# Scientific American.

## 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 centerto 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 thevery 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 the window on the inside of the house. 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."

### Heading 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, |a and c'c', to the support pieces, d d d d. F | to match a bead on the bottom of a door, six feet in width, of any desired length, free F' are vertical rods at the one side of the win- instead of being forced in a groove; the prinfrom 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 end of a shank attached to the front end of dust. We have seen weather-strips composed the second furrow: thus proceed until your six feet of width is planted, then let the last fur- slot, J', in plate, J, the knob, I, being outside tion. Owing to the dotted lines on the figures,

wall about the hight of the cabbage head.- and finally spank the dirt roof with the flat of parts, this weather-strip appears more complica-Through the whole length of the middle of the a spade until it will shed the rain. Fill up ated than it really is. It is a very simple means patch lay rails lengthwise, supported by crutch- two ends of your house in the same manner, for accomplishing the objects stated, and will be es, at the hight of about two feet from the cab- leaving only small air holes of a foot or two clearly understood by a careful examination of bages; this will form the ridge of the cabbage diameter, which may be closed with hay. The the description and figures. It is a neat house. Lay light brushwood from the side- length of the house should be on a north and walls to the ridge pole; then throw on salt south line. hay, or bog hay, or straw, two inches in depth. As the cold weather advances throw on dirt unpromising plants have heads of their own,

In the early spring you will find your most till you have a depth of say six or eight inch- and all will be thriving and fresh."

row be a double one-making the other side es-or even more when the winters are severe, which are necessary to show the action of the 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 informatfon may be obtained by letter addressed to Mr. Speer, of Passaic.

## Literary Notices.

Literary Notices. THE YEAR BOOK OF AGRICULTURS-This is a new book, forming an Annual of agricultural progress and dis-covery, 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 sicel plate frontispice 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 school section is devoted to new agriculture in an number of agriculture of the magnetic section is an able review, by the school section is devoted to new agriculture in an-number of agricultural Chemistry, and contains many able and useful articles, all of which beat the impress of idenious selection. The editor being an able practical chemist, hivitewand comments on agriculture, aud other kindred branches of agriculture are treated with judg-ment and perspicuity. The book is a volume of con-densed knowledge, and fills up a gap in our garicultural the and perspiculty. The book is a volume of con-densed knowledge, and fills up a gap in our people the sanches, of section and fills up a gap in our people the sanches of agricultural science and art. Hereafter if will form a yearly volume, and present toour people the sale by Saxton, & C. O. No. 152 Fulton st. this city.

Any 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 autheress, Madame Sand. It is prefaced by a bi-ographical sketch of the writer, from the pen of Mr. Oli-ver S. Leland, Boston, published by Fetridge & Co.

CROTCHETS AND QUAVERS—by Max Maretzek. This is a spicy book of revelations. It treats of things behind the scenes of various opera establishments in this coun-try, with which the author was connected as mana-ger or conductor. 'There are a good many personal allu-sions 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.



Inventors, and Manufacturers

ELEVENTH YEARS PROSPECTUS OF THE

SCIENTIFIC AMERICAN.

This work differs materially from other publications being an ILLUSTRATED PERIODICAL, devoted chiefly to the promulgation of information relating to the various Mechanic and Chemic Arts, Industrial Manufactures, Agriculture, Patents, Inventions, Engineering, Millwork, and all interests which the light of PRACTICAL SCIENCE is calculated to advance. Every number of the SCIENTIFIC AMERICAN

rods, secured in the frame, which rods, when tal position, or else to move the knob, I, to the contains *Eight Large Pages*, of reading, abundantly illus. groove, force the weather-strips in to the grooves assume an angular position, the reverse of pressly for this publication.

REPORTS OF U.S. PATENTS granted are also published every week, including Official Copies of all the and window sash completely, preventing the ted lines, fig. 1, show the position of the rods PATENT CLAIMS. These Claims are published in the Scientific American in advance of all other papers. The proprietors of the SCIENTIFIC AMERICAN will

A represents a window on the inside of the notice. A represents a window frame made in the erated as described. The upper rod, F<sup>3</sup>, is pay, in cash, the following SPLENDID PRIZES for the fourteen largest lists of subscribers sent in between the fourteen largest lists of subscribers sent in between the present time and the lst of January, 1556; to wit:

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French windows, &c., invented by Alfred Speer, are operated. This knob is placed in the in-

of the window sash, thus sealing the frame that which it now occupies in fig; 2. The dot-

usual manner externally, but provided with forced upward and the lower rod, F, is drawn

C', at one of its sides. B represents a sash seal up the spaces between the top and bottom

hung in the frame on hinges, B' B'. D D are of the sash and the trame, rendering the winthe grooves in the top and bottom of the win- dow air and water tight. In this position these

line with themselves and those in the frame. locking the window to the sash in such a man-

E E' are the weather strips—one at the top and ner that it cannot be opened from the outside.

the other at the bottom of the window frame. This improvement in weather-strips may also

These weather strips are connected by pivot be applied to doors, and either one, two, or

joints, b b and e e, to the bell-cranks and links, three weather-strips may be used. The weath-

and these latter are connected by axis pins, a er-strip may be made with a groove in its face,

dow frame; they are connected to the bell- ciple is the same in both cases. Among the

cranks or elbow links, G G, by pins, c c, and many kinds of weather-strips which have been

are kept in the recess, C'. These two rods, brought before the public, this one appears to

F F', are connected at about the middle of the us worthy of attention, on account of its posi-

window frame by a pin, f, which also passes tive action. It is evident that it will effectu-

through the small arm, H, that turns on an ally lock the frame and sash of the window

axis pin, e, fig. 2, inside of the plate, as repre- together, and at the same time be a positive

sented by dotted lines. I is a knob on the weather-strip to keep out the rain wind and

arm, H. The shank is inserted in a curved of fewer parts, but not so effectual in their ac-

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 as to unite the frame and the

sash, and close up the seam or space between

them, and lock them together, all that is re-

quired 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 assumea horizontal position, or else to move the knob, I, to the

F F', the weather strips, E E', and the el-

bow links, G G, and links, G' G', when op-

upwards. In this position these weather-strips

weather strips answer the purpose of bars,

of Passaic, N. J., who has taken measures to side of the window in the room.

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

The nature of the invention consists in mak-

ing a groove in the top and bottom of the win-

dow 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

entrance of rain, wind, and dust, and locking

grooves, C C, at top and bottom, and a recess,

dow sash-the grooves of both sashes being in

same. Similar letters refer to like parts.