

## CAFFEINE WEB is ragged.

The spider began laying threads in all directions instead of concentrically. The angles between spokes are too large and some spokes end before reaching rim.

## SPIDERS SPIN IN DRUG STUDY

## They build strange, significant cobwebs under influence of dope

Scientists have long found spider webs as serviccable as they are beautiful. Astronomers use web threads in their telescope sights and engineers use strands as crosshairs in range finders and transits. A young Swiss pharmacologist named Peter Witt now uses cobwebs as drug analyzers. He has discovered that if a spider is doped, it will spin a cockeved cobweb. Different drugs apparently affect different parts of the animal's nervous system so that the abnormality of the web pattern will differ characteristically with the type of drug swallowed by the spider, as shown in the pictures on these pages. Dr. Witt uses these odd nets as a quick, sure way of identifying drugs and says that the spider method is far easier than the elaborate chemical analyses usually needed to differentiate between closely related drugs.





**COLLECTING SPIDERS,** Witt taps barnyard web with tuning fork to simulate fly's vibration. Spider crawls out to catch fly and is caught in paper cone.



FRAMES FOR WEBS which spiders will spin in laboratory are hung in a window by Dr. Witt so that he can see fine strands silhouetted against sky.





**FORCED FEEDING** is achieved with drug-filled syringe (*top*). Mistaking the needle for trapped insect, spider rushes to it (*bottom*), drinks drop of drug.



**NATURAL FEEDING** is accomplished by filling abdomen of dead fly with sweetened drug fluid, placing it at edge of web. Spider will gorge on the bait.



**A** "MICKEY FINN"—chloral hydrate—produces unfinished web as knocked-out spider crawls off to sleep. Normally a spider always completes its web.



**A PERFECT WEB**, better than normal, is built when lysergic acid produces one-track mind, dulls all distractions. Spider concentrates on web alone.



**BENZEDRINELIKE DRUG,** Pervitin, causes a spider to build a one-sided web. After laying a foundation for a large web it becomes so restless under

the stimulant that it cannot coordinate. It weaves back and forth at one end only, laying down too many strands there but not completing whole net.