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Power of Condensation Possessed by Charcoal.
Some gases are absorbed and condensed within the pores of the charcoal, into a space several hundred times smaller than they before occupied; and there is now no doubt they there become fluid, or assume a solid state. As in a thousand other instances, chemical action here supplants mechanical forces. Adhesion or heterogeneous attraction, as it is termed, acquired by this discovery a more extended meaning; it had never before been thought of as a cause of change ot state in matter; but it is now evident that a gas adheres to the surface of a solid body by the same force which condenses it into a liquid.
The smallest amount of a gas-atmospheric air for instance-can be compressed into a space a thousand times smaller by mere mechanical pressure, and then its bulk must be to the least measurable surface of a solid body, as a grain of sand to a mountain. By mere effect of mass-the force of gravity-gaseous molecules are attracted by solids and adhere to their surfaces; and when to this physical orce is added the feeblest chemical affinity, the liquefiable gases can not retain their gaseous state. The amount of air condensed by these forces upon a square inch of surface is certainly not measurablé; but when a solid body, presenting several hundred square feet of surface within the space of a cubic inch, is brought into a limited volume of gas, we may understand why that volume is diminished why all gases without exception are absorbed. A cubic inch of charcoal must have, at the lowest computation, a surface of one hundred square leet. This property of absorbing gases varies with different kinds of charcoal ; it is possessed in a higher degree by those containing the most pores, that is, where the pores are finer; and in a lower degree in the mare spongy kinds, that is where the pores are larger.

## Cure of Rattlesnake Bite

A correspondent of the Baltimore American, writing from Russell county, Virginia, cites two cases, one of a negro man and the other of a boy, in which severe bites of rattlesnakes have been cured by the free administration of brandy, half a tumbler full at a time every few minutes untila quart had been taken. We have heard eye-witnesses attest the virtue of this remedy. It is said that the liquor in such cases does not ntoxicateWashington Republic.
[The above is certainly a very easy, if an effectual cure; but when young Dr. Wainwright, of this city, was bit by a rattlesnakeof which bite he died-it was stated that the use of ardent spirits hastened his death. We never believed the assertion; but it is well known that the bite of the rattlesnake is not very dangerous at any time, in comparison with what it is after long fasting. It is probable that some of the simple remedies stated to have proved effective, were so only in cases where water might have been just as good. Tobacco has been stated to be good for the bite of the snake, and so has strong coffee, olive oil, ammonia, and various other things; personally we have had no experience, and hope we rever shall, but for the sake of others it is good to present different opinions.
size for Draughtsmen.
A good sizing used by draughtsmen, after scratching or spung ng paper, is composed of doz. of white gelat ne, doz. of white soap, and doz. of alum; the gelatine and soap are dissolved together in a quart of warm water, and alum is added, previously reduced to powder and dissolved in a separate vessel. As soon as this solution of alum is poured into the other liquid it becomes as white as milk; it must then be cooled and bottled for use. A thin coat of this, laid with a hair brush on the scraped part of the paper, restores its primitive size and smoothness.

Varnish for Oil Paintings.
Dextrine 2 parts, alcohol 1 part, water 6 parts. Varnish for drawings and lithographs: -Dextrine 2 parts, alcohol half a part, water 2 parts. These should be prepared previously with tre boiled and strained through a cloth.
go from Neptune to the Sun, at the rate of fifty miles an hour, they would not have got there yet; for Neptune is more than six
thousand years from the centre of oursystem. thousand years from the centre of our.system.

## Immensity of Space

 Imagine a railway from here to the sun How many hours is the sun from us? Why, i we were to send a baby in an express train, go-ing incessantly a hundred miles an hour without making any stoppages, the baby would grow to be a boy-the boy would grow to be a man -the man would grow old and die-without seeing the sun, for the sun is more than a hundred years from us. But what is this compared to Neptune's distance? Had Adam and red to Neptune's distance? Had Adam and
Eve started, by our railway, at the creation, to

## A Disinfecting Agent.

Mix four parts of dry, ground plaster of Pa ris with one part of fine charcoal, by weight and sow them around the premises affected with any unpleasant odor, arising from decay d animal matter, and the gases producing th odor will directly be absorbed.

## A NEAT FARM COTTAGE....Fig. 1.



The situation, the laying out of the grounds, the arrangement of the out-houses, and the ge neral contour of the principal building, are things to which the attention of our farmer should be particularly directed. With the general advantages possessed by our countrymen, we certainly look for the future eleva tion of our race in our own land. To our far mers is principally committed this trust, and We must tell them that domestir taste, do
mestic architecture and comforts, are the sure evidences of superiority or inferiority. What do men struggle, and toil, and moil for in this world but to render home more comfortable. A good taste is now abroad among our farmers, and when this car: be gratified without any additional expense, or a very little, it hould be indulged in.
The accompanying engravings represent Farm Cottage of neat, simple, and pleasing design, and it is laid out with a view to comfort well as taste.
Fig. 1 is a perspective, and fig. 2 is a plan view.


