

A HOUSE THAT TURNS WITH THE SUN.

One of the curiosities of the Exposition de l'Habitation, recently opened in Paris, is a revolving house, designed by Dr. Pellegrin and M. Pettit, a well-known Parisian architect.

The structure is in truth a heliotropic house, since it does just what heliotropic plants do. In other words, it always presents the same facade to the sun, from dawn until dusk. Probably to most of the visitors to the Exposition the house was regarded as an architectural curiosity, with no practical value whatever. As a matter of fact, it was designed to meet certain scientific requirements in applying the doctrines of heliotherapy, of which we have heard so much through the work of Dr. Finsen.

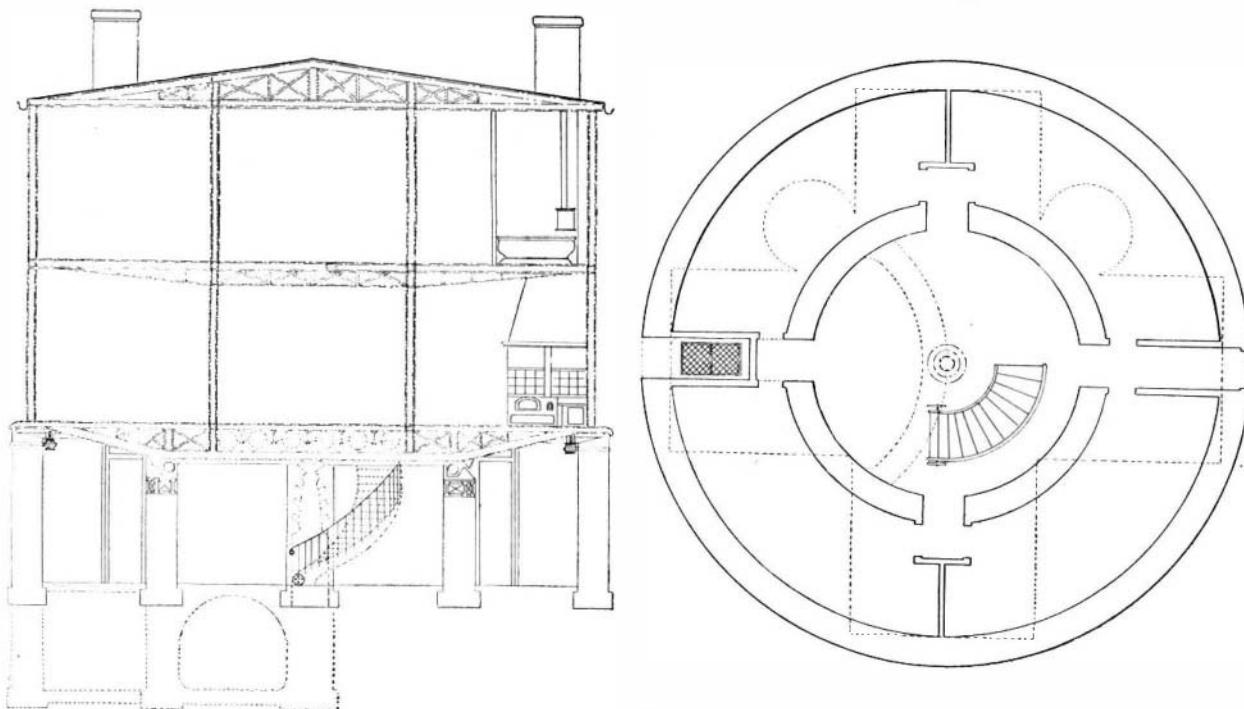
It has been proven clearly enough not only that a healthy dwelling should be well ventilated, but that it is quite as important to have it well lighted. Sunlight is a potent bactericide. Most houses, indeed, even the most carefully designed structures receive but a very small portion of the sun's rays during the day. This new and curious structure of Dr. Pellegrin's is intended to obviate this defect, and to provide a kind of family sanatorium. For that reason it has been planned so that it will receive the largest possible quantity of sunlight during the day. The walls are hollow and are entirely insulated from heat and from cold, so that the house will be neither too warm in summer nor too cold in winter.

The mechanical features of this peculiar building are not without interest. The mechanism by which the structure is turned consists of a vertical shaft, which is driven by machinery located in the basement. The house itself rests upon a platform or turntable flush with the ground, leaving the basement free, so that it can be used as a cellar.

