

## EUROPEAN AND NORTH AMERICAN RAILWAY.

A pamphlet recently published by order of the Legislature of Maine, contains the following digest of distances on the newly contemplated route from New-York to Liverpool.

"From the easternmost point of Nova-Scotia, Cape Canso, in Latitude 45 deg. 17 min. N. and in Longitude 61 deg. 3 min. W. to Galway Bay, in Ireland, in Latitude 53 deg. 13 min. N. and in Longitude 9 deg. 13 min. W. the distance is about 2000 miles. Assuming a speed of 17 miles an hour in steam vessels, the Atlantic Ocean can be crossed between these points in five days time."

The nearest accessible harbor to Cape Canso, Whitehaven, in lat. 45 d. 10 m. N. long. 61 d. 10 m. W. according to the authority of Admiral Owen, in a report on the subject made to Sir John Harvey, Sept. 5, 1846—"is a most splendid and commodious port, at the nearest available point of North America to Ireland; its natural facilities greatly exceeding those of Halifax, or any other point upon the coast." Galway harbor is one of the finest in the world, having great advantages over Bristol or Liverpool, as a steam-ship terminus.

The Gut of Canso could possibly be passed by a bridge; but upon this point, there is, at present, no satisfactory information. By means of a ferry across the Gut of Canso, the line could be extended to Louisbourg harbor, in Cape Breton, still further east, to a point less than 2000 miles distant from Galway Bay.

From Galway to Dublin, a line of railway is nearly completed across Ireland, and is in actual operation from Dublin to Mullingar, a distance of 50 miles. From Dublin the distance of 63 miles across the Irish channel to Holyhead, is passed with steam packets at the rate of 18 miles an hour, to which place the Chester and Holyhead Railway is already finished, connecting with Liverpool and London—crossing the Menai Strait by the Britannia Tubular Bridge, which was opened for traffic on the 18th of March, 1850.

The route of the steamship from Liverpool to New-York, passes near to Cape Race, in Newfoundland, Cape Breton, and Cape Canso, and thence along the coast of Nova Scotia to Cape Sable, and parallel with the general line of the coast of New Brunswick and Maine. From Cape Canso to New York, the line by can be passed in one-third the time. From New York to Waterville, the railway is already finished, a distance of 410 miles. From Waterville to the city of St. John, the distance would probably be about 200 miles; and from St. John to Whitehaven less than 250 miles further;—making the entire distance from New York to Whitehaven, from 800 to 900 miles in all.

From Whitehaven to the head of the Bay of Fundy, at Sackville, a feasible route for a railway has been ascertained, passing near to Pictou, through the valuable coal districts along the shore of the Gulf of St. Lawrence; and it is believed that the Legislature of Nova Scotia would cheerfully engage to construct that part of the line, whenever the other portions are secured.

A line of railway from Halifax, passing in the vicinity of Truro, could be easily connected at some feasible point, with the main trunk; and it cannot be doubted that the enterprising citizens of Halifax would engage in its construction at once. At the present time, they are urging the completion of a line from Halifax to Windsor, and a survey of the route has been accomplished.

From the city of St. John to Shediac Bay, on the Gulf of St. Lawrence, a line has been surveyed for a railway on the general line of the route to Sackville, and Provincial aid, to a large amount, proposed. The Province of New Brunswick has recently appropriated £60,000 currency—\$240,000, to construct that portion of the distance between Shediac and the bend of the Petitediac River—the head of navigation on the Bay of Fundy. No doubt can be entertained that the Province would extend this line from a point of connection with the Nova Scotia line, to the city of St. John; and it is believed that the local business of the country between the city of St. John and the head of the Bay of Fundy, would at the present time, pay a tolerable remuneration to the stockholders.

From the city of St. John to Bangor, it is supposed that a route tolerably direct can be found, without encountering serious obstacles, the necessary information upon this point has never been ascertained; and it is for the purpose of asking that this service may be speedily

accomplished, that we approach your honorable body. From Bangor to Waterville, private enterprise has already demonstrated the fact, that either one of several cheap and practicable routes can be adopted."

