which they receive them—suppose you send the mesages at 12 M., on Monday—and your friend in China will answer, 'I received your instructions twelve hours after date, or at midnight on Monday,' but your correspondent at Manilla with reply, 'I received your message twelve hours before the date, that is at twelve o'clock on Sunday night.' It is to be hoped the third attempt of the French government to lay their lines of telegraph in the Mediterranean will be successful.

When that and the Atlantic line are completed we will have the happiness of witnessing the three old continents in conversation with the new. The mariner, as he reaches the trade winds, finds himself wafted along by air the softest, sweetest, purest in the world; there is no sky more delicious, no heavens more beautiful. In the Pacific ocean the trade winds are the finest—they are perfectly developed—there is nothing to change or defect them; an open boat might float upon them as easily and safely as upon a sunny river's placid bosom.

The breeze is just sufficient to keep the sails filled; it is constant and never rises or falls suddenly—a gale is unknown. Of all the lovely scenes one meets with at sea, the most enchanting are among the islands in the South Pacific, along the course of the trade winds. There sky, earth and air combine their splendors in such a harmonious whole as doubly to delight the mind and raise the heart to admiration.

The land and sea breezes are other characteristics of the sea. At Valperaiso, in the summer afternoons, there is always a strong gale blowing from the sea, the waves rise and beat against the shore, the ships drag their anchors, the promenading in the streets is stopped, and nearly every outdoor pursuit is prevented. Suddenly there is a great calm—the fishermen launch their little boats upon the tide, which a moment before was angrily foaming and breaking against the shore, but now as calm as if it had never known a storm.

The weather invites abroad, the ladies promenade the streets in ball costume, for now there is not wind enough to disturb the slightest curl, and all this change in so sudden that one cannot realize it. Presently, when the short twilight has scarcely passed away, the stars stand out, as if held by invisible fingers, the constellations are fixed in their places, and there is beauty unsurpassed. Alone in the night watch after the sea breeze was sunk to rest, I have stood upon the deck gazing admirably upon the stars which shine with a lustre unknown to this latitude. The sky looks solid, like a vault of steel, set with diamonds; you fear to speak, lest the slightest noise shall disturb the deep profound. Glancing the eye above and around, you are dazzled with the firmament; the moon and stars stand out and do not seem to touch the vault.

But at the same time the western sky is beautiful. Orion is there, and just about to go down and sup with his brother. The constellations of stars seem like holes torn in the robe of night, through which the astronomers peer into the deep beyond. No one who has never beheld these skies can have any idea of their magnificence, grandeur and beauty. But let us pass from the deep above to the deep below. The lead is let down to the bottom of the sea, and it is curious to see the work that is going on there. Beautiful coral islands are built up there; perhaps a part of one, if we could dissect it would be found to have come down the Mississippi, from the Rocky Mountains, or to have been borne upon the bosom of the great Amazon, from the tropics of South America; or, indeed, parts in that island may have come from every part of the world, by routes which if we could trace them would seem wonderfully long and strange. In the cell which one of these animalculi has built for itself we should recognize a part of the Table Rock from Niagara, and sand from the Holy Mountains. It may contain matter from the Euphrates, from the sunny plains of Southern Europe, from the battle fields of the Danube and the Nile, or from the soil of classic Italy. We know all this, because mariners have told us of the islands these corals have built up; they seem to have been at work in the sea ever since the waters were gathered together in one place; and looking at the work they have done, the islands they have built up, we have a proof of their eternal dilligence and perseverence.

It appears that we had no idea of the operations that were carried on in the depths of the sea till we begin to explore it with lead and line, and now it seems a great charnel house. Everybody who has stood upon the shore of the sea has desired to fly away upon its waves and learn what there is beyond it, or if possible to dive below and learn what there is beneath it.

Until recently all was conjecture about the depth and formation of the bottom of the sea; it was supposed that it might be as deep as a mountain is high; but the character of the bottom, they left that to poets' brains to picture. Some supposed it scattered over with gold, gems, anchors, dead men's bones, &c., but Brooke's lead teaches a different story; it shows that all such things are covered up and buried deep down, many feet, by shells and animalculi. Everywhere where this admirable sounding apparatus of Brooks has been, it has brought up shells and the carcasses of the dead.

