

homes, and driven many of them to a far off land to find new homes among strangers, and are now becoming rich upon the increase of the soil of which have thus gained a possession. Now do we acknowledge these obligations? If we do, we have signally failed to discharge them.

Certainly, no principle of Christianity will justify us in such a course towards these distressed neighbors; neither is it in accordance with the rules of common justice, as universally allowed among men of the world. It is, therefore certain, that unless there is a speedy reformation in this matter, a fearful responsibility will be assumed somewhere, which God will inquire after.—*Indian Advocate.*

Dignity of Agriculture.

In his late Proclamation for a day of public Thanksgiving, Gov. Briggs places a successful agriculture at the head of that list of blessings for which he calls upon us to return thanks to the bountiful Giver of all our benefits. "Let us express our thanks," he says, "to the living God that He has caused the earth to yield her fruits in rich abundance, and rewarded the toils of the husbandman with a plentiful harvest, that the laborer has eaten the bread he has earned, in peace." This sentiment is not only well expressed, but well placed in relation to the proper order of our temporal blessings. The labors of the husbandman form the basis of national prosperity. Our real wealth, our sustenance, our clothing and the materials for our shelter, spring from the earth. The country which abounds in these is rich, and the man who draws these elements of wealth from the ground is more necessary to the State than he who exchanges them for foreign luxuries. Society might exist in a high degree of comfort without the merchant, but how can a nation be rich and independent, without a prosperous husbandry?

Of all pursuits, agriculture has been most highly honored in the history of our race. Of old, it furnished the true aristocracy of the world; for, at that period when all things were pronounced very good, it was 'amidst scenery of which the group was made up of God, a gardener and its cultivator man.' In scenes of commerce, everything is changeable. The foundations of confidence are often subverted in a day. No ingenuity or knowledge will enable one to calculate definitely the results of his plans and toils. But nature's alphabet (as says Bayles, a quaint writer, quoted by Dr. Choules in his first address before the American Institute,) 'nature's alphabet is made up of only four letters, wood, water, rock, and soil; and yet with these four letters she forms such wondrous compositions, such infinite combinations as no language with twenty-four letters can describe. Nature never grows old, she speaks now as ever; she has no provincialisms. The lark carols the same song, in the same key, as when Adam turned his delighted ear to catch the strain; the owl still hoots in the flat, yet loves the note, and screams through no other octave; the stormy petrel as much delighted to sport among the first waves the Indian Ocean ever raised, as it does now. Birds that lived on flies, laid bluish eggs, when Isaac went out into the fields to meditate at eventide, as they will two thousand years hence, if the world does not break her harness from the orb of day. The sun is as bright as when Lot entered the little city of Zoar. The diamond, and the onyx, and the topaz of Ethiopia, are still as splendid, and the vulture's eye as fierce, as when Job took up his parable. In short, nature's pendulum has never altered its strokes.'

Of all men on earth, engaged in secular business, the farmer has reason to magnify his calling. For his special encouragement, at an early period of the world, God gave the guarantee of a perpetual covenant; 'while the earth remaineth, seed-time and harvest, heat and cold, summer and winter, day and night shall not cease.' There is no better sign of a healthful tendency of the public mind, than the disposition to honor agriculture; and when our young men shall make the pursuit of it fashionable, and bring it to the knowledge which is requisite for scientific cultivation, our national prosperity will be established on deep and strong foundations. A widely-spread class of educated agriculturists, understanding their relative position, able to choose from amongst themselves men capable of representing their interests in halls of legislation, might become benefactors of their country; might do much to give tone to her character and mould her destinies.

A Good Education the Best Fortune for our Daughters.

1. Such an education aims at and may be expected to accomplish, by the Divine blessing, the highest good of our daughters—the establishment of suitable exercise and diet, of a healthful and vigorous constitution for the mind to stand on—a cultivated intellect, trained to independent thought by the acquisition of useful knowledge and the cultivation of the social affections and the moral powers; so that the symmetrical development of the body, mind and heart, shall qualify our daughters for the sober realities of life, for usefulness and heaven.

2. While riches, given to our daughters, often tempt them to indolence, pride, fashionable display, and ruinous expense, and make them the dupes and victims of worthless fortune-hunters, and thus take wings and fly away, such an educational fortune—possessing the elements of true worth—can never be lost, and will always command an honourable post in society, and an abundant competency for its useful services.

3. Such a training of our daughters is rendered the more important by the fact that woman obviously, however modestly and unostentatiously, rules the world; and therefore when we get all mothers, we shall have the world right.

4. This education, is yet further recommended by the consideration, that this is the only fortune which most parents can possibly give their daughters. By special efforts and self-denial many such parents, with but little property have been able so to educate a daughter, as not only to give her—what she prizes more highly than money—personal independence and usefulness in her vocation as a teacher, but have also provided an intelligent Christian home for themselves in their declining years.

