

in the form of apparatus shown in the figure is essentially the temperature of the room.

2. The balanced drop method here-with presented for the determination of  $e$  involves an experimental error of not more than 2 per cent., and is entirely free from all theoretical uncertainties except such as are incident to the application of Stokes' law to liquid spheres of diameters varying from 30 to 50 times the mean free path of air molecules.

3. The results obtained by this method taken in connection with Rutherford's experiments seem to constitute experimental verification of Stokes' law for these drops.

4. Positively charged drops of water and alcohol are found by direct measurement to carry charges which are multiples of  $4.65 \times 10^{-10}$ , and all of the multiples from 2 to 6 inclusive have been obtained.

5. The mean of the five most reliable determinations of  $e$  is  $4.69 \times 10^{-10}$ . The corresponding value of  $n$  (the number of molecules in 1 cubic cm. of gas at  $0^\circ$  C., 76 cm. pressure) is  $2.76 \times 10^{19}$ ; that of  $N$  (the number of molecules in a gram-molecule) is  $6.18 \times 10^{23}$ ; that of  $\eta$  ( $= 3/2 \frac{RT}{N}$ , the kinetic energy of agitation in ergs of a molecule at  $0^\circ$  C., 76 cm. pressure) is  $2.01 \times 10^{-16}$ ; that of  $m$  (the mass in grams of an atom of hydrogen) is  $1.62 \times 10^{-24}$ .

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## EXPLORATION

## Shippe-Johnson Expedition To Explore Peru By Air

**T**HE Shippe-Johnson expedition to explore Peru by air is now on its way to that country. The party of young adventurers and scientists will be gone four or five months during which time they hope to rediscover from the air Peru's arid coastal plain, the heights of the Andes, and jungles at the headwaters of the Amazon.

The members of the expedition, which is financed by private capital and is endorsed by the American Geographical and Harvard Geological Societies, are George R. Johnson, 30, former New York newspaperman, once chief photographer of the Peruvian Naval Air Service, leader; Robert Shippe, 20, co-leader, second pilot, geologist and historian; Irving G. Hay, 24, erstwhile tugboat captain of New York, chief pilot; Valentine Van Keuren, 30, civil engineer, and Max Distel, 24, mechanic.

The party plans to visit all points of geologic, archaeologic and geographic interest from Lake Titicaca, 11,500 feet up among the Andean peaks at the Bolivian border, to the sparsely settled gold country of the Marañon river

watershed 1,100 miles to the north. Ruins of huge Inca edifices in southern Peru, notably near Hauraz and Cuzco, and Chan-chan, crumbled capital of the Grand Chimú, near Trujillo, will be pictured from above.

El Misti, the 20,000-foot world-famous quiescent volcano, is to be aerially mapped, as well as more than two score agricultural communities of the Colca valley, long isolated in the Andes and practically unknown even to Peruvians. Pictures of bird colonies on the guano islands along the Peruvian coast and of impenetrable jungles at the source of the Amazon, will also be taken.

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## CHILD CARE

### Don't Let Junior Chew Paint From Toys

**T**HE chewing of paint from toys, cribs, and woodwork constitutes a real danger to children, facts gathered by a life insurance company of New York indicate.

Chronic lead poisoning occurs much more frequently among infants and young children than has been generally supposed, the report declares, and it would be more prominent in sickness statistics but for the fact that it is often unrecognized by physicians.

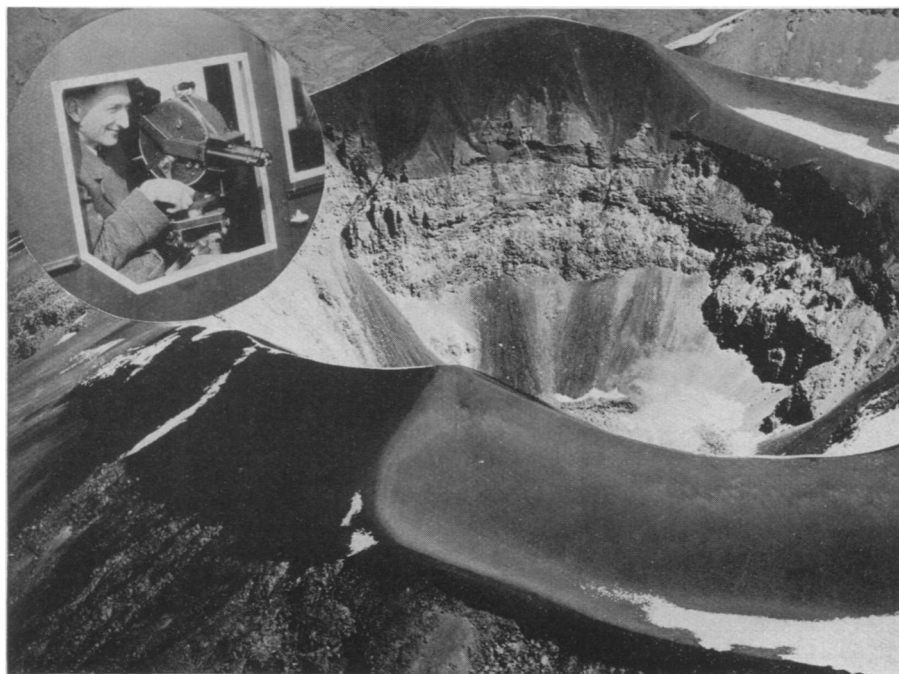
The poisoning usually comes from the sucking or chewing of paint containing lead, although sometimes lead ointments on the breasts of nursing mothers are at fault.

Health officials agree that parents should recognize the danger from this source, and should prevent the paint-eating habit in infants or else select furniture and toys free of the poisonous lead.

Many of the new lacquers and enamels put on with the spray process avoid the use of lead bases, and one of the well known makers of children's toys advertises that their paints are absolutely harmless.

Perhaps the greatest danger lies in the home use of cheap paints containing a large proportion of lead.

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**ONE GOAL OF THE AIR EXPEDITION**

*El Misti, 20,000-foot volcano in Peru to be mapped from air by five young explorers. Insert, George R. Johnson, 30, leader, once chief photographer for the Peruvian Naval Air Service.*