

We know, for example, that when a human being is suffering from pellagra, which specific steps in the oxidation process are not operating. They do not operate because they lack the necessary enzymes and the body cannot produce these enzymes unless the patient is given nicotinic acid. Although we know a great deal, there is yet very much more to be learned in this field. Much scientific endeavor is therefore turned in this direction and in the next few years considerably more will be known about these fundamental life processes.

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## PUBLIC HEALTH

## Tuberculosis Increasing In War Torn Europe

**T**UBERCULOSIS is now taking an increasing toll in war torn Europe, and in less advanced countries the death rate is likely to mount to frightful proportions as in 1914-1918. So statisticians in the United States are convinced.

"Despite absence of statistics, it is certain that tuberculosis is on the rise in all the areas that have been overrun," says a report by Metropolitan Life Insurance Company statisticians.

Clues are revealed in reports from lands outside the Nazi grip. Vichy reports a sharp increase in tuberculosis. In England and Wales the tuberculosis death rate for male civilians has risen 13%. For females the increase was 7%.

The longer the war, and the farther it extends, the greater will be the tuberculosis toll, particularly on the Continent, the statisticians predict. In World War One, every belligerent country had an increase in this disease, and practically all neutral countries of Europe had an actual increase or were set back in their fight to control tuberculosis. In England, pulmonary tuberculosis deaths were 25% higher in 1918 than in 1913. Among German women the rate was nearly 75% higher.

While Germany today is in the most favorable position of the Continental areas, the statisticians say it is unlikely that Germany has escaped an increased tuberculosis toll in this war.

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Russian officials compare *Moscow* with Chicago, saying that it has about the same population and is an all-around industrial center.

*Lignin*, a substance in woody tissue, is reported to be a good source of vanillin for flavoring agents.

## New Machines And Gadgets

### Novel Things for Better Living

Where's that safety pin? will no longer be heard in baby's room if a pinless diaper recently patented is used. Nor will the baby's shriek be heard as careless Papa essays to "change the baby." The new diaper is of a special shape, with a ribbon attached at one end and four slots on the opposite side. The diaper is folded on in the usual way, the ribbon is passed through the slots, and a pretty bow is tied. Thus the garment is ornamental as well as useful, and baby will doubtless be proud of his very modern attire.

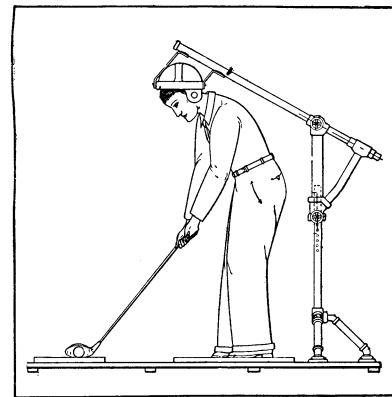
Burnt-out bearings will be a less frequent source of trouble and delay if use is made of one of a new line of "dry" oils now on the market. The oils are black and forbidding in color because they contain graphite in a finely divided state. When the oil dries out it leaves a thin film of dry graphite on the bearing surfaces. This prevents metal-to-metal contact and thus saves burning or abrasion in case of a delay in providing a new supply of oil.

An awning made like a Venetian blind has recently been patented. In place of slats it uses miniature awnings, one above the other, which therefore hang close to the window. It can be pulled part way or all of the way down, to cover any desired portion or the whole of the window—something that cannot be done with the ordinary awning.

A robot trailer brake, completely automatic in its operation, has recently been patented. When the towing car slows down, or holds back on a down grade, the trailer brake, all by itself, without human aid, sets itself so as to prevent the trailer from bumping into the car or pushing it. As soon as the trailer has been slowed down to the speed of the car, the brake releases itself. Thus the driver is relieved of all worry about the trailer. The mechanism can also be locked out of operation when the car is backing or maneuvering.

Old automobile bodies are now compressed by a huge press into a tight bale in a few seconds, and truckloads and carloads of these bales are shipped daily to the steel mills. Formerly old automobile bodies have lain rusting on out-of-town lots because there was no quick way of handling them.

Head down, eye on the ball, will not be easily forgotten by golfers if they use a recently patented "golfer's training rack." A sort of helmet, which is



attached to supporting arms that are adjustable according to the golfer's height, holds the head still and in the proper position while the golfer executes his swing. The whole apparatus is supported by a platform on which the golfer stands. With head and feet fixed in place, the inventor claims that the body is forced to execute the proper pivotal motion, and that practice with this device will obviate the services of a more expensive human instructor.

Balloon fabrics and other fabrics that must be as nearly gastight as possible can now be tested for leakage by means of a new "fabric permeameter." The test requires only a few minutes and the meter reads directly in "liters per square meter per 24 hours." A liter is a trifle more than a quart, and a square meter is a little larger than a square yard. Tests of the effectiveness of the various dopes with which the fabrics are treated, as well as leakage at the seams can be made. In addition to many other applications connected with National Defense, the instrument can be used to test materials for packaging tobacco products, foods, and other substances in which aroma is important.

*If you want more information on the new things described here, send a three-cent stamp to Science News Letter, 1719 N St. N. W., Washington, D. C., and ask for Gadget Bulletin 72.*

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# 29 Languages

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