SURGERY

Operations Within Hour Are Saving Many Wounded

➤ MANY SOLDIERS in the Korean fighting owe their lives to the fact that they were operated on within an hour from the time they were wounded, Dr. Harold B. Boyd of Memphis, Tenn., declared at the meeting of the American Academy of Orthopaedic Surgeons in Chicago.

Dr. Boyd, who is secretary of the Academy, reported his recent observations of hospital and medical centers in Japan and Korea made while serving as civilian consultant for the Office of the Surgeon General of the Army.

He praised the doctors, nurses and helicopter service for a heroic, life-saving job.

"The helicopters," he said, "usually carry two patients and land within a few yards of the clearing stations and hospitals. In extreme emergencies some of the wounded were observed arriving from the front by helicopter in less than 30 minutes from the time of wounding. In some cases, when necessary, these patients were examined, transfusions given, X-ray films made, given anesthesia, and the operation started within 30 minutes of the time they arrived at the hospital. Many soldiers owe their lives to this rapid transportation and immediate medical care.

"Mobile Army Surgical Hospitals are located near the front and can be moved 'like a circus' with a few hours' notice," Dr. Boyd said. "Equipment literally 'melts' into trucks and they are off. After reaching a new location, the hospitals can be set up and patients received within two or three hours. The hospitals in Korea are housed in permanent structures, such as schools and prefabricated units. Sometimes, tents are used."

Science News Letter, February 9, 1952

GEOLOGY

Malaspina Glacier Actually Flows Uphill

➤ MUCH OF Malaspina Glacier in southern Alaska actually flows uphill, geologists at the California Institute of Technology in Pasadena have concluded from studies to determine the flow mechanism of ice sheets.

This is reported by Dr. Robert P. Sharp, professor of geomorphology and leader of a five-man team in Project Snow Cornice, sponsored by the Arctic Institute of North America. The researchers found that the rock floor under the center of the glacier, which covers more than 1,000 square miles, slopes back inland toward the St. Elias Mountains to the north. Their observations were made with seismic equipment along a ten-mile line running north and south.

To make the study they set off small charges of dynamite in shallow holes in the ice, and with seismic equipment recorded the shock waves reflected back from the rock floor. Knowing the velocity of the waves through ice and the time it took them to make a round trip, the geologists could then calculate how far the waves had traveled.

Their measurements indicated that the ice thickness along the ten-mile line ranged between 1,130 and 2,075 feet. They also showed that the floor under the glacier center was at least 685 feet below sea level, whereas it rises above sea level at the glacier's outer edge.

In an effort to solve the problem of how the Malaspina Glacier moves, the researchers sank a vertical hole 1,000 feet deep into the ice sheet and left the drill pipe in the hole. Since mechanical drilling equipment is not suitable for ice work, they bored into the sheet with an electrically heated hot point—a gigantic soldering iron.

The researchers expect the drill pipe to be bent by the moving ice and its degree of bending to be different at different depths within the glacier. Measuring the various degrees of deformation with an instrument known as an inclinometer, they will be able to construct a vertical velocity profile for the ice sheet and thus tell how the glacier moves.

Science News Letter, February 9, 1952

MEDICINE

Food Tube Completely Stopped by Laxative Pills

➤ COMPLETE OBSTRUCTION of the esophagus, tube down which food is swallowed into the stomach, by three methylcellulose tablets taken for constipation is reported by Dr. Morrison H. Belmont of San Francisco in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION (Feb. 2).

No similar case has been reported in medical publications.

The patient was a 67-year-old man who came to the hospital complaining of a choking sensation and inability to swallow comfortably after taking the three pills.

Efforts to suck or flush the pills out through a special instrument, the esophagoscope, failed. The doctor had to remove the gelatinous mass bit by bit with a forceps.

After this the patient had no more choking or smothering sensations.

Science News Letter, February 9, 1952

INVENTION

Hands Free for Make-Up With Body-Supported Mirror

➤ MYRTLE A. AMER, Long Beach, Calif., received patent number 2,583,803, for a body-supported mirror holder device. With this invention, a woman may make up her face with both hands, since it would be no longer necessary to hold a hand mirror with one hand. It consists of a frame which hangs around the neck.

