

MEDICINE

Grafts Repair War Wounds

New, mobile bone bank will help wounded from Korea without problem of refrigeration. Improved method of storing skin also described to AMA.

➤ A THREE-INCH piece of shin bone, gift to the Navy from a dead woman, will soon be grafted into the leg of one of our wounded fighting men back from Korea. The piece of bone, sealed in a glass tube, was shown to doctors at the meeting of the American Medical Association in Atlantic City, N. J.

It is important both for its future in helping to restore bone to a wounded serviceman and because it is an example of a new, mobile kind of bone bank that may help hundreds of other wounded. Bone banks are not new. But the bones in banks up to now have been frozen and had to be kept frozen until the surgeon was ready to use them. For use overseas this gave the Navy a difficult and expensive handling and shipping problem. The piece of bone shown to the doctors can be packed in a cardboard carton and shipped without refrigeration. And it will keep longer than frozen bank bone.

This advance in bone preservation was reported by four Navy doctors, Capt. F. P. Kreuz and Lieuts. G. W. Hyatt, Thomas C. Turner and Andrew L. Bassett. Working at the National Naval Medical Center in Bethesda, Md., they found that bone could be preserved by the freeze-drying methods used for preserving plasma. Bones preserved by this method are not live bone, they explained. But when grafted they act as a strut or trellis until the body can form its own new bone.

A new method of storing skin has also been developed by these four Navy doctors with the aid of Dr. W. R. Earle of the National Cancer Institute. Instead of storing it in pliofilm at icebox temperatures, it can now be stored in a liquid made of balanced amounts of salt and blood chemicals with penicillin and streptomycin to prevent germ growth.

A Marine with a 12-inch-long hole in his leg that went so deep the bone was exposed is one of the men who has already benefited from this new preserved skin. The man got his wound in Korea. He had to lie about 36 hours before he could be rescued. His leg was splinted and he was flown back to the Naval Hospital at Bethesda. He suffered excruciating pain because of the nerves that were torn when he was wounded. This made it almost impossible to dress his wound daily, as was necessary. And he had developed a sensitivity to drugs so that he could not be given morphine or other pain-killers.

In desperation the doctors at Bethesda

finally took all the skin from their new type skin bank and put it on his wound. The quick relief of pain and improvement in his general condition were dramatic, the doctors reported. The preserved skin acted as a dressing. It was left on for several weeks, during which time no other dressings were needed. When it finally sloughed off, he was in shape for having his own grafted on him. This, also, had been kept by the new preserving method.

Science News Letter, June 23, 1951

TECHNOLOGY

Nitrogen Packaging Keeps Foods Fresh a Longer Time

➤ PACKAGING in nitrogen instead of oxygen of the air will keep such foods as potato chips, roasted nuts, dry soup mixes and dehydrated foods, packed in flexible film, fresh for much longer than now possible.

"Same-day" freshness for foods packed months or even a year before their purchase was promised by W. S. Walker of the Linde Air Products Company. He told members of the Institute of Food Technologists meeting in New York that the benefits from using nitrogen to protect

food products against oxygen deterioration have been proved for many foods.

Nitrogen is harmless and tasteless and does not change the natural flavor and color of the food. Shelf life and quality of film-packed foods are improved significantly by processing and packaging in an atmosphere of nitrogen, eliminating atmospheric oxygen, a contributing cause of food spoilage and rancidity.

Science News Letter, June 23, 1951

PHYSICS

Rescue Work Not Stopped by Radiation from Atom Bomb

See Front Cover

➤ RADIATION HAZARDS will not delay rescue and recovery work after an air burst of an atomic bomb, it was announced officially in the report of Joint Task Force Three upon the atomic bomb tests conducted in April and May.

In a high aerial burst there would be no residual radiation. In a low air burst just above the ground's surface, the significant residual radiation would be confined to a radius of 300 to 400 yards which would be completely devastated and need no rescue work.

No further information about thermonuclear weapon development (so-called hydrogen bomb) beyond earlier cryptic statements (SNL, June 9, p. 357.) was made available.

A 1951 version of the now familiar atomic bomb mushroom is shown on the front cover. It is an early phase of one of the nuclear explosions.

Science News Letter, June 23, 1951



FIRE BALL—In one of the latest atomic tests at Eniwetok Atoll, the fire ball of a nuclear detonation pushes upward through the clouds.