

Science and Art.

New Views Respecting Geology.

Do FOSSILS AND ROCKS GROW—A practical miner of great experience, named W. Ennor, has recently communicated some very curious views and strange information to the London Mining Journal relative to the growth of rocks and fossils. His views are entirely opposed to the Plutonic theory, and the common opinions of geologists, who believe that the fossils found in rocks, however deep, once lived and moved on the face of the earth, and were submerged by some convulsions of nature, and buried where they are now found, in the coal measures and sandstone, &c. He says:—

“We have also ample proof that quartz grows in a short space of time, which I could prove to any one who likes to accompany me through the mines. A person visiting Devon Consols will have it pointed out. I am, for various reasons, inclined to think that all lodes where quartz or other crystals are seen in the act of growing are progressive lodes. While on this subject, I would call attention as to how these things first form. Do they germinate from a seed of their own kind? or what is the first formation, as I at all times find the first or center to be of a different character from the outer portions? Again, how do they increase in size? I, at first, was inclined to think the addition took place on the outer side, by accumulation from aqueous gases passing through the earth; but I now discover it is not the case, as the very crystals at Devon Consols have shot up by thousands from the lode in the bottom and sides of levels where there is a current of air, which clearly proves that they draw their nutrition from the rocks below, which is carried up as the sap passes up in a tree; and rings may be often seen in quartz crystal when broken across, similar to those in a tree when sawn.

Minute crystals of copper, sulphur, or arsenical mundic, adhere to it. Crystals are often found adhering to clusters of quartz.

I next call attention to the fossil plant so often found on stones, and notice that they are at all times found to take the cleavage way of rocks, and to incline south or west, with the top of the plant upwards. Were these plants once embedded in sediment which had undergone upheavals, they would now be found lying in all directions; and not passing between the cleavage, as the cleavage is often contrary to the bed. Every different rock appears to produce its own species of plant. I have long doubted the fact of a large portion of them being plants which once enjoyed the sun's rays. Query, are these plants the rock's natural produce, or the seed of living plants that became embedded, and strove hard with Nature to produce what we see? or did all plants germinate from the earth?

I must mention a plant which I saw growing last Christmas, in a level from 70 to 100 fathoms deep, at North Wheal Crofty. These plants might be seen coming out of the joints, some not above 6 inches long, and others of various sizes—one was perfect, 4 feet high, spreading 4 feet, and stuck to the side like ivy to a wall. There were many others as large, but injured, as it was a working level. I can produce impressions of plants of the same kind, and as large, printed between the cleavage of stone. All these things are to be seen, as I never promulgate mere hearsay.”

Headline: Cabbages in Winter.

A number of our agricultural exchanges give the following method of making cabbage head in winter, which we hope is correct:—

