6 or 8 pails of water over them; shortly after doing so, the potatoes became a solid mass of ice. In a few days a thaw took place, the ice and water left them, and they remained during the winter perfectly free from frost, and were not in any way injured."

LARGE POTATOES.—"T. B. M." writes:—"I saw a piece in THE CANADA FARMER of the 15th ult., about the products of potatoes. I am a young farmer in the Township of Scarboro', and have a small piece of ground which I manured well and dug with the spade and planted with the ordinary quantity of seed, in hills. When fit I gave them the ordinary cultivature, and in digging them up this fall, I found the largest potato I ever saw—it weighed over three pounds and a-half. I can produce bushels that will weigh over two and a-half pounds, from the same piece of ground. Beat that, if you can!"

On the same subject, "L. C.," of Ballinafad writes:—"'A. J.' having written to THE CANADA FARMER, states that he had this year a potatoe which weighed 2 lbs. 12 oz., and if this could be beat, would like it to be made known. Now, I have raised potatoes this year, several of which weighed over 4 lbs., and I can show five bushels that will weigh 3 lbs. I may also state that for the above five bushels of potatoes I only planted two quarts of seed. Can this be beat?"

HOME-MADE WEATHER INDICATOR.—"L. C. B." writes: "During last winter, while attending a course of lectures, delivered under the auspices of the Board of Agriculture, an idea occurred to me for a simple hygrometer, having tested which, I beg to offer it to your readers. Wood in the direction of its fibre is little affected by moisture; paper is very sensitive thereto. Accordingly, I form an Indicator by glueing a strip of cardboard to one side of a narrow pine shaving, keeping them pressed together till dry. One end of the Indicator I secure in a cleft in a wooden peg, which peg I insert tightly in a piece of board, leaving the other end of the Indicator free to move along a scale marked on the board. At about 3 P.M. of a summer's day during continued fine weather, by turning the peg I adjust the free end of the Indicator to the zero point of the scale. Any increase of moisture then causes the cardboard to expand, thereby moving the end of the Indicator along the scale.

"In the instrument I have constructed for myself the Indicator is 8 inches long, and I have observed a movement of more than 1 inches on the approach of rain."

HYDRAULIC POWER FOR STUMP PULLING.—On this subject, "J. F. C.," of L'Orignal, writes:—"The application of hydraulic power to the extraction of stumps, is, I see, attracting considerable attention in your columns. Some additional knowledge as to the properties of the hydraulic press seems to be requisite. In forcing water from a small cylinder into a large one, the distances through which the two pistons move are in inverse proportion to their areas. The easiest way to find the area of a circle is to multiply the square of its diameter by ·7854. The area of a half-inch piston is, say 2, and that of a 12-inch 113; therefore, in forcing the small piston down 12 inches, the large one will be raised 113.2.:12..212, say about one-fifth of an inch not a result, we should say, to warrant the introduction of the principle into stump machines."

"A Farmer" discusses this matter as follows:—"Your Romney correspondent, in No. 18 of THE CANADA FARMER, has stated the advantages of the hydraulic press. By your permission, I will state some of the disadvantages. It is called a 'press' because it is so admirably adapted to giving a tight squeeze, and not much else. It confirms the universal rule in mechanics, that what is gained in power is lost in time or speed. True, with such a press as is described on page 287, No. 18, a man may lift a weight of 576 tons (only the loss of power by friction must be deducted from the weight, or added to the power, or its equivalent), but it is only on condition that his lever is long enough and travels far enough. Supposing each cylinder to have one-foot stroke, and the man to exert a power of 100 pounds; then, in order to raise the said 576 tons 12 inches high he must use a lever twenty times as long at one end as at the other; and that part to which he applies his strength must move 20 feet to force the water out of of the small cylinder into the large one, by which it is raised the 576th part of a foot; before he can repeat the process the lever has to be returned, making 40 feet by the lever, which has to be repeated 576 times. Thus the man carries 100 pounds over two miles in one direction, and a heavy lever the same distance in an opposite one to lift the above weight 12 inches high. The proportions may be varied, but the rule cannot be broken. The hydraulic press constitutes a compound lever thus, the difference in the arms being one, the difference in the cylinders the other; moreover, the cylinder keeps all that the lever gets. The laws of the Medes and Persians are not to be compared for stability with the laws of nature."

PORK AND PEAS.—A Farmer" writes from Lefroy thus.—"Messieurs the 'Pork Packers' have taken some pains to instruct the readers of THE CANADA FARMER in the art and mystery of fatting pigs, but I am afraid their labour will be pretty much 'labour lost,' unless they or some one else will supplement it by informing us how we can grow large crops of peas at a reasonable outlay of labour. Through various channels, and at various times, we hear and read great stories about corn-growing in the States. At one time we are told that crops of 160 bushels per acre are raised, at another that it is used as fuel, and again that it may be bought at 10 cents per bushel and grown for less. No such statements would apply to pea-growing in Canada. We are quite willing to believe that peas make better pork than corn does, but don't think the above-named gentlemen are willing to make so much difference in the price as there is in the cost. Either Canadian farmers must continue to fat pork at a loss or reduce the cost of feeding it. Supposing peas to yield 20 bushels per acre, at 50 cents per bushel, they just about pay rent and labourers' wages, but I never made that of them when converted into pork. Can you, or any of your readers, suggest a plan by which larger crops can be obtained, or the expense of cultivation reduced?"

