

PSYCHIATRY

Shell Shock Common

War conversion hysteria is called most frequent mental casualty in modern warfare. Many could be prevented, psychiatrist says.

► SHELL SHOCK is the most common mental casualty in modern warfare, Dr. Edward A. Strecker, professor of psychiatry at the University of Pennsylvania and president-elect of the American Psychiatric Association, declared at the Neuro-Psychiatric Institute meeting at Hartford, Conn.

Many of these mental casualties could be prevented through greater care in the selection of fighting men and through more thorough conditioning for battle of those who are selected, Dr. Strecker, who served as neuropsychiatrist in the U. S. Army in World War I, stated.

"War conversion hysteria, or shell shock," Dr. Strecker explained, "is an abnormal solution of a strong emotional conflict which takes place in the soldier

between his ego-instinct (the instinct for self-preservation), which is strongly moved by such emotions as fear, horror and revulsion, and the opposing claims of soldierly ideals and disciplinary reactions.

"In other words, when the conflict within the soldier, which is common among today's combatants, becomes too strong, the soldier responds by a state of shell shock.

"Psychiatry in the armed services, particularly under combat conditions, will have to be 'rough and ready' but skillful," Dr. Strecker continued, adding that this is the acid test of psychiatry today, and that under present world conditions, every physician, in and out of the armed services, will have to practice psychiatry.

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FORESTRY

Pine Stumps Salvaged

Formerly left in ground to rot, they are now processed to extract turpentine, rosin and pine oil. Expansion of industry expected.

► PINE STUMP salvaging has become a profitable enterprise in southern states where reduction plants have been established to chew them up and extract their turpentine, rosin and pine oil. The plants are working at full speed these days as the war activities use up their products as fast as they can turn them out.

Generally the stumps are left in the ground to rot if the land is to be used for another timber crop. They must be cleared if the land is to be used for farming. Leaving them in the ground or pulling and burning them wastes their valuable resinous and oil contents.

Much experimental work has been done during the past two or three decades by the U. S. Department of Agriculture and by private companies interested in naval stores, to find a profitable method of extracting resinous contents for commercial purposes. Processes have

now been simplified and a great expansion in the industry may be expected.

Before the stumps are processed they must be thoroughly dried. Usually they are left in the ground to dry. This may take several years. While drying important changes take place in the composition of their resinous contents. Then they are pulled with special machines, loaded on trucks and taken to the mill. They are washed free of all earth in long troughs through which they are dragged on an endless chain in a stream of running water.

The next step is their mastication. They are ground in drums with heavy cutting blades that crush, cut and chew them into small pieces. In another machine they are further shredded into tiny chips. What was once an ungainly stump is now a mass of very small pieces, and ready for the treatment necessary to ex-

tract the oil, the turpentine and rosin.

The extraction is accomplished in large tanks, some of which will hold as much as 15 tons of the chips. The tanks are sealed and the contents treated with a solvent—benzole, naphtha or other petroleum product — which is steam-heated and forced in under pressure. The solvent mixes with the tiny chips and takes up the rosin, turpentine and oil in solution. When the process is completed the liquid is drawn off and the resin-free wood is used for fuel under the boilers of the plant.

The liquid solution is first cooled. A resinous pitch settles which is easily separated. It is sold to foundries where it is used as a core binder. The remaining liquid is separated by distillation. The petroleum solvent is evaporated off first, as it has the lowest boiling point. It is reused. The turpentine is evaporated off next, then the pine oil. The rosin is left in the retort, from which it is drained as a heavy fluid that hardens as it cools.

Longleaf pine and slash pine stumps are used in these processes. There are some nine or ten well-equipped plants operated in the country. The uses of turpentine and rosin are well known. Pine oil is used in the manufacture of textile sizes, disinfectants, liquids and industrial soaps, and in a variety of sprays. It is used also as a flotation agent in recovering metals in copper refining.

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CHEMISTRY

By-Product from Beets Used to Make Nazi Forts

► THE NAZIS are making cement for fortifications from the by-product of French beet factories, according to a report received indirectly from Germany.

Scum that forms when beets are boiled consists largely of carbonate of lime and water. From this scum, which was formerly thrown away, 4,000 tons of calcium carbonate is said to have been obtained from processing 70,000 tons of beets.

The scum is pumped into large tanks, where it is partially dried. Finely divided clay is then thoroughly mixed with it by mechanical beaters. After burning the mixture in a rotary kiln, the clinker is removed and pulverized into cement.

This new product shows satisfactory durability under war conditions, the report claims.

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