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IN SCIEN

SURGERY

"Light Bulbs," Aid Bad Hips in Aged

➤ PLASTIC AND metal devices shaped like light bulbs and door knobs are now helping aged persons with bad hips due to breaks or disease.

The "light bulb" was designed by Dr. J. E. M. Thomson of Lincoln, Nebr., who himself has a hip disability from an accident in his youth. He announced the new device at the meeting of the American Academy of Orthopaedic Surgeons in Chicago. He has tried it on 55 patients with an average age of 70, the oldest being 94. The "light bulb" works smoothly and painlessly, he reported.

"Surprisingly satisfactory" results were reported for the "door knob" by Dr. Earl D. McBride of Oklahoma City. All but three of 23 patients fitted with this device to replace their own hip bone have good free hip motion, Dr. McBride told the surgeons, many of whom were skeptical when he described the device at the meeting last year.

Patients have worn the device for from one to three years. Only three report any pain other than mild soreness.

Science News Letter, February 9, 1952

INVENTION

Silica Gel Grease Made Waterproof for Marine Use

➤ A NEW kind of waterproof lubricating grease, for use on ships and wherever moisture might decrease the efficiency of ordinary grease, has been developed.

Two Canadian inventors, Aurelio F. Sirianni and Ira E. Puddington, of Ottawa, have assigned their five patents on the new kind of grease to the Canadian Honorary Advisory Council for Scientific and Industrial Research. They received American patents number 2,583,603 through number 2,583,607.

Most lubricating greases made with a silica gel, the inventors say, have an affinity to water. Any water which comes in contact with the lubricating grease tends to replace the oil content in the grease. The inventors have stopped this process by waterproofing the silica gel with certain alkyd resin components.

The two inventors have also improved the process of making lubricating grease from an aqueous gel by finding a way in some cases to cut out some of the various steps previously necessary in replacing the original water in the gel with the oil used in the grease.

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CE FIELDS

AERONAUTICS

Improved Automatic Pilots For Accurate Bombing

➤ MORE ACCURATE bombing by fast-flying jet airplanes is now possible, using improved automatic pilots, much faster in their reaction time than those for World War II aircraft.

As recently as three years ago, the bombardier of a high-speed airplane had to start his run so far from the attack target that his accuracy in aiming was affected. The automatic pilot just did not react fast enough to allow him to change his heading if he waited to get a more definite "bead" on the target. Now the time needed to complete such a change in direction has been cut in half, Boeing Airplane Company, Seattle, has stated.

The added maneuvering time also allows for better evasive action from enemy guns. Quickening of the automatic pilot's response time is the result of a joint research program conducted by Boeing and manufacturers of automatic pilots.

The job of an automatic pilot on a bomber is much more complex than on an airliner, requiring abrupt turns and steep bank angles. Automatic pilots for commercial planes are designed to change course gradually, so that little motion can be felt by the passengers.

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ETHNOLOGY

60 Rabbitskins for Indian "Baby Bunting"

➤ THE PRIMITIVE Chippewa Indian baby was a real "Baby Bunting." He was wrapped in a rabbitskin blanket woven from inch-wide strips made by cutting round and round the animal fur. From 60 to 70 skins were used in such a blanket.

The baby's first moccasins had a hole "about the size of a blueberry" cut in the ball of the sole or in the heel so that when he grew up he would work hard enough to wear out his moccasins.

These are among the Chippewa customs of child care collected by Sister M. Inez Hilger, of St. Benedict's Convent, St. Joseph, Minn., in a study conducted over several years. Sister Inez interviewed old people of the tribe who had good memory for the old customs and younger men and women who had been brought up by grandparents and so learned the old primitive ways. Report of the findings is published by the Smithsonian Institution.

Baby's first step was an event for rejoicing among Chippewa parents, as it is among modern Americans. When the child first walked alone at least half the length of the wigwam, a feast was given. When the baby walked alone to the neighbors for the first time, the neighbors visited gave a feast.