The "Canada Farmer."

Subscribers to THE CANADA FARMER will please observe that the year closes with the issue of the 15th December. No papers will be sent after that date unless paid for in advance. Parties who are getting up Clubs, as well as single subscribers, will please note the fact and govern themselves accordingly. The "Canada Farmer" is the cheapest Agricultural Paper in the world, and we find it a necessity arising from the low price at which it is furnished, that it should be invariably paid for in advance. For Club terms, see advertisement in another part of the paper.

The Canada Farmer.

TORONTO, UPPER CANADA, NOV. 15, 1864.

The Climate of Canada.

VERY incorrect ideas prevail abroad as to the climate of this country. Our winters are supposed to be arctic in their duration and severity, and our summers, in like manner, arctic in their brevity and coolness. The statement is current that we have frost every month in the year, and "the rigours of a Canadian climate," have become a proverb. Not only in Great Britain and on the European continent, do these misconceptions prevail, but even our American neighbours cherish them to some extent. They confound Canada with Labrador, and the Canadians with Esquimaux. A few years since we were asked in Boston by an intelligent lady, if the people of Canada did not usually travel in the winter season in sledges drawn by dogs. This was a glaring case of ignorance, to be sure, but, in a less degree, similar ignorance exists in many quarters. We are thought to inhabit an inclement region hardly worthy of being styled "home." But the truth is that ours is a singularly pleasant and fruitful land. For natural scenery, varied resources, and ability to sustain a teeming population, we shall search far and wide ere we find a country to surpass the Province of Canada. Our climate has been severely criticised, and its extremes of heat and cold have been much complained of, but the healthfulness of this land is established beyond controversy, and our climatic vicissitudes, though sometimes a source of inconvenience, are by no means unwholesome. No where on earth do the seasons of the year move on in lovelier, grander procession. In spring, we have a quick awakening of vegetable life and nature puts on her best attire, promptly as a bride on her wedding-morn. Our summer is short but gorgeous with splendour, and bedecked with flowers that can hardly be surpassed; we have oppressive heat at times, and occasionally drouth, but how do our summer showers refresh the face of all things, how welcome is the rain, and how green and beautiful are the fields, the gardens, and the woods when it falls. In autumn, we have the waving fields of grain and tasseled corn; our orchards display apples of gold in baskets of silvery verdure, and we can reckon even the grape among our fruits; our forests present a richly-tinted and many-coloured foliage; we have mid-October days in which the weather is superb; our Indian summer is a splendid valedictory to the season of growth and harvest; a bright and beautiful hectic flush sits upon the face of universal nature as death draws on, and we glide imperceptibly into winter. This though confessedly severe is exhilerating, hardening animal as well as vegetable fibre, while it has its ameliorations and joys in the fire-side warmth that tempers into goniality the clear, frosty air; we have also the merry jingle and fleet gliding of the sleigh, and the skater's healthful sport, together with almost entire exemption from damp and mud, two most disagreeable characteristics of winter in milder climes. The characteristics of this country are only beginning to be known abroad, as its resources are only beginning to be developed at home. It offers inducements rarely surpassed to industrious, energetic, prudent settlers. Let it only be thickly settled with a population worthy of it, and it will take no mean rank among the countries of the earth. Sunnier climes there may be, but a fitter habitation for a manly, vigorous race,—a finer field for displaying the energy, intelligence, and virtues of Anglo-Saxons, we may safely challenge the wide world to produce.

Thatching, and How to do it.

WE have often wondered that there is not more thatching done in this country. Straw is often very abundant, and there are many of our farmers who are quite familiar with the process, having come from various parts of Britain, where this mode of roofing is very common. Not only are ricks, out-houses, barns, and humble cottages often covered with straw roofs in the British Isles, but country buildings of a more pretentious character are sometimes thatched, to give them a rustic air. The present season is not a very favourable one for thatching, as the yield of straw has been short and meagre in many parts of the country. Nevertheless, in many instances it would be good economy to use a portion of the straw for roof and shelter, instead of throwing it all out to cattle in unprotected yards. The following "hints on thatching," from the November number of the *American Agriculturist*, may be useful to such of our readers as do not understand the process:—

"In some countries thatching is a regular trade, but with care any one may do it. It makes a beautiful finish for rustic houses, porters' lodges, well-houses, bee-hive shelters, etc., and is besides the most excellent roofing for ice-houses—so the subject has interest for almost every one. For durability and imperviousness to water, and for warmth in winter and coolness in summer, a straw roof well put on is nearly all that can be desired. Its liability to take fire from sparks is by no means so great as would be supposed, especially after it has been laid a few months. There are many ways of making a straw roof. The mud roofs of the log cabins at the South and West are not unfrequently thatched by laying light courses of straw and binding each with a layer of clay or sods upon the upper end, covered out of sight by the next course, and they look very well.

"Roof frames are prepared for thatch, much as for shingles, so far as the plates, purlines, rafters, and ridge poles are concerned. Upon the rafters are lashed, with well tarred rope yarn, boughs of hazel or Scotch fir in England; nothing could be better