Under these conditions the ball bearings, on which the turntable rests, have a receiver of considerable diameter, and arranged on a suitable metallic crown supported by a massive annular masonry wall within which a staircase is built, fixed to the turning structure and carrying rollers at its lower end which rest on the

floor of the basement and enable the staircase to turn with the house. Doorways in the annular wall permit access to the various rooms. In the middle of this basement an arrangement is mounted on two parallel masonry supports, which consists essentially of a cone on which two-part rings turn, their number being such as to prevent their axial displacement. These rings are provided with an interior coiled spring which is frictionally seated in an annular recess.

The rotation is obtained by means of a pinion which is geared to a circular set of teeth fixed on the plat-



Plans of the Revolving House.

form. A central apparatus, above which the house turns, allows the introduction of water, of gas, of electricity, as well as the exit of water, etc.

The dwelling is turned either by hand or by means of a motor. The latter plan is necessary if the house exceeds two stories in height. If the structure be turned by hand, it is simply necessary to move a lever once an hour in order to cause the house to turn a few inches. If the house be turned by mechanical means, it must make a complete revolution in twenty-four hours, which can easily be attained by properly regulating the mechanism. The movement is so slow that the inmates hardly perceive it.

The Australian government has decided to call for tenders for the manufacture locally of sixty to a hundred locomotives.

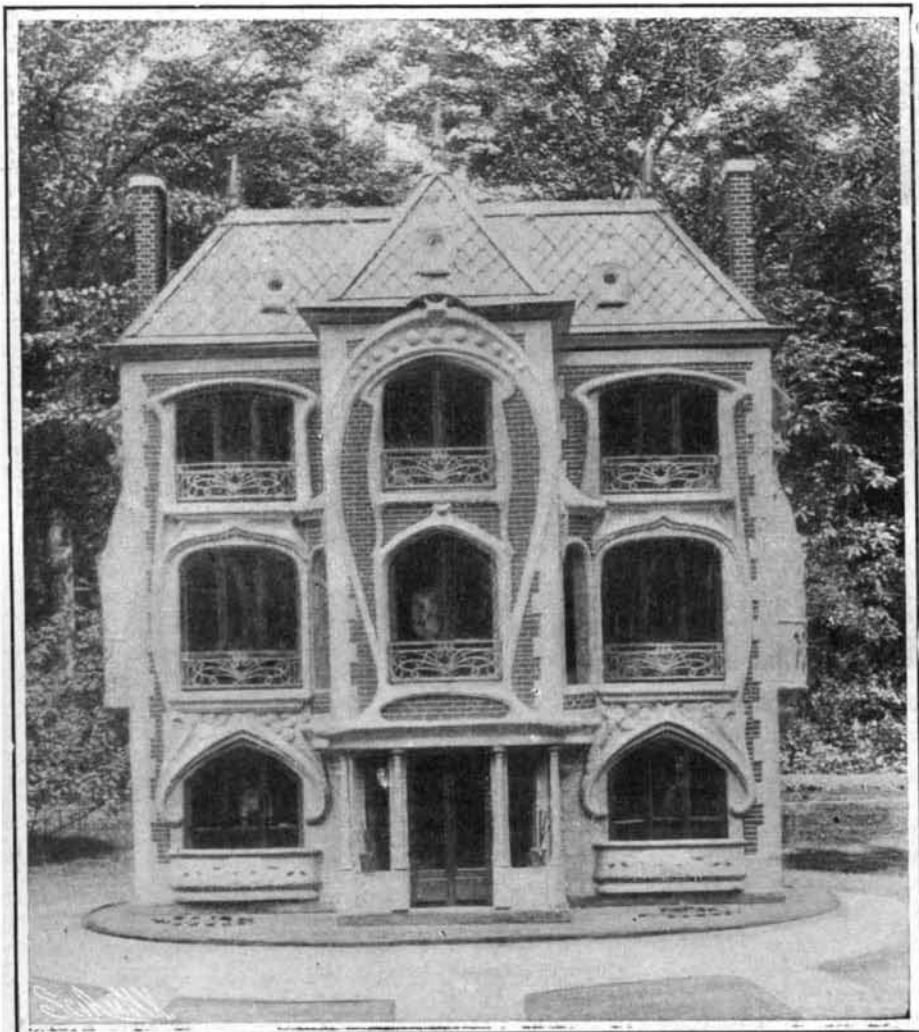
Radium Emanations for Consumption.