Belief in prenatal influences on the children was strong among the Chippewa. A freckle-faced baby, it was believed, was born to a mother who had eaten sea-gull eggs before the birth. Cry-babies were thought to be born to mothers who had eaten blackbirds or robins. Eating porcupine caused the baby to "have a stuffy nose," to be clumsy or crippled, clubfooted or pigeon-toed. Porcupine also made the baby touchy for "the needles of the porcupine are sharp."

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SURGERY

Deformed Hands Remade By New, Safer Operation

➤ A SAFER operation for correcting a certain type of hand deformity was announced by Dr. H. van H. Thatcher of Portland, Oreg., at the meeting of the American Academy of Orthopaedic Surgeons in Chicago.

The operation is for the kind of hand deformity in which the fingers are drawn into the palm.

This condition of contracted fingers occurs mainly in men past 40 years of age. Previous operations for correction of the condition often left the patient with a troublesome scar in the palm of his hand.

Dr. Thatcher found that if multiple incisions are made in the natural creases of the palm the patient can escape the disfiguring result. Also, he explained, the surgeon, by following the natural creases, can with more ease and safety cut away the contracting diseased tissue below the skin, thereby causing little or no disturbance to the natural circulation.

The new operation has now been performed on 171 patients.

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CHEMISTRY

New Chemical Family Kills Plant Fungi

➤ A NEW group of chemicals effective in killing fungi on plants, such as late blight of tomatoes and late blight of celery, has been developed by Wm. E. Rader, C. M. Monroe and R. R. Whetstone of the Shell Agricultural Laboratory at Modesto and Shell Development Co. at Emeryville, Calif.

The chemicals are called alkyltetrahydropyrimidines. In preliminary tests in the laboratory and greenhouse they show high fungistatic value making them worthy of further testing as foliage fungicides.

Results of these tests are reported in the journal SCIENCE (Feb. 1).

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PSYCHOLOGY

Children Growing Up Now Are Made Anxious

➤ CHILDREN GROWING up in this time of worries, international tensions and threats of total war and total destruction are more seriously disturbed and anxious than is generally realized. This is the warning given by the yearbook of the National Education Association, "Growing Up in an Anxious Age."

Children in today's schools may be guided by teachers who are themselves anxious, the book points out. Teachers are under tension because they are pressured from all sides. They must individualize instruction, but they must do it in large classes of 35 or more. They must use "democratic" methods but "they must not let children 'get out of hand' or, for that matter, out of their seats."

Nevertheless, adults should not project their own anxieties onto their children, the educators point out. Older people have to un-learn and re-learn in order to keep up with changing attitudes and are likely to become anxious in the face of so much change. But what is new to the elders may be all that the children have ever known.

Yesterday's children went out to play war against redskins, armed with their trusty beanshooters. Today's youngster, if he eats his breakfast cereal, may be armed with an Atomic Ray Gun and he is opposed by strange creatures crawling out of interstellar space. But the motives and emotions that lie behind the child warfare then and now are "as timeless as the restless urges of youth."

Science News Letter, February 9, 1952

ENTOMOLOGY

Breed Good Insects To Resist DDT Death

➤ HELP FOR farmers trying to use DDT to destroy unwanted insects without at the same time destroying the useful ones is coming from experiments by D. P. Pielou and R. F. Glasser of the Dominion Parasite Laboratory at Belleville, Canada.

They are breeding DDT resistance into an effective parasite of the larvae of the oriental fruit moth. By this means they hope to be able to keep the parasite's ability to destroy the fruit moth larvae at the same time that DDT is used for insect pest control.

The DDT resistance of the parasite, *Macrocentrus ancylivorus* Rohw., has now been increased more than four times for the females and more than three times for the males. While these results are "promising," the scientists state in their report to the journal SCIENCE (Feb. 1) that they do not plan to release any DDT-resistant parasites until the resistance has "been increased to the practical limit."

Science News Letter, February 9, 1952