# SCIENTIFIC MUSEUM

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Power of Condensation Possessed by Char. coal

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 of 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 force 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 measurable; 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 feet. 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 more spongy kinds, that is where the pores are larger.

## Cure of Rattlesnake Bites.

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 until a 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 ntoxicate .---Washington 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 never 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 hoz. of white gelat ne, hoz. of white soap, and doz. of alum ; the gelatine and soap are dis-

# Scientific American.

Immensity of Space. 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

go from Neptune to the Sun, at the rate of Imagine a railway from here to the sun fifty miles an hour, they would not have got How many hours is the sun from us ? Why, if there yet; for Neptune is more than six we were to send a baby in an express train, go- thousand years from the centre of our system.

#### A Disinfecting Agent.

Mix four parts of dry, ground plaster of Pa--the man would grow old and die-without ris with one part of fine charcoal, by weight, seeing the sun, for the sun is more than a hun- and sow them around the premises affected dred years from us. But what is this compa- with any unpleasant odor, arising from decayred to Neptune's distance? Had Adam and ed animal matter, and the gases producing the Eve started, by our railway, at the creation, to 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- elevated on a terrace, or mason work, 3 feet neral contour of the principal building, are above the common level of the ground, to be things to which the attention of our farmers | built of wood, with the outer walls lined with should be particularly directed. With the bricks. The roofs, also, are designed to be general advantages possessed by our country- built of wood, covered either with common men, we certainly look for the future elevation of our race in our own land. To our farmers is principally committed this trust, and house, a false chimney top is shown, which we must tell them that domestic 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 can be gratified without any additional expense, or a very little, it should be indulged in.

The accompanying engravings represent a Farm Cottage of neat, simple, and pleasing design, and it is laid out with a view to comfort as well as taste.

Fig. 1 is a perspective, and fig. 2 is a plan view.



The whole building is to be designed shingles or water-proof cement.

On the centre of the main body of the may be formed 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 of coal, 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 lob-

by, 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.

E is the back entry, 4 by 4 feet, communicating with the verandah, kitchen, dining room, and the back garret stairs.

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 woodcellar stairs. I, the lightning conductor.

In respect to the price of such a cottage, we must say that the carpenter must be consulted, and his price is alone the sure standard. The prices that we see in some of the architectural works only mislead.

## LITERARY NOTICES.

LITERARY NOTICES. IGONOGRAPHIC ENCYCLOPEDIA.-No. 24 of this fne work has just been published and is now on our table. The engravings are illustrative of Railroads, Bridges, Locomotives, Viaducts, and everything con-nected with railroad engineering. They are also il-lustrative of Hydraulic machines, such as pumps, water wheels. Also machinery for carding and spin-ning, and various other machines, such as coining machinery, &c. The next number will be issued this month, and will complete the whole work; with the last number a great amount of letter press, to render complete the full explanation of all the en-gravings, will be issued, when the work will be finish-ed, and will then form the only work of the kind in our language. The extra text will cost \$5, and will form a full volume of itself. Rudolphe Garrigue, publisher, this city. THE AMERICAN RALLWAY GUIDE FOR OCTOBER.

THE AMERICAN RAILWAY GUIDE FOR OCTOBER. This is the only reliable monthly publication which contains the entire list of Railroads in the United States, their time of starting, rates of fare, and dis-tances, together with a complete Steamboat Journal, "posted up" for the present month. For sale by News Agents generally, and at the office of publica-tion, 138 Fulton street. New York. C. Dinsmore, Publicher Publisher.

MINIFIE'S MECHANICAL DRAWING BOOK.-This valuable publication, embracing full and comprehen-sive instructions on the art of Mechanical Draught-ing, has passed through two large editions, and a third is just issued. We have several times spoken highly of this work, and are pleased to believe that its merits, as the greatest work eXtaft upon the sub-ject, are being appreciated. Wm. Minifie & Co., pub-lishers, Baltimore. Price \$3.

RURAL NEW YORKER-Published by D. D. T. ROVER DATA TO KARA - Individual of D. I. Moore, Rochester, N. Y., is one of the most enterpri-zing and ably conducted agricultural journals in America. It is issued weekly in a large quarto sheet at \$2 per annum. No. 39 contains the admirable Ad-dress of Hon. S. A Douglass before the New York Agricultural Society, on the 19th ult.

