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# Science

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*Tarsius carbonarius*, currently on deposit at the U. S. Zoological Park, Washington, D. C., photographed in its natural habitat in the Philippines. Its size can be estimated by comparison with the leaves in the background, which range from 5 to 6 inches in length. (See *News and Notes*.)

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## Detection of Incipient Army Criminals

Gilbert L. Betts

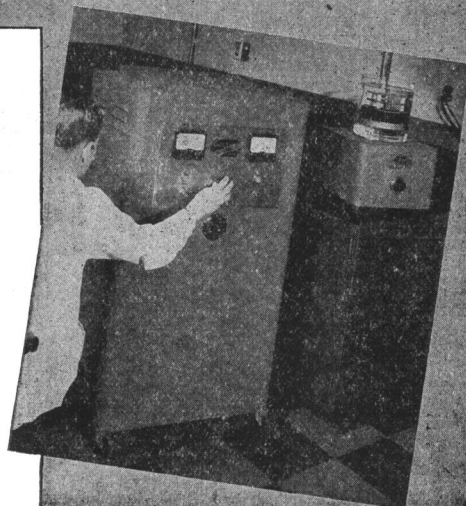
# ULTRA-SONORATOR

for exploring the applications of  
**SUPERSONICS** to  
INDUSTRY — AGRICULTURE — HEALTH

The Ultra-Sonorator, the first laboratory model supersonic generator, is a valuable scientific instrument which opens an entirely new field of research. The science of supersonics is relatively unexplored and its application is a challenge to scientists.

The instrument produces vibrations of 400, 700, 1,000 and 1,500 kilocycles frequency. It operates on 110 volts, 50-60 cycle A.C. The use of the Ultra-Sonorator is explained in the 'step-by-step' directions furnished with each instrument.

Read the following list of changes effected by supersonics and if you visualize a possible application to your particular field, write for further information.



*Vibrations from 400 to 1500 kc. are obtainable with this Ultra-Sonorator.*

## Some of the Startling Changes Effected by Supersonics:

### Physical

- Dispersion of soil samples.
- Emulsification of immiscible liquids.
- Dispersion of metallic elements or alloys in water, alcohol and oil.
- Coagulation of precipitates in liquids.
- Agglomeration of smoke and dust particles.
- Colloidal suspension of solids in liquids.
- Degassing of liquids.
- Precipitation of ammonium chloride fogs.
- Production of stable photographic solutions.

### Chemical

- Oxidation reaction of potassium iodide to free iodine.
- Oxidation of water-soluble dyes.
- Rapid hydrolysis of dimethyl sulphate.

- Reduction action on compounds such as mercuric chloride.
- Oxidation of water to hydrogen peroxide.

### Biological

- Accelerating and stimulating germination in agriculture.
- Reproduction loss in yeast cells.
- Loss of luminosity of luminous bacteria.
- Stimulation of activity and virulence of bacteria.
- Production of "electric fever".
- Separation of antibodies from pathogenic cells.
- Disintegration of bacteria and cells under aseptic conditions to release endotoxins, enzymes, polysaccharides and hemoglobin.
- Reduction of "curd tension" in milk.

— Manufactured in Crystal Research Laboratories —

Ultra-Sonorators and Further Information Available From:

**FISHER SCIENTIFIC CO.**

717 Forbes St., Pittsburgh (19), Pa.  
2109 Locust St., St. Louis (3), Mo.

In Canada: Fisher Scientific Co., Ltd., 904 St. James Street, Montreal, Quebec



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Greenwich and Morton Street  
New York (14), New York