Scientific.

has been heated to the boiling point, on cool- of Psychological Medicine. ing again, does not readily absorb its former bulk of air, and consequently it is a quicker conductor of heat, will freeze sooner than that which has not been heated, and, it would seem, derstood, we will take an illustration which is must be better for tempering steel,

proportion to its warmth; thence the variable- frequently see them, in children and young ness of temperature produces rain and dew. people, enlarged and projecting : by bad diet, Warm earth thrown up to the cold air will pro- by exposure to cold, and a thousand other duce an opaque vapor ; the reason is, the cold causes which will arouse the dormant disease, air is warmed on the wet earth, and this ab-they become red and tender; they increase in sorbs a portion of moisture, which rises, be-size, and are inflamed; presently they become comes cool on mingling with the cold air, and softer, and fluctuate on pressure; afterwards is given out again visible like fog; and it is by they point, the skin ulcerates, and ultimately the same rule that drops of water collect on they burst; they then discharge their contents, the outside of a tumbler of cold water in a which is softened tuberculous matter, and as warm summer's day.

the constitution improves, they gradually heal But this rule appears to be reversed, or at with an irregular scar. We have all, perhaps, least varied, when above the boiling point .- seen several of these glands similarly affected, Take a kettle of cold water, fill a vial with the either at the same time, or one rapidly succeedsame, and invert it under the water, heat mo- ing to another, and we have then noticed that life of plants. They are very numerous. To But there are many different kinds of plants. derately up to the boiling point, and you may the inflammation and the pain is not confined observe the operation of water and air by a to the munediate vicinity of the glands, but change of temperature; as the water begins to that the disturbance spreads around the whole warm, its surplus bulk of air begins to escape, neck and to the neighboring parts. One after and occupy the upper part of the vial, and another, abscesses form and burst, until pus is these pores indicates to those who have studi- I may mention mildew, smuts and rust.before the water boils, the air and vapor will dripping from innumerable points; at length ed this subject, the circumstances of climate This is a subject of highest interest. By exhave forced all the water out of the vial by their the whole adventitious matter is discharged ; and atmosphere to which the plant is adapted. amining them closely through the microscope, lively expansion. Immediately above this de- wide and deep openings are left, the edges of gree of heat the affinity of water or steam and which are hard, thick, and indolent; neverair appears to be reversed, as may be argued theless, as the health of the patient improves, from the result of my experiment with steam so we may hope to close the wound, and in from a boiler; and I think we may account for time it heals by a cicatrix. Here we have the the dripping of store pipes in cold weather; progress of scrofulous tubercle in a part not when nothing is used for fuel but dry coal, essentially vital, from which we may trace the upon this principle : the draft of air, though progress of tubercle in that vital organ, the cold, contains a portion of vapor which is heat- lungs. -

ed, so that separation from the atmospheric and a link air and carbonic acid takes place, and as it

A Slight Cold. HERE STORE

flies along to where the pipe is cool, it con- The commencement of consumption is slow denses on the upper portion of the pipe and and insidious; there is seldom any pain in the runs down. That steam and air may separate part most affected, to direct the attention of by heat, is nothing more than reasonable; for the patient to his malady. After some slight a separation is produced by heat between many exposure to cold, or other exciting cause, he other combinations in the same way and for feels an uneasiness at the back part of the the same reason ; that is, one ingredient is rari- throat, which induces a hard dry cough : withfied and made lighter than the other; the rea- out being very troublesome the cough contison for the change of property between air and nues, and is soon accompanied by a trifling ther important point, requiring a minute study its vapor by an elevation of heat, being un expectoration of frothy mucus, without color doubtedly on the same principle by which and without consistence, as in common catarrh. their affinity is overcome. By reference to Presently the cough becomes more frequent the gravity of the respective gases of water and air, it will be seen that water brought into the on getting up, and at night soon after retiring gets from the soil. Thus the habits of these which seemed by its effects on the organs of gaseous state, so as to possess the same inde- to bed. The expectoration is now transparent pendent elasticity of atmospheric air, must ne- but more tenacious, almost ropy; any little excessarily become lighter, and possibly as much ertion during the day, as walking fast, or go-

connected with determination of blood to the The fresh juice has an excessively strong common rag wort, (rag weed.) which occurs The nightmare (incubus ephialtes,) smell, and grows weaker and weaker upon in arable lands, indicates that the land is badly head. PECULIAR PROPERTIES OF WATER AND AIR. with great sensitiveness, is a sign of determi-keeping; a single drachm of the fresh fluid cultivated.