5. While females possess peculiar qualifications for moulding the youthful mind, and training the rising generation, it is a fact, highly honourable to female education and enterprise, that in New England a large portion of their best primary schools, as well as many of their best academies, are taught by females; and the fact that hundreds of additional well qualified instructors of this sex are called for at the East, West, North and South, should greatly increase their number.

6. Such education is not only greatly needed to furnish the competent teachers demanded, but every one of our properly educated daughters is the better qualified to meet the high demands of an intellectual age; to aid in the training of the younger children of the family in the systematic and economic discharge of the domestic duties, and in imparting pleasure and ornament to the social and religious circle.—*N. York Evangelist.*

EARTHQUAKES.—The shaking which this portion of the earth's surface recently received in this vicinity, has caused a large amount of conjecture to be set afloat as to the cause of the phenomenon. We believe that the most generally accredited theory of earthquakes among scientific men, is that which rests on the supposition that the centre of the earth is a liquid mass, completely filling the globe, whose crust varies in thickness at the Poles and at the Equator, being much thinner at the latter. It is obvious that any exciting cause, the sudden manufacture of an immense quantity of gas, the fall of unmelted masses into the fiery liquid, or any similar circumstance, may raise a wave in this internal lava-ocean, or possibly two or three waves, which proceed as waves in our upper seas. A wave moves, but the water only rises and falls. It is a very common error to suppose that the water itself flows along. The progress of a wave consists in the rise and fall of successive bodies of water, one mass falling and displacing and forcing up the next, and so on across a sea. Supposing this same process to take place in the lava which already fills, almost to bursting, the globe, it can readily be imagined that the crust will be lifted and strained as the wave passes along. Hence the frequent fissures in the earth's surface, which gape and close again. The fact that the crust of the earth is thinner at the Equator (a fact easily explained when we reflect on the revolution of the earth and the natural result at different distances from the poles,) explains the more disastrous effects of such waves in torrid regions. The same wave which there stretches the thin crust of the earth, and lifts it in hills, and over-

turns cities and empties seas, finds here a granite shell which hardly yields to the heaviest waves. [N. Y. Jour. of Commerce.]

The Atmosphere.

The atmosphere rises above us with its cathedral dome arching towards the heaven, of which it is the most familiar synonyme and symbol. It floats around us like that grand object which the apostle John saw in his vision—"a sea of glass like unto crystal." So massive is it that, when it begins to stir, it tosses about great ships like play-things, and sweeps cities and forests like snowflakes to destruction before it. And yet it is so moveable that we have lived years in it before we can be persuaded it exists at all, and the great bulk of mankind never realize the truth that they are bathed in an ocean of air. Its weight is so enormous that iron shivers before it like glass, yet a soap-ball sails through it with impunity, and the tiniest insect waves it with its wings. It ministers lavishly to all the senses. We touch it not, but it touches us: its warm south wind brings back colour to the pale face of the invalid; its cool west winds refresh the fevered brow and make the blood mantle in our cheeks: even its north blasts braces into new vigour the hardened children of our rugged clime. The eye is indebted to it for all the magnificence of sunrise, the full brightness of mid-day, the chastened radiance of the gleaming, and the clouds that cradle near the setting sun. But for it the rainbow would want its triumphal arch, and the winds would not send their fleecy messengers on errands round the heavens. The cold either would not shed its snow feathers on the earth, nor would drops of dew gather on the flowers. The kindly rain would never fall—hail, storm, nor fog diversify the face of the sky. Our naked globe would turn its tanned unshadowed forehead to the sun, and one dreary monotonous blaze of light and heat dazzle and burn up all things.

Were there no atmosphere, the evening sun would in a moment set, and, without warning, plunge the earth in darkness. But the air keeps in her hand a sheaf of his rays, and lets them slip but slowly through her fingers; so that the shadows of evening gather by degrees, and the flowers have time to bow their heads, and each creature space to find a place of rest to nestle and repose.

In the morning the garish sun would at one bound burst from the bosom of night and blaze above the horizon; but the air watches for his coming, and sends at first but one little ray to announce his approach, and then another, and by and by a handful, and so gently draws aside the curtain of night, and slowly lets the light fall on the face of the sleeping earth till her eye lids open, and, like man, she goeth forth again to her labour until the evening.—*Quarterly Review.*

Inflating Balloons.

Nearly all the citizens of the United States have seen balloons, or at least pictures of them and have some general ideas of the principle by which they are made to ascend. But as we have had frequent applications for information on the subject of the mode and expense of inflating them, we shall describe the process in a manner more explicit than heretofore published. A number of casks are provided and set up on end, the upper ends being open. In each cask is placed a quantity of sulphuric acid, diluted with five times its weight of water. Each pound of acid will produce ten cubic feet of hydrogen gas; therefore, if the balloon to be inflated is required to contain 10,000 cubic feet of gas, 1,000 pounds of acid will be required. Each cask is provided with a covering of painted cloth, which is made to fit the top; and from each of these caps a tube of painted cloth or leather extends to a point directly under the balloon, which is placed centrally, in a collapsed form, and with the open part downward.