NEW JERSEY MEDICAL REPORTER.—This excel-lent work commenced its fifth volume this month: it is devoted to the publication of the Transactions of the New Jersey Medical Society, and other valuable papers on medical subjects. It is published by S. W. Butler, M. D., of Burlington, N. J.



And Publishers of the SCIENTIFIC AMERICAN, espectfully announce to the public that the first number of VOLUME SEVEN of this widely circulated and valuable journal was issued on the 20th of September in AN ENTIRE NEW DRESS, printed upon paper of a heaviertexture than that used in the preceding volumes.

It is published weekly in FORM FOR BINDING, and affords, at the end of the year, a SPLENDID VO-LUME of over FOUR HUNDRED PAGES, with a copious Index, and from FIVE to SIX THOUSAND •RIGINAL ENGRAVINGS, together with a vast amount 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 reader, which is not treated in the most able manner-the Editors, Contributors, and Correspondents being men of the highest attainments. It is, infact, the leading SCIENTIFIC JOURNAL in the country The Inventor will find in it a weekly DIGEST

of AMERICAN PATENTS, reported from the Pa-

	solved together in a quart of warm water, and		lobby or hall 11 or 19 fast with a cleast 4	tent Office,-an original feature, not found in any
	alum is added previously reduced to powder		for by, of hall, 11 of 12 feet, with a closet 4	other weekly publication.
	and dissolved in a senarate vessel. As seen		leet square, and may be used for a library,	TERMS-52 a-year; \$1 for six months.
	and dissolved in a separate vessel. As soon	DESCRIPTION The main body of the cot-	office, living room, or nursery, according to the	All Letters must be Post Paid and directed to
	as this solution of alum is poured into the	tage is in the form of a parallelog am, 34 feet	taste or wants of the occupant.	MUNN & CO.,
	other liquid it becomes as white as milk; it	long, including the portico, and 32 feet wide,	B is a bed room, designed for the head of the	Publishers of the Scientific American,
	must then be cooled and bottled for use. A	having 14 foot posts. 2 feet of which extend	family, 11 by 12 feet, with a closet 4 feet	128 Fulton street, New Fork.
ш	thin coat of this, laid with a hair brush on the	above the attic floor, sustaining a roof of a 16	square, and communicating with the library	INDUCEMENTS FOR CLUBBING.
н	scraped part of the paper, restores its primitive	foot nitch with the gable end facing the	and dining room	Any person who will send us four subscribers for
Ш	size and smoothness.	south or south west. The back part of the	D is the dining room 14 by 20 feet commu-	six months, at our regular rates, shall be entitled to
Ш		south of south-west. The back part of the	b is the diffing room, 14 by 20 feet, commu-	one copy for the same length of time; or we will
	Varnish for Oil Paintings.	nouse, which extends to the kitchen, is 18 by	meaning with the front lobby H; the back	furnish—
Ш	Dextrine 2 parts, alcohol 1 part, water 6	23 feet, including the verandah, with ten foot	entry, E, and the cellar S.	Ten Copies for Six Months for \$8
Ш	parts. Varnish for drawings and lithographs:	posts, supporting a roof of 11 1-2 foot pitch,	K is the kitchen, 12 by 20 feet, communica-	Ten Copies for Twelve Months, 15
	-Dextrine 2 parts, alcohol half a part, wa-	with the gable towards the north or north-	ting with the dining room by the back en-	Fifteen Copies for Twelve Months, 22
1	ter 2 parts. These should be prepared pre-	east. The kitchen is 12 by 23 feet, including	try, E, and a sliding window in the pantry, C;	Twenty Copies for Tweive Months, 28
	viously with two or three coats of thin starch	the passage to the vault, with 6 foot posts and	with the wood cellar at $d$ ; and the back yard,	subscriptions or Post Office Stamps taken at their
Ĭ	or rice boiled and strained through a cloth.	a lean to roof having a 4 foot pitch.	by the steps, S.	full value.
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