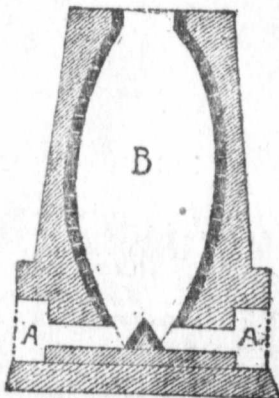


being found in vast beds of marble and other forms of it, might lead to the supposition that plants might procure all they need without any help. But it is quick lime they need, and not the inert carbonate of it; and thus it is that the stone is burned to drive out of it the carbonic acid, and make it into lime, which is an acid, caustic substance that exerts a most energetic action on all organic matter; and considerable action on mineral compounds in the soil, dissolving silica and thus setting free such plant foods as potash, magnesia, soda and phosphoric acid from insoluble compounds. Limestone is insoluble in water, but lime is soluble in 700 parts of water. Thus it is that while the roots of plants may possibly decompose to some extent the common carbonate, and get a little lime in this way, it is found very useful, some think indispensable, to apply the actual lime to the soil.

It is not much of a job to make lime. The limestone may be put in a heap with wood or coal, and a wall built up around the heap to confine the heat. The fuel being fired, the stone is made into lime in three or four days. But this is a costly way, and thus where there is a demand for the lime, kilns are used, some temporary ones, but little improved on the heaps, or clamps, as they are called, and some strong structures called permanent kilns of which the cut is an example. This is made of any kind of hard stone, and lined with fire brick. It is egg-shaped, because as the limestone is burned, and the coal or wood used as fuel is consumed, the bulk decreases, and thus what will fill the belly of the kiln, only fills throat at the bottom. This kiln may be three or four throats or openings for drawing out the lime, but each is made the way shown. The lime when it ches the bottom being fully burned, is drawn out into the hearth a, through the opening into the kiln, b. In burning the one is broken into convenient size for adding, and a way is made to the top of the kiln, which is most often built in a



KILN FOR LIME BURNING.

bank. A small sloping track is sometimes made to the top of the kiln, and a platform around it, so that the small cars of lime and fuel may be drawn up and dumped into the kiln. The fire is started in the bottom by filling in dry wood, from the throat, then more fuel, wood or coal (the cheap slack being used), is dumped in at the top, then some lime, and then alternately fuel and limestone

until the kiln is full, when it is fired, and goes on day after day as long as lime is required. About the third day, the lime is ready for raking out, which is done with long bars of iron with a right angled hook at the end. It is only necessary to start it, when it fills the hearth, where it is left to cool. When it is taken out, more lime comes down, or if it lodges, the hook is used to loosen it. After the kiln is first charged, the stone sinks down steadily, and as this is always to be kept heaped at the mouth, as soon as it has sunk down to a level, a fresh supply is heaped up. As the fumes from the kiln consist of carbonic acid, which is a deadly gas when breathed, it is necessary for the man in charge of feeding the kiln to keep on the windward side, so that the gas is blown away from him.—Rural New Yorker.

Do Repairing at Home.

On all well-conducted farms where much machinery is used, farmers spend a great deal of time running to and fro from the blacksmith shop. There are so many different tools used that something gives out almost every day. Now a great deal of this expense may be saved by having a small shop on the farm. A portable forge can be had for \$15. This will answer every purpose, although it is not advisable to get one too small. Secure a hand anvil weighing about 100 lbs., a good hammer, a ten-pound sledge, a steel punch and a good blacksmith's vise, and you are ready for almost any job but horseshoeing. Of course a beginner cannot expect to do skilled work at first, but with a little practice, time and money can be saved. A farmer should not be without an assortment of good carpenter tools. Many a dollar can be saved by their use. If the farmer does not care to do his own repairing, perhaps the boys (if there be any) will take hold and to them it will soon become more of a pleasure than a task.

Reclaiming Swampy Lands.

No dwelling house ought ever to be built near a swamp. If such a one exists either the house should be removed or the swamp should be drained. There are many places where the deepening of ditches already made is all that is needed to make dry land fit for cultivation of what has been an eyesore to the neighborhood. This making of an outlet is much the most expensive part of the reclamation. It will improve the neighboring upland also, for that equally needs under draining, but cannot get it until a safe reliable outlet has been provided. All swampy lands have been for ages the deposits for vegetable matter from uplands. So soon as the latter is underdrained the water falling on the upland sinks down to the tile and enriches the soil, instead of washing away its fertility.—Rural World.

Kenilworth Village Wiped Out.

Mount Forest, Ont., June 17.—Sunday morning about 10 o'clock, Kenilworth, a village seven miles south of here, was swept out by fire. The fire originated in the hotel stables of David Kenny, spreading to the hotel and store, sweeping everything in its course. The store and dwelling were owned by T. O'Donnell, was insured for \$1,300, the contents of the store for \$800. No insurance on hotel stables. Loss estimated at \$12,000.

TOPICS OF A WEEK.

The Important Events in a Few Words For Busy Readers.

The revenue for May shows an increase of \$433,000.

The Turkish Ministry has resigned and a new Cabinet is being formed.

Signor Maccio has been appointed Italian Minister to Chili.

Extensive reductions are proposed in the salaries of Winnipeg city officials.

The Austrian estimates contain an item of 20,000,000 florins for repeating rifles.

The contract for the Halifax drill shed, to cost about \$360,000, will be let in a few days.

Mr. Gladstone has suffered a slight relapse, due to his going out carriage riding prematurely.

It is thought probable that the troubles at Jeddah will culminate in a general Bedouin revolt.

The Dax and Pau Districts of France are flooded by heavy rainstorms and overflowing streams.

The Congregational Union is discussing a proposal to amalgamate the various bodies of the church.

A big beaver dam has been discovered in the line of the projected Hudson Bay road, north of Gladstone.

Three female tramps have been working the philanthropic people at Galt. Each carried a baby in her arms.

Hon. J. F. Wood, Col. Tyrwhitt and Col. Denison were upset in the canal while boating at Ottawa on Saturday.

Miss Maggie Carlyle, sister of ex-Ald. Carlyle, Toronto, has been appointed female inspector of factories.

Hamilton has received a tender from the Electric Light Company to light the city at \$91.25 per lamp per year.

The County Council of Ontario has passed a by-law to put in force the Torrens land titles act in that county.

Emperor William inspected the Baltic North Sea Canal on Saturday, and passed through the waterway in a yacht.

Hon. J. O. Ward of New Zealand has arrived at Ottawa to interview the Government on the Pacific cable scheme.

The International Miners' Convention, meeting at Paris, has adopted a resolution declaring in favor of an eight-hour day.

The Bay of Quinte Conference has expressed itself against the proposed excursions to Pictou on Conference Sunday.

An avalanche in the Alps on Saturday threw fifteen French soldiers upon Italian territory. Six of the soldiers were seriously injured.

Tribesmen have made an attack upon Fort Sandeman, in the Waziri territory, India, killing Lieut. How and eleven of his attendants.

M. Andree of Stockholm will shortly go to Paris to oversee the making of the balloon in which he will attempt to reach the north pole.

The steamer Tilgate ran into a small boat at Isle Grosbois, upsetting the craft and drowning a seven-year-old girl named Emma Rinderman.

China's concessions to Russia, enabling her to extend the Siberian Railway into Manchuria, are the consideration for the guarantee of the loan.