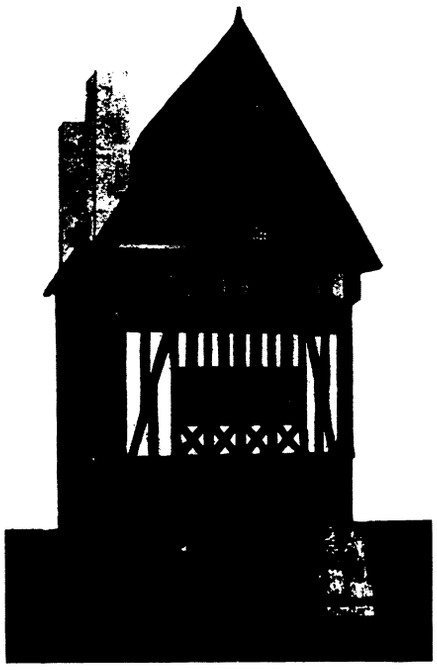

IN MEDIEVAL FRANCE

Ornate without, this house was rather bare and inconvenient within. It contained only four rooms and an attic.

PALEOBOTANY

Seed-Like Objects 300,000,000 Years Old

WHAT may be the oldest known seeds in the world were described before the meeting of the Botanical Society of America by Dr. Chester A. Arnold of the University of Michigan. They are small, round, petrified objects that have all the appearance of seeds, and they were found close to the fossils of an extinct plant known as *Archaeopteris*, or "most ancient fern," in a rock stratum belonging to the Upper Devonian period. This geologic subdvision of time was roughly 300,000,000 years ago.

It has always been suspected that this plant, in spite of its fern-like leaves, was really a seed-bearer. Dr. Arnold has produced the strongest bit of evidence yet available in favor of this interpretation.

Science News Letter, February 2, 1935

The leaf fish of the Amazon very much resembles a floating mottled leaf.

A giant cactus of the Southwestern desert may live for several years on the water stored in its thick stem.

ARCHAEOLOGY

Museum Enterprise Remembers Antiquity's "Forgotten Men"

Small Cardboard and Wood Houses to be Used in Schools Demonstrate Living Conditions in Ancient Times

MODEL houses—not the real estate man's variety, but models on a miniature, doll house scale—are the clever idea of one big museum to teach young people what good homes were like in ancient Egypt and in medieval France.

The University Museum in Philadelphia reasons that archaeologists give the public a clearer notion of how kings lived and how people were buried in ancient times, than of everyday living habits.

Hence, the model cardboard and wood houses. The museum is publishing and selling the carefully scaled houses in knock-down form for school classes to paint and assemble.

Ancient Egypt lived more comfortably than medieval France, it appears.

The Egyptian house chosen for reproduction, explains the architect of the models, George B. Roberts, is an official's home excavated at El-Amarna. This home had 17 rooms and halls. Its flat roof was a pleasant outdoor living room, shaded by awnings or arbors. Cooking was done in a separate nearby building.

Egyptian Bathrooms

Near the master's bedroom were elaborate bath and toilet rooms. To insure ventilation while he slept, there was an opening in the roof over his bed, much like ventilators used on ships.

In contrast, is the medieval French house of a cloth draper of Rouen, superficially more like modern homes to look at, yet far less modern in its conveniences. This house has just four rooms and an attic, the whole building high and narrow, as if to take as little space as possible inside the crowded, walled town.

The fifteenth century furniture is not unlike many modern pieces. But chairs and benches are bare of upholstery. And the absence of wardrobes, hanging closets, and drawers in chests and tables would dismay a modern housewife.

"The shop on the ground floor," says Mr. Roberts, "is typical of the age before the Industrial Revolution when trade and manufacture were always carried on at home."

Eventually, the museum hopes to show what city homes have been like in all civilizations that the world has known—not life in the palaces, nor yet in hovels,—but in the "better homes."

Science News Letter, February 2, 1935

PHYSICS

X-Ray "Bounce-Back" Tells Secrets of Crystals

A SIMPLIFIED and speedy method of studying atom layers in metal crystals, expected to cut markedly the time necessary for crystal structure studies in metallurgy, has been developed by Alden B. Greninger of Harvard University.

The new method is a variation of the classical scheme of the German scientist Max Laue for "fingerprinting" atoms in a crystal by making the atoms diffract X-rays and having them fall on photographic plates in characteristic patterns.

Such knowledge is vital for studies of metal weakness and, hence, is intimately bound up with problems of strength in such things as railroad rails, armor and boiler plate, and metal automobile chassis frames.

Instead of making X-rays pass through the crystal, which had to be cut in fairly thin sections in the former Laue method, Mr. Greninger cuts a hole in the photographic plate, passes X-rays through it, lets them fall on the surface of the crystal being studied and finally catches them on the plate as they are diffracted backward.

From the characteristic pattern thus obtained the arrangement of atom layers in the crystal can be calculated with relative simplicity.

Science News Letter, February 2, 1935

The seventeenth layer of the oil fields of Baku, supposed to contain only gas, recently yielded an oil gusher.