

Human Ant Eaters

THE eating of locusts or grasshoppers is a practice so ancient and well-known in some parts of the world as to excite no particular comment. The example of John the Baptist has given it the sanction of Biblical precedent even in the minds of those of us who are personally too squeamish to "eat bugs."

The use of ants as food, however, is neither so widely practised nor so well known. But there are at least a few places in the world where people find this industrious insect to be quite as tasty a morsel as her thrifless neighbor of the fable. In the interior of Brazil the natives make use of the females, or queens, of the leaf-cutting ant, a large and very destructive species that ranges throughout Latin America. It builds great ant-heaps, sometimes as much as twenty feet in diameter, and into these insect cities it carries huge quantities of leaves, which it strips from all imaginable kinds of plants. The leaves are not eaten by the ants, but used as a fertilizer for a kind of miniature mushroom which it cultivates.

The only members of the tribe that are eaten are the young queens, when they leave the parent colony on their mating flight. They are very large ants, reaching a length of as much as two inches, so that they are by no means contemptible mouthfuls. The natives gather them up when they come to earth, pinch off their heads, and fry the bodies in butter until they pop open like popcorn, and are quite crisp. Brazilian children, however, are like children everywhere, and do not always wait for the superfluous ceremony of cooking.

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ENGINEERING

Auto Knock Photographed In Cylinder Head

ENGINEERS have learned more about what happens in the cylinder head of an automobile engine while it is running by taking pictures of the actual explosions of each charge of gasoline, it is revealed in a report made to the American Chemical Society in Indianapolis last week by Lloyd Withrow and T. A. Boyd, of the General Motors Research Laboratory, Detroit. (See SCIENCE NEWS-LETTER, April 4, 1931, p. 212.)

These engineers used a fast camera with a constantly moving film to take the pictures through a narrow quartz window that extended all the way across the combustion chamber.

The photographs show that a knocking explosion differs from a non-knocking one only in the way the last portion of the charge burns. In a non-knocking explosion the flame continues to move at a comparatively constant rate to the end of the combustion space, while in a knocking explosion the latter portion of the charge inflames at a much higher rate than normal.

The rate of inflammation of the last part of the charge is so high that the explosion is thought to be spontaneous, caused by high temperature. But the engineers emphasized that this spontaneous form of ignition is not pre-ignition, which in years gone by was thought to be the cause of knock.

One effect of anti-knock compounds in gasoline, it was explained, is to prevent the extremely rapid inflammation of the latter portion of the charge and the accompanying pressure rise, which is the knock.

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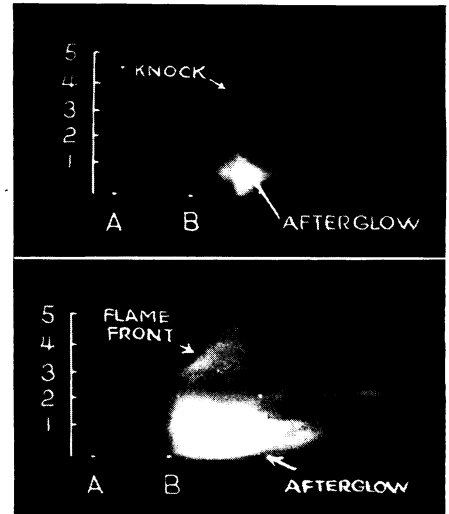
PHYSICS

Oldest American Newspaper Still Well Preserved

THOUGH yellow with age, specimens of America's first newspaper, "The Boston News Letter," have retained their strength and pliability during the more than two centuries since they were printed in 1704, tests made at the U. S. Bureau of Standards reveal.

Hemp and jute fibers were the chief or sole materials used in the manufacture of these time-defying old papers, it was discovered on analysis.


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CYLINDER HEAD EXPLOSIONS

The top photograph shows an explosion of a charge of gasoline in the cylinder head of an engine knocking violently. The bottom picture is of an engine, which is not knocking, burning benzene. The figures along the vertical line represent the distance in inches of the advancing explosion from the spark plug, A indicates the time of ignition and B denotes a point on the flame front 20 degrees after ignition.

Evidence of prehistoric men's efforts at mining have been found in Africa.



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