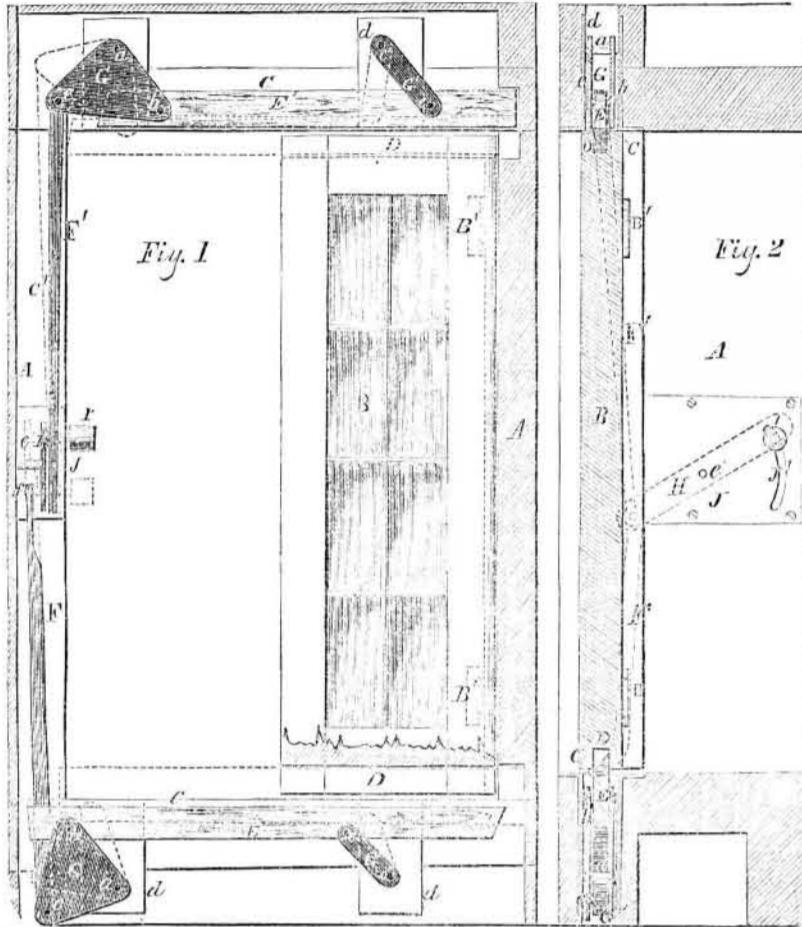
“Select a suitable spot in a garden or field, six feet in width, of any desired length, free from standing water; run a furrow the proposed length of your bed, and throw a back furrow upon it. This double furrow will form a side wall of your cabbage house. In the trench stand your cabbages on their roots, leaning towards the furrow at an angle of 40 to 45 degrees. Let the next furrow be thrown upon the roots and stalks of the cabbages, and another row be placed in the trench made by the second furrow; thus proceed until your six feet of width is planted, then let the last fur-

row be a double one—making the other side wall about the height of the cabbage head.—Through the whole length of the middle of the patch lay rails lengthwise, supported by crutches, at the height of about two feet from the cabbages; this will form the ridge of the cabbage house. Lay light brushwood from the side-walls to the ridge pole; then throw on salt hay, or bog hay, or straw, two inches in depth. As the cold weather advances throw on dirt till you have a depth of say six or eight inch-

es—or even more when the winters are severe, and finally spank the dirt roof with the flat of a spade until it will shed the rain. Fill up two ends of your house in the same manner, leaving only small air holes of a foot or two diameter, which may be closed with hay. The length of the house should be on a north and south line.

In the early spring you will find your most unpromising plants have heads of their own, and all will be thriving and fresh.”

COMBINED WEATHER STRIP AND LOCK.



The accompanying figures represent an improved combined weather-strip and lock for French windows, &c., invented by Alfred Speer, of Passaic, N. J., who has taken measures to secure a patent.

Fig. 1 is a vertical longitudinal section—looking from the outside—of a French window with the locking weather-strip applied to it; and fig. 2 is a vertical transverse section of the same. Similar letters refer to like parts.

The nature of the invention consists in making a groove in the top and bottom of the window frame, and also in the top and bottom sash of the window, and providing a thin weather-strip hung on links connected with rods, secured in the frame, which rods, when operated by a knob or pin set in a curved groove, force the weather-strips into the grooves of the window sash, thus sealing the frame and window sash completely, preventing the entrance of rain, wind, and dust, and locking the window on the inside of the house.

A represents a window frame made in the usual manner externally, but provided with grooves, C C, at top and bottom, and a recess, C', at one of its sides. B represents a sash hung in the frame on hinges, B' B'. D D are the grooves in the top and bottom of the window sash—the grooves of both sashes being in line with themselves and those in the frame. E E' are the weather strips—one at the top and the other at the bottom of the window frame.

These weather strips are connected by pivot joints, b b and e e, to the bell-cranks and links, and these latter are connected by axis pins, a a and c' c', to the support pieces, d d d d. F F' are vertical rods at the one side of the window frame; they are connected to the bell-cranks or elbow links, G G, by pins, c c, and are kept in the recess, C'. These two rods, F F', are connected at about the middle of the window frame by a pin, f, which also passes through the small arm, H, that turns on an axis pin, e, fig. 2, inside of the plate, as represented by dotted lines. I is a knob on the end of a shank attached to the front end of arm, H. The shank is inserted in a curved slot, J', in plate, J, the knob, I, being outside

of the plate. By moving the knob, I, in the curved slot, J', fig. 2, the weather-strips, E E', are operated. This knob is placed in the inside of the window in the room.

