



### BOMB OF FIRE

One of the most effective of all incendiary devices used during the World War was the "Baby Incendiary" bomb used by the British. Here is a U. S. Chemical Warfare Service picture showing such a bomb exploding at night with a shower of flaming particles.

that the patterns of the lines of palms of hands and feet differ in the different races of mankind. Each race has its characteristic pattern, he found from studying thousands of palm prints.

Mongolian idiots are not necessarily Mongolians, but have the slanting eyes and other facial characteristics of the Mongolian race. The mental defect is present at birth. Finding of unusual characteristics in the palm patterns of

mongolian idiots indicates that the other physical characteristics are present at least as early as the third or fourth month of prenatal existence, since that is the stage at which the configurations on the palms appear.

The palm print characteristics cannot, Prof. Cummins said, be used as a diagnostic sign in an individual, but are characteristic of the group as a whole.

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#### PSYCHOLOGY-PHYSIOLOGY

## Brain Waves Provide New Clue to Mongolian Idiocy

**N**EW LIGHT on the brain condition underlying the peculiar mental defect known as mongolian idiocy may be obtained by tapping the electric waves originating in the afflicted person's brain itself, Dr. George Kreezer, of the Vineland Training School, indicated before the meeting of the New York Branch of the American Psychological Association.

Scientists do not know what causes this sort of mental deficiency. Several theories have been advanced, but none of them is entirely satisfactory. It is not thought to be hereditary, because it seldom occurs repeatedly in any one family. The name mongolism was applied to the condition, because of the characteristic physical appearance of individ-

uals with this type of mental deficiency.

Now, the newly developed technique of tapping the brain waves which accompany mental processes throws open a new door for the exploration of brains suffering from this little understood disease, Dr. Kreezer said.

He showed photographs of electric impulses tapped as they came from the brains of idiots with minds no more capable than those of ordinary 6- or 7-year-old children. He also showed, for comparison, brain waves taken from normal individuals.

Great variability exists between the brain wave patterns of different individuals, and idiots vary in this respect just as normal persons do. For this reason, Dr. Kreezer is proceeding with scien-

tific caution in the interpretation of his records.

But the records seem to indicate that, over and above the individual differences, variations in pattern and in frequency exist not only between normal persons and defective individuals, but also between mongolian idiots of relatively high levels of intelligence and those who have minds less capable than little four-year-old children.

Further study of this clue, Dr. Kreezer hopes, will provide new insight into mental deficiency of this type.

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#### CHEMISTRY

### Fogs of Fire Among the Horrors in Next War

**F**OGS of fire sprayed from low flying airplanes may be among the new horrors which the next war will bring to civilian populations far behind the actual combat lines, suggests Lieut.-Col. A. M. Prentiss of the Chemical Warfare Service.

Fire, spread by incendiary bombs, shells and flame-throwers, is not dead as a war measure, says the Chemical Warfare expert, despite the relatively ineffectual success of incendiary techniques in the World War. The rise of aviation since the war is the reason.

While the actual battle forces have become so mechanized that there is little about them to burn but their clothing, the civilians behind the lines will feel the brunt of the warfare by fire.

The fog of fire, explains Col. Prentiss, would be spontaneously inflammable fluid. "Not only should bombs of such fluid prove effective against specific targets, but by regulating the ignition to occur after the lapse of sufficient time for the liquid to reach the target, such a liquid could be sprayed at night from low-flying attack plane over relatively large areas with tremendous effectiveness," Col. Prentiss declares.

Writing in *The Military Engineer* (March-April) publication of the Society of American Military Engineers, Col. Prentiss traces the history of fire-making devices in warfare from the first "flame-thrower" used at Delium in 424 B.C., through the famous "Greek fire" of 660 A.D., down to the World War.

The apparent lack of success in the last conflict, he points out, was due in part to the fact that many of the chemicals were only in experimental production and never received a fair trial in the conflict.

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