

INVENTION

# "Mincing" Feathers

New process developed by Department of Agriculture scientist may help out in present acute shortage of goosedown needed for war uses.

► A NEW process for "mincing" feathers, developed by Dr. John I. Hardy of the U. S. Department of Agriculture, promises to help out in the present acute shortage of goosedown, badly needed for filling aviators' jackets, pillows for hospitals and other essential war services. The United States used to import about three million pounds of goosedown a year from Europe; now, with greatly increased need, it is getting scarcely a third that much.

Dr. Hardy's treatment of feathers is relatively simple. After being dried and cleaned, they are put into a special mill, which breaks the barbs away from the midribs and cuts them into short pieces. These cling to each other with thousands of microscopic hooks, forming a loose, fluffy structure. The "minced" feathers are separated from the midribs by blowing them upward in tall towers. The light bits float over into a large container, while the heavier midribs fall short.

Dr. Hardy conservatively declines to regard his product as a replacement for the scarce goosedown, but states that it can be mixed with the down and make it go much farther.

In the Department's great Western Regional Laboratory at Albany, Calif., chemical utilization of feathers is under investigation. Feathers are basically keratin, the same protein substance that makes up horns and hoofs, traditional material of animal glue. Feather glues have been tried out, especially in the bonding of plywood. Molding plastics made from feather keratin also look promising.

In one experiment, the gluey protein was even drawn out into filaments that could be spun into a yarn resembling wool. Work along the lines of feather-thread fabrics, however, has not yet been very extensive.

In the meantime, the Department of Agriculture is encouraging all possible use of feathers as such. Demand for domestically produced feathers has hitherto been far below the supply, so that a large part of the feathers from poultry packing establishments has been only a troublesome waste. Now, goose and duck feathers are carefully saved for

the armed forces; chicken and turkey feathers go into civilian use.

A smaller possible source, but one yielding choicer feathers and down, is being opened up by a sportsmen's organization, Ducks Unlimited. They want hunters everywhere to save all down and short feathers from the birds they kill, and mail them to Ducks Unlimited, 83 Columbia Street, Seattle. They state that they will market everything so received through regular channels, and that all money realized will be turned over to the proper authorities for the establishment of waterfowl nesting refuges.

*Science News Letter, December 12, 1942*

PUBLIC HEALTH

## National Health Picture Reported "Pretty Good"

► THE NATIONAL health picture is "pretty good," with no signs of any epidemics, according to reports of communicable diseases received weekly by the U. S. Public Health Service.

The death rate in large cities has shot up some 12% or 13% in recent weeks, chiefly because of influenza and pneumonia. Death rates from these two diseases are higher than the three-year average established by the Service for basis of comparison since the introduction of the sulfa drugs which have so greatly reduced pneumonia deaths.

Cases of influenza reported by state health officers have also been increasing, from 1,596 for the week ending Nov. 14 to 1,851 for the week ending Nov. 28, latest on which figures are available. About 60% to 70% of the cases for the last three weeks were reported from Texas, South Carolina and Virginia. So far, however, no signs of an influenza epidemic have appeared.

Meningococcus meningitis cases have been running higher all this year than during any year since 1937. Total number of cases for the week ending Nov. 28 were 89, an increase of 25 over the number reported for the previous week. The five-year median figure runs around 30 cases per week for the nation. Only

17 cases have been reported from the nine service commands of the Army. Although the total number of cases in the nation is higher than usual, it does not represent any particular outbreak.

The largest number of cases of epidemic typhus fever ever reported to the Public Health Service will probably be reported this year. More than 3,300 cases have been reported so far this year, most of them from Texas and Georgia. The federal health service has been receiving reports on this disease since about 1930. Endemic typhus fever in the United States is a mild disease, spread by the rat flea, and not to be confused with the highly fatal European typhus fever.

*Science News Letter, December 12, 1942*

MEDICINE

## Gorgas Medal Honors Three Military Doctors

► FIRST to receive the new Gorgas medals, awarded by the Association of Military Surgeons of the United States, will be three military doctors who have made outstanding contributions to the protection of the health of the armed forces.

The medals, each accompanied by a check for \$500, will be presented at a luncheon in Washington on Dec. 15 to Brig. Gen. Jefferson Randolph Kean, U. S. Army, Brig. Gen. Frederick Fuller Russell, U. S. Army, and Rear Admiral Edward Rodes Stitt, Medical Corps, U. S. Navy, all retired.

General Kean will be cited for his aid in conquering yellow fever by initiating warfare in Cuba against mosquitoes in 1900; General Russell for first immunizing the entire Army against typhoid fever and thus reducing the peril from this disease to a minor problem; and Admiral Stitt for extensive research and writings on tropical diseases and their prevention.

The medals were established by John Wyeth and Bro., in memory of Surgeon General William Crawford Gorgas whose work in preventive medicine made possible the construction of the Panama Canal. They will be presented by Col. Edgar Erskine Hume, vice-president of the Association of Military Surgeons and acting chief executive officer of Carlisle Barracks, Carlisle, Pa., where the Army maintains its Medical Field Service School.

Mrs. Aileen Wrightson, daughter of General Gorgas, will be guest of honor and receive a courtesy medal.

*Science News Letter, December 12, 1942*