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come from the dried expectoration of consumptives. Fortunately their power to invade, and the power of the body to resist invasion are very equally balanced, and only under conditions of debility do they gain the mastery. Let the balance of power be destroyed in any way, and inflammation set up by even the slightest of injuries is followed by grave results. In various parts of the body, these disturbances, receive different names, but the essential factors in all, are *inflammation* and *bacilli*. Should the coverings of the brain be the parts attacked, we hear it spoken of as meningitis, or "water on the brain," in the neck we find "scrofulous glands," in the throat "tubercular laryngitis," in the skin "lupus," in the chest "consumption," in the spine "Potts disease," at the knee "white swelling" and so on through a very long list.

How many of us are there who can justly claim to have lost no friend or relative by some one or other of the diseases developed through the agency of the tubercle bacillus? Admitting the importance of finding, if it be possible, something which will protect the well from the inroads of the bacilli, and destroy or dislodge this particular disease germ when it has gained entrance into the body and has begun to develop, what chance is there of Koch having made for us the long sought discovery. Ever since he found the germ of tubercle, this patient scientist has been working to find also its antidote. The expectorated matters of consumptives, injected under the skins of guinea pigs will rapidly reproduce the disease in these animals. Making use of these creatures for experiment one substance after another was tested, until at last one

was found that would arrest the disease, in an inoculated animal, at any stage, and insure its restoration to health. When by such experiments on animals long continued and often repeated Koch found what he was in search of, he began to test its effects on mankind. He first tried it on healthy people, and it produced no local or general disturbances. Next he chose the simplest and most super-

ficial form of tubercular disease, that is "lupus." Pushing a hollow needle through the skin between the shoulder blades, he injected a few drops of fluid and left it there. In a few hours what is called



*Bacilli of Tubercular Phthisis seen through Microscope.*

"reaction" came on. The patient had a chill, followed by nausea, fever, cough and other symptoms. After twelve or fifteen hours, these subsided,



*The same Bacilli after fourteen days' development.*

and the tubercular masses in the skin passed through certain changes, ending in the formation of clean soft scars. When this progress in cases now num-



DR. KOCH AT WORK IN HIS LABORATORY.