Water seems to retain only a certain bulk of nation of blood to the chest. We may add, smells more than a hundred pounds of the dry air; a slight elevation of heat in cold water that dreams of dogs, after the bite of a mad assafeetida brought to us. The Persians are ferent varieties of soil. The beech, a light occasions an expansion of its air, and produces dog, often precede the appearance of hydro- commonly obliged to hire ships on purpose soil : maple, also a light soil of a very superior a surplus of bulk which is set free; a relief of phobia, but may be only the consequence of for its carriage, as scarcely any one will re-pressure will have the same effect. Water that excited imagination. Dr. Winslow's Journal ceive it along with other commodities, its and the different formations which they seveit.-Scientific American.

Progress of Tubercle.

To make the progress of tubercle better unprobably familiar to all, namely, the glands of The atmosphere will also take up water in the neck in a person of a scrofulous habit. We

The Farm.

STRUCTURE OF PLANTS.

croscope, this difference is very striking. The farmer lives.

been seen and counted. The number of any other.

cular kinds of leaves.

and beauty. These, as Professor E. well says, exhibit in a strong light, the important relations which science bears to the practical cultivation of these plants.

into the manner in which the stem tapers down into the extreme fibres of the root of the spongy form of the extremities of the roots, which enspreads its roots to the distance of four or five The same place has been also used as a shelfeet. You may readily trace them to the dis- ter for sheep, in which their feeding boxes tance of three or four and even five feet, show- were placed. Occasionally a little straw was ing from how great a distance these plants scattered, that they might have a clean bed.the soil.

Then you all know that trees indicate difstench affecting every thing that comes near rally indicate, but I need not dwell on this part of the subject.

Again, the mode in which plants are propagated is another subject of importance. Many of them are propagated only by seeds, and if you destroy the seeds, you are certain they In investigating the structure of plants, that will not appear again. But there are others of the leaves become essential, to know as well which are propagated not only by seeds, but how plants live, as how they should be fed; by running roots; of this character is the Cathat is, to those who are desirous of under- nada thistle, so that if you cut down the plant, standing the principal branches of knowledge, before the seeds are ripened, the roots will on which all sound agriculture must be based. propagate and increase the crop. So with the Among the circumstances connected with the common twitch grass; the more you cut it structure of plants, the organization of the down, the morelit will grow. These facts bear leaf is of the greatest importance. The up- closely on the practical operations of the farper side differs generally from the under; when mer, and in this respect botany has a direct subjected to the magnifying power of the mi- and a special reference to the art on which the

under part of the leaf is found to be studded I need not go further into details, to conwith little holes or pores, or mouths, which vince you how far an ignorance of botany stands sustain important functions or relations to the in the way of progress in agricultural pursuits. give you some idea of their number, I may which botanists study, which are of particular mention that on a square inch of a single leaf, interest to the practical farmer, or which, at twenty thousand of these little pores have least, possess as high an interest to them, as

By means of these pores, they suck in wrial botanists have discovered how they growfood from the atmosphere, the mode in which what they are-how they propagate-how they they drink it in, the quantity and the circum- get into the plant and seed-and how they stances under which they absorb it most favo- may be exterminated. It is obvious that to rably; that is, the circumstances of tempera- exterminate smut, you must either destroy the ture and moisture, are related to the form and seeds, (sporules,) when they have come to manumber of these pores, as they occur in parti-turity, or destroy the plants before they have attained that state. But of all the smuts, or The structure of the stein of plants is also fungi, as they are called, that injuriously aione much connected with their growth .- fect plants, the potato disease is one of the most Those who have the curiosity to examine the remarkable; and when we consider how imporstructure of the stems of plants have only to tant a root the potato is, and what great disturn to Professor Emmons' volume on the tress has followed the effects of this disease. Agriculture of the State, where sections of you cannot fail to see that this branch of knowplants and trees are given with great accuracy ledge is deserving of all possible encourage-

Shelter Your Manure.

ment.

One word more on manures. Every agricultural paper has told us that manures exposed to the weather all winter, possesses little. if any, more than half its value. A farmer has used a portion of his barn-a bay for inroots are important. Some plants spread their which seemed by its effects on the organs of roots over the surface, as the turnip, which smell, to be doubly charged with ammonia .--

ighter as the difference between the amount ing up stairs, is sufficient to bring on a fit of of weight of the gases that belong to each se- coughing, and with it quickness of breathing, parate composition. attended with some degree of oppression at

For some reason air has a tendency to im- the chest. The patient soon becomes sensipart elastic properties to water, and it is evi- ble of unusual languor ; he is readily fatigued, dent the air of water will generate steam, even and finds his strength unequal to his customary under a great pressure, sooner than heat alone, labor or exercise; he breathes with some difand from this fact it is evident that the reason ficulty, and his respirations are shorter and why water does not take all the elastic state quicker than usual; if he takes a deep inspiraat once, like gunpowder, is simply because the tion he is conscious of uneasiness, scarcely a air of the water is a slow conductor of heat, and pain, immediately beneath the coll ir bone, and must be heated to a certain point before the this more frequently is felt on the right side. elastic properties are imparted to the water .--Scientific American. 112 10 India Rubber.

