



**FACTORY FINISHED**—The walls of this built-from-the-top factory, and the concrete floors laid directly on the ground without steel reinforcing, are now finished. Machinery has been moved into the first section, and production is booming, while the other sections are being constructed.

## MEDICINE

## Disease Cause Found

A rod-shaped bacterium is discovered in large numbers in the low-grade dusty cotton handled by workers who developed illness like mill fever.

► AN ACUTE ILLNESS affecting hundreds of workers in cotton mills, rural mattress-making centers, upholstering plants and cottonseed processing plants throughout 27 States and 2 Canadian Provinces is caused by a poison produced by a germ in the cotton. Experiments showing this, including use of human volunteers who inhaled the germy cotton dust and caught the identical disease, were reported by Roy Schneider, Dr. Paul A. Neal and Miss Barbara H. Caminita, of the U. S. National Institute of Health, at the meeting of the American Public Health Association in St. Louis.

The illness occurred among workers handling a very low grade of dusty, stained cotton. It started suddenly, within one to six hours after exposure to cotton dust containing the germs, and the acute phase lasted 24 to 72 hours. Principal symptoms were irritation of the eyelids, pain under the breast-bone, dryness of the throat, generalized aches, fatigue, headache, cough, chills, fever, loss of appetite, nausea and vomiting.

Samples of cotton incriminated in outbreaks of the illness contained no poison gases, no insecticides, no chemically extractable substance and no fungi to which the illness could be attributed. A rod-shaped bacterium, however, was found in large numbers in the incriminated cotton or in the soil in which some of the cotton had grown.

"The same type of disabling illness," the Federal health workers reported, "could be produced in humans by inhalation of (a) dust from normal cotton contaminated with this 'cotton bacterium' and its culture filtrates, (b) dust from stained cotton containing a high incidence of the 'cotton bacterium' and (c) a fine mist of a sterile filtrate from cultures of this microorganism. The severity of symptoms and physical findings are dependent upon the presence and concentration of the 'cotton bacterium' or its products in the cotton dust inhaled, and upon the duration of exposure.

"This acute illness, except for its

greater severity, closely resembles mill fever, Monday fever and gin fever in cotton mill workers, heckling fever, grain fever, and hemp fever reported in workers inhaling flax, jute, grain and hemp dust respectively. Typical cultures of this microorganism have been isolated from hemp and grain dust. Further studies on this problem are being undertaken in cooperation with the U. S. Department of Agriculture."

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### Short Shift for Mothers

► "ASSEMBLY LINES and clothes lines don't mix," Dr. James G. Townsend, U. S. Public Health Service officer in charge of the division of industrial hygiene of the National Institute of Health, declared in pointing out the health hazard of fatigue to women war workers who go home to cook, clean and wash for the family after eight hours on the assembly line.

Remedy suggested by Dr. Townsend is a shorter working shift for these women if they cannot find housekeepers or nurseries to give full care to their children.

A working week of six eight-hour days followed by one day of rest for the workers, and three shifts a day, are advised by Dr. Townsend in general as best working hours for avoiding the fatigue that impairs both health and output of the workers. Shifts should not be changed oftener than every two or three months, to allow ample time for the workers to get used to the new shift each time.

Night work is not harmful, he said, although there seem to be some who cannot or will not adjust to it.

War has brought improvements in plant ventilation and lighting but has increased industrial health hazards because of changes in industrial processes. Instead of using steel shot for sandblasting, sand is now being used, which brings the danger of silicosis to workers exposed to the sand. Toluene, widely used as a solvent, is now needed for TNT, so some plants have turned to benzene, which is much more dangerous to those working with it. A pimply condition of the face with little black centers in the pimples is due, the federal health service discovered, to the use of chlorinated hydrocarbons put into cutting oils to thicken them for use in heavy grinding.

Skin ailments account for two-thirds of absenteeism due to industrial conditions.

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