## Singular and Curious Facts in Natural History.

The greyhound runs by eye-sight only, and this we observe as a fact. The carrier-pigeon flies his two hundred and fifty miles homeward, by eye-sight, viz.: from point to point of objects which he has marked, but this is only our conjecture. The fierce dragon-fly, with twelve thousand lenses in his eyes, darts from angle to angle with the rapidity of a flashing sword, and as rapidly darts back—not turning in the air, but with a dash reversing the action of the wings—the only known creature that possesses this faculty. His sight, then, both forwards and backwards, must be proportionately rapid with his wings, and instantaneously calculating the distance of objects, or he would dash himself to pieces. But in what confirmation of his eyes does this consist? No one can answer. A cloud of ten thousand gnats dance up and down in the sun, the minutest interval between them, yet no one knocks another on the grass, or breaks a head or a wing, long and delicate as these are. Suddenly, amidst your admiration of this matchless dance, a peculiarly high shouldered, vicious gnat, with long, pale, pendant nose, darts out of the rising and falling cloud, and settling on your cheek inserts a poisonous sting. What possesses the little wretch to do this? Did he smell your blood in the mazy dance? No one knows. A four-horse coach comes suddenly upon a flock of geese on a narrow road, and drives straight through the middle of them. A goose was never yet fairly run over; nor a duck. They are under the very wheels and hoofs, and yet, somehow, they contrive to flop and waddle safely off. Habitually stupid, heavy and indolent, they are nevertheless equal to any emergency. Why does the lonely wood pecker, when he descends his tree, and goes to drink, stop several times on his way—listen and look round—before he takes his draught? No one knows. How is it that the species of ant which is taken in battle by other ants to be made slaves, should be the black ant of the starfish (*Ludia fragilis-sima*) possesses the power of breaking itself into fragments, under the influence of terror, rage or despair. "As it does not generally break up," says Professor Forbes, "before it is raised above the surface of the sea, cautiously and anxiously I sunk my bucket, and proceeded in the most gentle manner to introduce *Ludia* to the purer element. Whether the cold air was too much for him, or the sight of the bucket too terrific, I know not; but in a moment he proceeded to dissolve his corporation, and at every mesh of the dredge his fragments were seen escaping. In despair I grasped at the largest, and brought up the extremity of an arm with its terminating eye, the spineous eyelid of which opened and closed, with something of a wink of derision." With this exquisite specimen of natural history wonders, for which naturalists can only vouch that "such is the fact," and admit that they know no more. You see that young crab blowing bubbles on the sea-shore!—such is the infancy of science. He waits patiently for the rising tide, when all these globules of air shall be fused in a great discovery.

## The Farm.

## RAISING PUMPKINS AMONG FRUIT-TREES.

In a former communication, I incidentally mentioned the subject of raising vines under and about fruit-trees. The only object I had, or have now, is to excite the cupidity of farmers, so as to induce them to try the experiment, which will result in renovating their orchards.

I have one third of an acre of land, on which stand some apple-trees, set out about thirty years ago. They were sprouts from a neighboring orchard. They had always received the same careless treatment as other trees in the neighborhood, with this exception—that some fifteen or twenty years ago they were grafted into winter fruit, Spitzenbergs, Greenings, Russets, Pound Sweetings, (Vermont Sweetings of Goodrich.) A few years ago they received the same treatment that all old trees receive from a new proprietor, and a young man—i. e., injudicious, excessive, and ruinous pruning. When I came into possession, I knew nothing what they were, or what they wanted; but by accident I gave the

land a good dressing of chip manure, and the long-collected matter of the sink-spout. I mended them what I could; but in reality had no other object but to produce a good crop of hay.

My trees grew surprisingly, and for what reason I could not at that time tell. After using apples for the family, and not very sparingly either, I have for the last three or four years put into my cellar from ten to fourteen barrels of good grafted winter fruit. Last season it was not over ten barrels. I also have cut a good ton of hay yearly upon the land, and have also growing some twenty trees that yield me no profit. But having become a very nice operator, I dug about and manured my trees; and being unwilling to lose the immediate produce, I planted around each tree two or three pumpkin seeds. These plants induced me to keep the ground free from weeds; and the result was that I obtained last year ten or twelve barrels of apples, and a ton of hay, and a good cart load of pumpkins, to say nothing of the growth of my young trees. The pumpkins will not make vines and run until the grass is cut, when they will make up for lost time. They were as productive as those among my corn.

I had another small yard of young fruit-trees, set in rich grass land, which I treated in the same way, with the same result—although the seeds were planted late, and suffered severely from drought. Had the seeds been planted early, and the season as good as usual, I have no doubt I should have had three times as many as I had. With a bad year for apples and hay, I still realized over the rate of one hundred dollars the acre.

Winter squashes, melons, tomatoes, and beans may all be raised the same way to great advantage, I think, although I have not tried them, particularly under small trees. All these results however depend upon enriching the land, which for all purposes is necessary. —Vermont Chronicle.