OPERATION—As represented distinctly in fig. 1, the weather-strips, E E', are in position in the grooves, C C, of the frame, and not in those of the window sash. In order to force the weather-strips into the grooves, D D, of the sash, so as to unite the frame and the sash, and close up the seam or space between them, and lock them together, all that is required is simply to move down the knob, I, in the curved slot, J', fig. 2, so as to make the arm, H, turn on its axis, e, and assume a horizontal position, or else to move the knob, I, to the bottom of the slot, J, and make the arm, H, assume an angular position, the reverse of that which it now occupies in fig. 2. The dotted lines, fig. 1, show the position of the rods F F', the weather strips, E E', and the elbow links, G G, and links, G' G', when operated as described. The upper rod, F', is forced upward and the lower rod, F, is drawn upwards. In this position these weather-strips seal up the spaces between the top and bottom of the sash and the frame, rendering the window air and water tight. In this position these weather strips answer the purpose of bars, locking the window to the sash in such a manner that it cannot be opened from the outside. This improvement in weather-strips may also be applied to doors, and either one, two, or three weather-strips may be used. The weather-strip may be made with a groove in its face, to match a bead on the bottom of a door, instead of being forced in a groove; the principle is the same in both cases. Among the many kinds of weather-strips which have been brought before the public, this one appears to us worthy of attention, on account of its positive action. It is evident that it will effectually lock the frame and sash of the window together, and at the same time be a positive weather-strip to keep out the rain wind and dust. We have seen weather-strips composed of fewer parts, but not so effectual in their action. Owing to the dotted lines on the figures,

which are necessary to show the action of the parts, this weather-strip appears more complicated than it really is. It is a very simple means for accomplishing the objects stated, and will be clearly understood by a careful examination of the description and figures. It is a neat weather strip, as no part of it is seen, and it can be attached by any carpenter to casings already set. The price for each, applied to a French window, the inventor informs us, is but two dollars.

More information may be obtained by letter addressed to Mr. Speer, of Passaic.

Literary Notices.

THE YEAR BOOK OF AGRICULTURE—This is a new book, forming an Annual of agricultural progress and discovery, published by Childs & Peterson, Philadelphia, and edited with marked ability by David A. Wells, A. M. It is a handsome volume, numbering 400 pages of closely printed matter, illustrated with a steel plate frontispiece of the celebrated Downing. The object of this Annual is to collect and present in a clear and attractive form, all the new discoveries, and everything useful connected with each branch of Agriculture which have been developed during the year. The first section is an able review, by the editor, of the progress and prospects of agriculture; the second section is devoted to new agricultural machines, implements, &c., and is illustrated with a great number of excellent wood cuts, such as planters, straw cutters, plows, harrows, &c., &c. A very large section is devoted to Agricultural Chemistry, and contains many able and useful articles, all of which bear the impress of judicious selection. The editor being an able practical chemist, his views and comments on agricultural chemistry are of great value. Botany, Horticulture, and other kindred branches of agriculture are treated with judgment and perspicuity. The book is a volume of condensed knowledge, and fills up a gap in our agricultural literature long felt by many of our farmers. Hereafter it will form a yearly volume, and present to our people the annual progress of agricultural science and art. It is for sale by Saxton, & Co., No. 152 Fulton st., this city.

AMY LEE—By the author of "Our Parish." We are not acquainted with the writer of the last mentioned book, and therefore can give no further information as to who originated "Amy Lee." It appears to be well written, and to contain many scenes of absorbing interest. The typographical appearance is highly creditable to the publishers, Messrs. Brown, Bazin, & Co., Boston, Mass.

TEVERINO, is the title of a novel by a well-known French authoress, Madame Sand. It is prefaced by a biographical sketch of the writer, from the pen of Mr. Oliver S. Leland, Boston, published by Fetridge & Co.

GROTCHEFS AND QUAYERS—by Max Maretzek. This is a spicy book of revelations. It treats of things behind the scenes of various opera establishments in this country, with which the author was connected as manager or conductor. There are a good many personal allusions that should have been left out; but on the whole it forms a very lively readable volume. S. French, 121 Nassau st., N. Y., publisher.



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