A single quill may bring up thousands—nay, millions of these shells; they are so small that it requires the minutest microscope to discover them; they cannot be seen when alive. The bottom of the deep is covered over with their carcasses; they have obeyed the commandment which was given on the fifth day: 'Multiply and bring forth abundantly.' Never before now does history give an account of any attempts being made to measure the depths of the sea. Chance circumstances caused me to attempt it, and thinking it might result in good, I continued the attempt.

Congress then passed an act directing the Secretary of the Navy to set apart and direct one vessel to continue these soundings for the purpose of assisting in perfecting these discoveries, and also to allow the whole navy to assist in making the investigation in so far as they could without interfering with their proper duties. In order to get at the bottom of the sea, they got some common twine and tied a thirty-two pound ball to it; then letting it down into the sea, they waited to see how much line would run out, and considered the length of that line measured the depth of the sea at that point.

The twine and ball were left in the sea. As soon as the deep sea soundings were commenced, we found we were in a new field; we found that system would not do; experiment showed us that when the cannon ball was at the bottom, the twine continued to run out, and that the larger the ball the slower the twine would run. The difficulty of getting it down was not because of the increased density of the water, since that can only be compressed very slightly, but because that it had to drag a mile of twine after it.

Then we used the same kind of twine and the same weight of ball for every experiment, but we found sometimes that the twine would never run out. A vessel one day was sent out to take soundings, or measure the depth of the sea at a particular spot; they began at sunrise, and, as the captain was a very patient man, they stayed there till sunset, the twine still runing out, so they came back and said they guessed there was no bottom there. (Laughter.) This was before we discovered the under-currents. By the use of proper leads we now know the structure of the bottom of the sea along the north Pacific, as well as along the Atlantic.

The most peculiar thing in the North Atlantic is a ridge from Newfoundland to England, which is called the telegraphic plateau. The deepest point along that route is about two miles. Having learned this, we must next get some plan to prove to the people that we had reached the bottom of the sea and knew its composition and geography. We tried to bring up the shot to which the twine was fastened, but the twine was not strong enough, and if we used a larger one it was too heavy for the shot to carry down. Hence we have the invention of Brooke's excellent apparatus. (Lieutenant Maury here presented a sample of it and explained it to the audience.) The shot is hollow, with a long reed running through it; there are quills in the reed; now, the shot is left at the bottom, but the quills and reed are drawn up. The apparatus is so arranged that the moment the end of the reed—which extends six or eight inches beyond the ball—touches the bottom, the shot falls off and the rest can be easily drawn up.

Provided with these instruments and facilities, a ship was sent out to the ocean to take soundings, and it discovered better than gems and pearls at the bottom of the sea—it discovered the telegraphic plateau which is to unite the Old and New World. The quills on coming up contained skeletons of sea insects of microscopic minuteness; these were sent to West Point, and particularly examined by Professor Bailey. The specimens from the calm sea, from the Gulf of Mexico, from the Gulf Stream, all evidently consist of one family and of one kind. When Professor Bailey examined the matter brought from the telegraphic plateau, he found volcanic cinders in it.

We could not account for it at first; we knew that the volcanoes of South America had cast their cinders as far as Cuba; but if they came from that source we would have found them in the Gulf Stream; so it was useless to look there for an explanation. It was next suggested that those cinders lying just along the track of the European steamers might be the ashes from these boats; so Professor Bailey told me to get him some cinders from the ashpit of the Baltic and the Pacific.—After giving them a careful and critical examination, he established the gratifying fact that steamboats are not volcanoes. (Laughter.) The source of these cinders still remains a mystery; but they show that the matter there lies as soft as down at the bottom of the deep sea.