## A Model Farm.

The Committee on Farms, in their Report to the Essex Agricultural Society, endeavor to distinguish. They call it also "a model farm," and describe it as follows:

"His homestead farm consists of one hundred and twenty-seven acres. Fifty-two acres of mowing, tilling and orcharding, the remainder pasture, with the exception of a few acres of woodland. He has two barns, one thirty by forty feet, used exclusively for storage of hay, and one eighty-four by forty, with a cellar under the whole, both of which he usually fills every year with English hay, of which he sells from forty to sixty tons per year. In his large barn is kept his stock, and in the cellar his swine, working over and mixing the manure. He has experimented, to some extent, with raw and cooked food for fattening swine, and is of opinion that it may pay the cost for cooking roots, but will not for grain or meal. The produce of his orchard, the present year of great scarcity, was one hundred and twenty barrels of winter fruit, picked from the trees. There is, of field land, a proportion well adapted to the growth of corn and grain, of which the committee saw fine crops growing. He has given more attention, of late, to the production of hay, which, in his opinion, gives him a better profit with less labour. Much of his field land is well adapted to grass; a proportion of it being reclaimed meadow, which does not admit or require the plough, as it is kept highly productive by occasional top dressing. Other portions are moist, but admit of ploughing at dry seasons of the year, which he usually does once in about six years, as soon as the crop of hay is off. He then carts on about twenty loads of compost manure to the acre, harrows and rolls smoothly, and sows timothy and red-top seed, which never fail of a good crop the next season. He is in favor of sowing grass seed in autumn rather than in the spring, with grain on dry land.

His pasture is on a high, smooth swell of land, where the committee had a fine opportunity of witnessing the good effects of gypsum as a fertilizer. Comparing his land where gypsum was applied, with other land adjoining, of apparent like quality, where gypsum had not been used, the difference was truly surprising. Although the season was dry, there was a luxuriant growth of white clover covering the ground where gypsum had been used. His method of applying is, to sow early in the Spring from one and a half bushels to two bushels per acre, every year.

There were in this pasture about twenty head of beef cattle, the looks of which satisfied the committee that the food was as nutritious as handsome. Mr. How composts most of his manure, for which he uses for highland, three parts meadow mud to one of manure, with leached ashes, gypsum, and sometimes a little salt. For moist land, subsoil is used instead of mud. He has experimented, to some extent, with guano, crushed bones, and pou-drette. He is of opinion that any of these will benefit the first crop, but will show but little or no effect afterwards, while this compost endures for a number of years with little apparent failure. In the application of manure, he, like others, finds much difficulty in arriving at certain conclusions, owing in part to the uncertainty of the seasons, whether wet or dry. For a corn or potato crop, on dry land, he favours the ploughing in of the manure, as the surest manner of obtaining a full crop. But for grass and grain, which usually arrive at maturity before drought pinches with severity, he prefers to have the manure near the surface. In the application of his compost to grass land, he is of opinion that it should be applied late in the Autumn, to avoid the scorching rays of the sun before it is settled by the rains around the roots of the grass.

His cultivation is remarkably neat and clean. Scarcely a weed, and not a bush, are to be found in his fields or pastures, neither in the open field, or in ambush under the fences, which are mostly of stone wall. The surface stones had also been removed for fences and under drains, of which he has many.

Mr. How has been in possession of his farm for about twenty years. He is the third generation upon the same spot. His land as a whole is naturally of a good quality, and by his skilful management he has brought it to that state that it will continue to yield full crops with but little labor. In the haying field we saw two lads at work, which we were informed are Mr. How's only children, apparently fifteen and seventeen years of age. From their father, it now is, a model farm for the next generation.

## Another Model Farm.

James M. Bishop Esq. of Seekonk, who received this Society's premium in 1847, gives its committee on farms this account of his estate which will be read with interest and profit by our cultivators.

I came into possession of the farm in the spring of 1833. It then contained 37 acres, and its value was estimated to be about \$2500. It is probable, that, if everything which could have been produced from it, by the most skilful management, during that year, could have been sold to the best advantage, its value would not have exceeded \$100. The team, kept on the farm, consists of two horses and a yoke of oxen; these, with two cows, complete the stock. About four hogs are generally kept through the year. From the stock and hogs, with the aid of sea-weed, salt mud, loam, &c., are manufactured about 40 cords of manure each year, which is worth about \$3 per cord. The stock is kept mostly in the barn during the foddering season, and stabled every night during the year. The urine is all saved. It passes under the barn into a vat, prepared for the purpose of receiving it and the solid manure, which are there mixed with seaweed, salt, mud, loam, or straw, in the proportion of one part solid manure to three parts of the material with which it is composted. The hog-yard and sink drain are supplied with a sufficient quantity of seaweed and loam, or mud, frequently enough to prevent the strength of the manure from being carried off by evaporation.

The crops grown on the farm, are Indian corn, potatoes, hay, millet, and almost all kinds of roots, together with nearly every description of green vegetables and garden sauce known in the country, or called for in the market.

The quantity of manure used in cultivation is made to depend upon the strength of the manure, the condition of the soil, and the kind of crop which is to be raised. Generally, however, from six to ten cords of ordinary manure are put upon an acre. It is applied broadcast in all cases, and is ploughed in from six to ten inches deep. In preparing the ground for beets, parsnips, &c., the manure is first pulverized as much as practicable, and then spread uniformly over the ground. The ground