Description.-The main body of the cottage is in the form of a parallelog am, 34 feet long, including the portico, and 32 feet wide having 14 foot posts, 2 feet of which extend above the attic floor, sustaining a roof of a 16 foot pitch, with the gable end facing the south or south-west. The back part of the house, which extends to the kitchen, is 18 by 23 feet, including the verandah, with ten foot posts, supporting a roof of $111-2$ foot pitch, with the gable towards the north or northeast. The kitchen is 12 by 23 feet, including the passage to the vault, with 6 foot posts and a lean to roof having a 4 foot pitch.

The whole building is to be designed elevated on a terrace, or mason work, 3 feet bove the common level of the ground, to be built of wood, with the outer walls lined with bricks. The roofs, also, are designed to be built of wood, covered either with common shingles or water-proof cement.
On the centre of the main body of the ouse, a false chimnor tur is shown, which ay ve iormed of metal, bricks, or artificial stone, for receiving the stove pipes from the rooms below. Between the dining room and the kitchen there is a chimney designed to communicate with the cooking range in those parts of the house.
This cottage is designed to be entered from the front gate through a portico, 6 feet wide, extending across the whole width of the house. The entry of the kitchen and dining room is also designed to be passed into on the easterly side of the back part of the building, through a verandah 3 feet wide.
The windows are all designed to be of good dimensions, and protected by wooden blinds Towards the top of each gable end, there is a latticed window for ventilation, which may be closed at pleasure in stormy weather.
Under the entire floor of the main body of the house, a cellar is intended, with walls and arches laid in cement, to be entered by stairs from the dining room, and by a six foot doorway on the easterly side from without. Beneath the kitchen, there is also another cellar designed for storing wood ool, entered from the kitchen through the trap-door, and likewise by a passage, on the easterly side, from outdoors. If circumstances require it, a dairy or milk cellar may also be constructed under the dining room, and lighted or ventilated by windows at each side of the house. In the ground plan, H , denotes the front lobby, or hall, 7 feet wide including front stairs.
P is a double parlor, 14 by 28 feet, with folding doors communicating with the front lobby, or hall. Either, or both these parlors might be used as sleeping apartments, should circumstances require
L is a room communicating with the front lobby, or hall, 11 or 12 feet, with a closet 4 feet square, and may be used for a library, office, living room, or nursery, according to the taste or wants of the occupant.
$B$ is a bed room, designed for the head of the family, 11 by 12 feet, with a closet 4 feet square, and communicating with the library and dining room.
D is the dining room, 14 by 20 feet, communicating with the front lobby H ; the back entry, $E$, and the cellar $S$.
K is the kitchen, 12 by 20 feet, communica. ting with the dining room by the back en$\operatorname{try}, \mathrm{E}$, and a sliding window in the pantry, C ; with the wood cellar atd; and the back yard, by the steps, S .

E is the back entry, 4 by 4 feet, communi cating with the verandah, kitchen, dining oom, and the back garret stairs.
$\mathbf{V}$ is the vault, 5 by 6 feet communicating with the verandah by a passage under cover 3 feet wide.
C C C closet, or pantries. S S S S, stairways, or steps. $c$, kitchen or dining room chimney. d. trap-door, covering the woodellar stairs. $l$, the lightning conductor
In respect to the price of such a cottage we must say that the carpenter must be con sulted, and his price is alone the sure standard The prices that we see in some of the architectural works only mislead.

## LITERARY NOTICES.

Ioonographio Enorcloprdis.-No. 24 of this
fine work has just been published and is now on our table. The engravinge are illustrative of Railroads
The Bridges, Locomotives, Viaducts, and eversthingcon-
ected mith railroad engineering. They are also il nected with railroad engineering. Thes are also il
lastrative of Hydraulic machines, such as pump, Water wheels. Also machinery for carding and spin-
ning, and raarious other mach ines, such as oining
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forma a full volume of itself. Rudolphe Garrigue, forma a full volume
publisher, this city.
The Ambrican Railway Guide for October Contains the entire list of Railroads in the Unite States, their time of starting, rates of fare, and dis tances, together with a complete Steamboat Journal
nosted up, for the present month. For sale by
News Agents generally, and at the oftice of publica News Agents generally, a ad at mothe oftice of publica-
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ect, are being appreciated. Wm. Minife \& Co., pub-
ishers, Baltimore. Price $\$ 3$.
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he New Jersey Medical Society and papers on medical subjects. It It is nublished by S. W.
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MERICAN \& FOREIGN PATENT AGENTS, And Publishers of the SCIENTIFIC american respectfully announce to the public that the firs number of VOLUME SEVEN of this widely circula ad and valuable journal was issued on the 20th of eptember in $\triangle N$ ENTIRE NEW DRESS, printe pon paper of a heaviertexture than that used in th receding volumes
It is published weekly in Form for Binding, and OME of over FOUR HONDRED PLENDID VO copious Index, and from YIVE to SIX THOUSAND -RIGINAL ENGRA VINGS, together with a vas mount of practical information concerning the progress of INVENTION and DISCOVERY throughout the world. There is no subject of importance to the Mechanic, Inventor, Manufacturer, and general eader, which is not treated in the most able man-ner-the Editors, Contributors, and Correspondents iog The Inventor will find init a weekly DIGEST AMERICAN PATENTS, reported from the P ent Office,-an original feature, not found in an ther weekly publication.
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