There is no motion nor disturbing force there. Indeed, these soundings suggest the idea that the sea like the snow cloud with its flakes in a calm, is always letting fall upon its bed showers of microscopic shells; and we may readily imagine that that 'sunless wrecks' which strew its bottom are in the process of ages hid under this fleecy covering, presenting the rounded appearance which is seen over the body of the traveler who has perished in the snow storm.

The ocean, especially within and near the tropics, swarms with life. The remains of myriads of moving things are conveyed by currents, and scattered and lodged in the course of time all over its bottom. This process, continued for ages, has covered the depths of the ocean as with a mantle, consisting of organisms as delicate as the immaculate frost, and as light as the undrifted snow flake on the mountain. Wherever this beautiful sounding rod has reached the bottom of the deep sea, whether in the Atlantic or Pacific, the bed of the ocean has been found of a downlike softness. The lead appears to sink many feet deep into the oozy matter there, which has been strained and filtered through the sea water.

This matter consist of the skeletons and casts of insects of the sea of microscopic minuteness. The currents do not reach down to the bottom of the deep sea; there are no abrading agents at work there, save only the gnawing of the tooth of time; a rope of sand if stretched upon the bed of the ocean, would be a cable strong enough to hold the longest telegraphic wire that art can draw.—At the bottom of the sea there is a protecting cushion of still water. We have had soundings in the Gulf Stream, and every thing at the bottom there is as still as the grave.

If the stream, with its current of four miles an hour, reached to the bottom of the sea, it would have torn up or worn through the surface of the earth, and we would have gone down to the molten interior. We see in the Table Rock, at Niagara, what a small stream continually wearing away will do. The notion has prevailed that a telegraphic cable must be of great strength to resist and withstand the forces of the sea.

Whereupon the conducting wire, after being coated to insulation with gutta percha, was encased in a wire hawser or cable stout enough to hold the largest 'seventy-four' to her anchors. These cables were very expensive in their manufacture, bulky for stowage, unwieldy for handling, and difficult to lay. It was such a wire laid cable that the Telegraph Company lost in the laying between Newfoundland and Cape Breton, in 1855; and it is such a one—wire laid, stiff, and larger than a man's arm—that the French have twice attempted to lay in the Mediterranean, and twice lost. But now we have learned that all the obstacles interposed by the sea to the laying of submarine telegraphs lie between the surface and the depth of a few hundred fathoms below; and that these are not to to be mastered by force nor overcome by the tensile strength of wire drawn ropes, but, that with a little artifice, they will yield to a mere thread.

Therefore, it may now be considered as a settled principle in submarine telegraphy that the true character of a cable for the deep sea is not that of an iron rope as large as a man's arm, but a single copper wire, or a fasicle of wires, coated with gutta percha, pliant and supple, and not larger than a lady's finger. A company composed of English and Americans are now at work on the submarine, Atlantic telegraph, and I hope and believe that before this time next year it will be in successful operation. The first telegraph that was ever laid down under water was across the East River, from the Merchants' Exchange to the signal station on the other side.

But then there was no such thing as gutta percha known in commerce. It was laid down surrounded with a leaden tube, but the motion of the water wore it off in six months. After the discovery of gutta percha we learned the very beautiful process of insulating wires in it. Iron wires have been used to surround the gutta percha, but they are unnecessary, except near the shore or in shallow water.

May the submarine Atlantic telegraph be quickly completed, and let the first message which flashes across its wires read thus:—'The people of the United States, in Congress assembled to the Princes, Potentates and Powers of the Old World send greeting: peace and good will to all nations in the world; free intercourse and commerce with all people.'

The Vermont State Capitol.—Boston, Jan. 7.—The Vermont State Capitol was a simple but imposing structure. commenced in the year 1833 and finished in 1837, at a cost of one hundred and thirty-two thousand dollars. Nothing remains of the building this morning but the granite walls. Among the most serious losses is the State Naturalist's apartments the destruction of which is total and the loss irreparable.

Religious Liberty in France.—Louis Napoleon has positively and peremptorily ordered the prefects of France to all the free and undisturbed exercise of their religion, desiring that he may hear no more persecution of Protestants, and that they may never again be disturbed in their worship.