Frederick Soddy, who was Prof. Rutherford's assistant at McGill University, in Montreal, has suggested another use for radium. He argues that, as it has been found to cure consumption of the skin (lupus), it should also cure consumption of the lungs, if its rays can be brought to bear directly on the diseased lung tissue, without any intervening substance, such as the chest wall. At first sight this seems rather a difficult thing to do, as it is, of course, out of the question to place any solid mass of radium within the lungs themselves. But recent studies have shown that radium in solution gives off a gas and that this gas is itself radioactive. So all that is necessary to subject the internal lung tissue to the direct action of radium rays is to breathe a mixture of air and the radium gas. By this means Mr. Soddy believes a new and valuable remedy for consumption will be available to the pathologist. The rays from radium have already proved useful in the treatment of several forms of skin disease, and it has been suggested that the insertion of minute particles of radium in the interior of a cancer is worth trying. It should be remembered, however, that even if

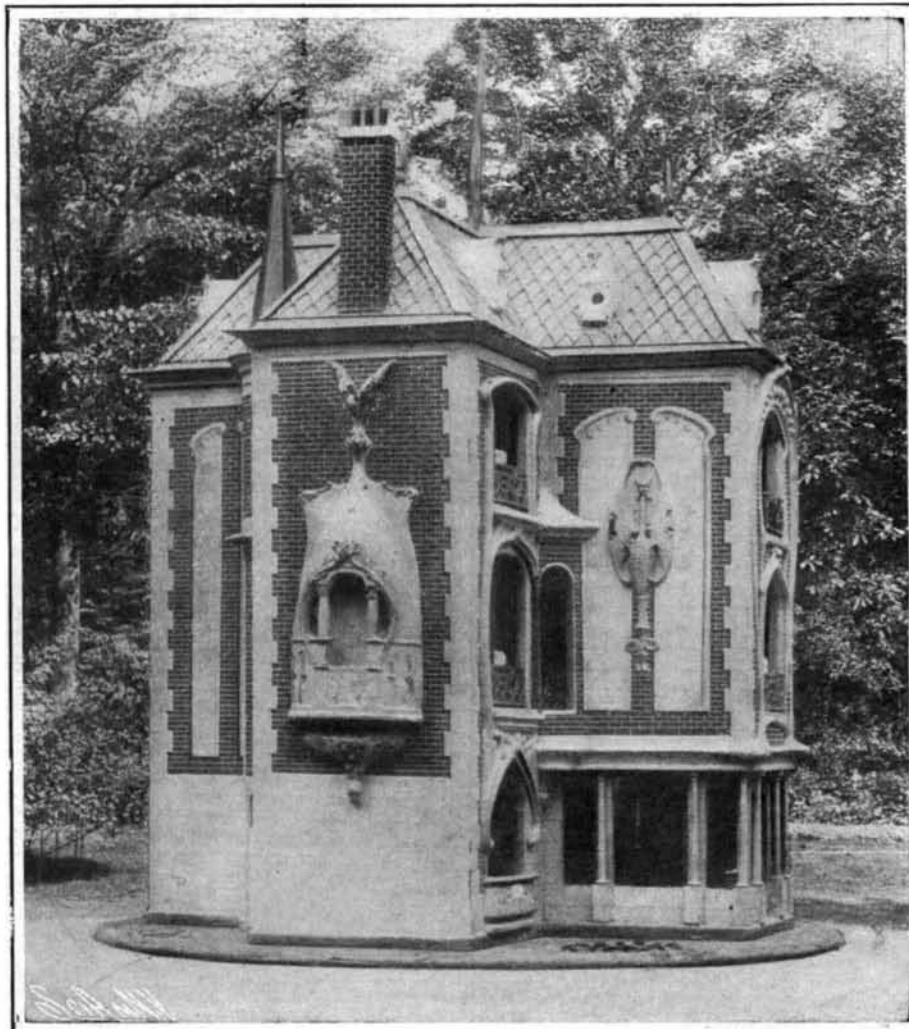
radium proves valuable in the treatment of pulmonary tuberculosis, its cost is so high—several hundred dollars a grain—that it could not come into general use, under present conditions.

A \$25,000 Prize for a Formula.

The average price of California wines is ten cents a gallon with cooperage. Such has been the enormous production of wine within recent years, that attempts are now being made to find some other use for the grapes which grow in such profusion in California. The American Grape Acid Association, 318 Front Street, San Francisco, Cal., offers a prize of \$25,000 for the best formula and the right to its use, by which grapes containing over twenty per cent saccharine, and valued at \$10 per ton, may be utilized in producing tartaric acid at a price which will permit exportation without loss.



The Facade of the House Presented Toward the Sun.



Another View of the House Taken from the Same Position as the Adjacent Picture.

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