Thus arranged, a quantity of iron filings and turnings, equal in weight to the original quantity of acid, is put in the casks, and the cloth caps are lashed tight over the tops. The acid immediately commences corroding and dissolving the iron, by which action the oxygen of the water unites with the iron, and its other component, hydrogen, is liberated in the form of gas, which, passing through the tubes to the balloon readily inflates it.

When ebullition has nearly ceased in the casks a fresh supply of water, nearly equal to the ori-

ginal quantity, may be added, which will occasion a renewal of the chemical action till the iron is nearly all dissolved.

The power of buoyance of this gas is a trifle more than one ounce per cubic foot; whence it may be calculated, that the buoyancy of a balloon of 10,000 cubic feet will be at least 600 pounds. The weight of the balloon, if properly constructed, being made of silk cambric, and thinly varnished, will not exceed over 300 lbs., thus leaving a buoyancy sufficient to carry 300 lbs. extra, besides the appended car, lines, &c. The cost of the iron and acid will average about four cents a pound, and the solution of the sulphate of iron will command about half the original cost.—*Scientific American.*

CHILDREN IN JERUSALEM.—Our blessed Lord, in sending out his apostles to evangelize the world, said unto them "Beginning at Jerusalem;" and, although it might be said that thus Jerusalem has been specially consigned to the charge and care of the Christian Church in every age, it has long been, and continues still to be, a city above many others sunk in the grossest superstition, idolatry, misery, and wretchedness. Now, would our own dear children at home wish to have a description of the children of the Holy City at the present day? Then here is one furnished them by a faithful witness.

"Alas! how many hungry and half-naked children wander about in this region like lambs who have never had a shepherd, and whose minds are left as naked, and their souls as defenceless as their bodies. Not long since we went on a Saturday to a wretched school, situated at the foot of Mount Moriah. The inhabitants of this village chiefly dwell in caves and clefts of the rocks. There we saw whole tribes of children, who are left to roam about, and grow up as the beasts of the field, and who followed us with loud and ceaseless cries of 'Bread! bread!'

We are glad to learn that, in addition to the Christian agency already at work in Jerusalem, there is the prospect of a school-house, and house of refuge, being soon erected, for the benefit of the young outcasts above alluded to.—*Pres. Witness.*

SONS OF TEMPERANCE.—A new Division of the Sons of Temperance was opened at Annapolis on the 20th ult., called Port Royal Division, No. 46. The following are the officers for the present quarter:—W. Wheelock, Esq., W. P.; A. Henderson, W. A.; A. W. Corbet, R. S.; Geo. Snider, T.; H. Hughes, F. S.; Kerr Henderson, C.; Wm. Burton, A. C.; Jas. H. Roach, L. S.; Wm. Roach, O. S.

The following new divisions of the Sons of Temperance, were opened on the 14th and 15th ult., by the Hon. P. S. White, P. M. W. P.

MINAS DIVISION—No. 42, Wolfeville.—Rev. John Pryor, D. D., W. P.; Professor Chipman W. A.; John Graham, R. S.; Thos. DeWolf, A. R. S.; — Armstrong, F. S.; Jas. R. Fitch, M. D., T.; John Rousafell, C.; S. W. DeBlois, A. C.; David Freeman, L. S.; Thomas Barss, O. S.; Edwin Clay, P. W. P.; Rev. T. S. Harding, Chaplain.

OAK DIVISION, No. 43, KENTVILLE.—T. W. Harris, W. P.; W. Chipman, W. A.; W. Eaton, R. S.; J. E. Masters, A. R. S.; J. E. DeWolf, F. S.; J. Blanchard, T.; A. Tupper, C.; B. B. Cogswell, A. C.; Charles A. Masters, L. S.; David Chipman, O. S.; John F. Hutchinson, P. W. P.

A Division was opened at Bridgetown, on the 22nd ult. called the OLIVE BRANCH DIVISION. The following are the names of the officers for the first term:—

Silas L. Morse, W. P.; W. H. Chipman, W. A.; Avery B. Piper, R. S.; Benj. S. Fellows, A. R. S.; James Carlton, C.; Isaac Me Ann, A. C.; W. H. Morse, F. S.; Joseph Wheelock, T.; S. T. Neily, L. S.; J. Smith, O. S.; Chaplains, Rev. John Chase, Rev. W. Temple; Thomas Spurr, P. W. P.

(From the Royal Gazette of Wednesday.)

PROVINCIAL APPOINTMENTS.—His Excellency the Lieutenant Governor, by and with the advice of Her Majesty's Council, has constituted and established a Board of Health for the City of Saint John, and Parish of Portland, in the City and County of Saint John, and has appointed William H. Street, Esquire, Mayor, and the Honorable Robert L. Hazen, Recorder of the City of Saint John, to be ex officio Members, and William H. Neeham, George A. Lockhart, Thomas Harding, Gregory Vanborne, George Bond, Josiah Wetmore, Isaac Woodward, Moses H. Perley, Jacob Allan, and James Gallagher, Esquires, to be Members of such Board of Health.