Medical Interpretation of Dreams.

Dreaming, as the precursor and accompa- ly Review for February, 1772, sent to "Notes and to reach its maturity. Hence a knowledge niment of diseases, deserves continued inves- and Queries" by a correspondent makes us of this fact, in regard to wheat and flax, sug- lowing experiment. Almost every farmer has tigation, not because it is to be considered as a spiritual divination, but because the uncon-scious language often very clearly shows to because the uncon-scious language often very clearly shows to these who can be the uncon-scious language often very clearly shows to these who can be the uncon-scious language often very clearly shows to these who can be the uncon-scious language often very clearly shows to these who can be the uncon-scious language often very clearly shows to these who can be the uncon-scious language often very clearly shows to the uncon-scious language often very clearly shows to the uncon-these who can be the uncon-scious language often very clearly shows to the uncon-scious language often very clearly shows to the uncon-these who can be the uncon-scious language often very clearly shows to the uncon-the uncon-scious language often very clearly shows to the uncon-the uncon-scious language often very clearly shows to the uncon-the uncon-the uncon-scious language often very clearly shows to the uncon-the uncon-the uncon-scious language often very clearly shows to the uncon-the uncon those who can comprehend its meaning, the black-lead pencil. It must, therefore, be of house of natural food, which is essential to ver the whole with straw to a depth sufficient state of the patient. According to Albert, singular use to those who practice drawing .- supply the wants of the plant, and enable it, to carry off all water. Then, instead of throwlively dreams are in general a sign of the ex- It is sold by Mr. Nairne, mathematical instru- through the medium of its roots, to bring this ing his stable manure beneath the shelter of citement of nervous actions : soft dreams are ment maker, opposite the Royal Exchange. food to the surface, and make it useful. Thus, the clouds, toss it under the shed. Keep an a sign of slight irritation of the brain-after He sells a cubical piece of about half an inch some plants have roots so formed, that they account of all extra labour, and in the spring. a nervous fever, announcing the approach of for three shillings; and he says it will last will grow only in light soils-others in stiff draw the manure to the field for spring crops. a favourable crisis : frightful dreams are a several years." sign of determination of blood to the head : 0603309503 dreams about fire are, in women, signs of an

Assafoctida.

3might impending hemorrhage: dreams about blood This article is obtained from a large um- a strong soil, he must lighten it in order to nure from the open yard; on the other a like and red objects are signs of inflammatory con- belliferous plant growing in Persia. The grow barley or the turnip; and that some soils quantity from the shed. The manure from the ditions: dreams about rain and water are oft- rost resembles a large parsnip, externally of must be drained in order to cultivate these var should of course come from the same en signs of diseased mucous membranes and a black colour; on cutting it transversely, two things.

dropsy: dreams of distorted form are fre- the assafeetida exudes in form of a white, thick Certain plants indicate certain soils, as the and in the full measure the produce of each. quently a sign of abdominal obstruction and disorder of the liver : dreams in which the pa-tient sees any part of the body especially suf-fering, indicate diseases of the part: dreams about death often precede appoplexy, which is about death often precede appoplexy, which is

is one that will send its roots three or four feet up a shed, under which manure may be kept into the soil, in search of food ; and the more from the leaching storms. The cost of this India Rubber is now so cheap and common, mellow the soil, the more easy is it to get the may be fifteen or at most twenty dollars bethat the following reference to it in the month- food, which enables it to grow to a great height, sides the work.

draw their sustenance. Some plants descend In the spring I helped to remove the manure. to a great depth. This is another important and it nearly used me up,-certainly, it sent point; for if the habit of a plant is thus to go forth the most penetrating, if not the most down to a great depth, and if the deeper it sickening odor I remember to have encoungoes, the more food it extracts from the soil, tered; but one load of that, I would prefer to then it is quite clear, that the more shallow two of the weather-beaten stuff usually called the soil is kept, the less the farmer has studied manure. It would pay fifteen per.cent. on the expense of a thousand or two feet of lumber

Now, among the plants of this habit, wheat of the cheaper kind, and a day's time in fitting

If any one doubts this, let them try the folsoils only. Wheat requires a strong and stiff Measure off two equal patches, as nearly as soil-the barley and the turnip a light soil, and may be in the same condition in every respect. this fact indicates that where a farmer has only Upon one put a sufficient dressing of the mastable. Treat the two portions exactly alike.