

# Plastic Mitral Heart Valve Means Life for Rheumatic Fever Victims

## Precision Device Developed at Lab At Medical School

(Editor's note: This is another in a series of articles by Mrs. Wilma Morrison, well-known reporter of Oregon education, on the research and public service projects being carried on by the state's colleges and university. They have been written for the state system of higher education.)

By MRS. WILMA MORRISON

The congenital heart children who are living normal or relatively normal lives as a result of the heart-lung machine and open heart surgery techniques developed at the medical school's heart laboratory, are evident to any layman's naked eye: their surgery has been dramatically publicized.

The continuing life-saving research output of the lab and the machine shows up less spectacularly in medical literature and in doctors' and hospital reports.

Most recent development of the lab is a precision device—a plastic mitral heart valve—that can mean a reprieve from death sentence for some of the severely heart-damaged victims of the historic killer, rheumatic fever.

**Machine Developed**  
Showing the valve along with several others which have been tried and found wanting in some way, Dr. Albert Starr, the cardiac surgeon who heads the laboratory, said this perfected valve has now been tried on enough dogs that he is ready to place



**EXPLAINS VALVE**—As dramatic as the latest product of his heart laboratory at the medical school. The ball valve opens and closes with the surge of blood. It has been proven on dogs and holds a life promise for heart-damaged victims of rheumatic fever.

it with confidence in a human heart.

The heart-lung machine which Dr. Starr and his laboratory staff developed and which has made possible 102 open heart operations in the past year is an intricate pump that keeps the blood circulating while surgeons make repairs on the human heart. It is an engineering masterpiece but all it does is make the repair job possible; the laboratory research and experimentation necessary before surgeons can work with safety to the patient, is endless.

Before the development of the machine surgical methods of correcting cardiac defects were all theoretical. Now doctors must know how to make the repairs, and every procedure has to be proven on dogs in the laboratory before it is used on a human. "In cardiac surgery with its rapid advances the only way to have proper patient care is to have one foot in the lab and one in the operating room," Dr. Starr said. "You can't have a top-notch clinical team without this research laboratory experience. The

lab is a training ground for surgery as well as a place of discovery. It is just fantastic how soon we will do an operation after the technique is discovered in the lab. **No End to Research**  
"There is no end to research. You solve today's problem and out of the solution, you have ever-expanding problems that demand solving. Five years ago the problem was a safer heart-lung machine; now we have it and it has allowed us to

enter into problems we never could touch before."

Dr. Starr illustrated with the new mitral heart valve soon to be placed in a human heart. Another recent lab achievement was the successful search for a synthetic material to widen the area of the lung artery. Narrowing of this artery is cause of "blue babies." The lab experimented with all kinds of materials including the fibrous tissue that covers the brain. Finally it was demonstrated that teflon is ideal, and this material now has been placed in 20 patients with apparent success.

"Here, right out of the lab, boom!—we had something of urgent clinical value," Dr. Starr said.

**Anti-Blood-Coagulant**  
The lab also makes possible the testing of discoveries made elsewhere in heart surgery. Currently the staff is testing a newly-marketed anti-blood-coagulant for the Red Cross to see if that organization's whole procurement program for heart surgery should be changed. If the new anticoagulant works it will mean blood storage of 4 to 5 days is feasible instead of the present 24 hours. There would be no more rushing of blood by plane, followed by all-night testing before an operation.

There is a time drama in background of the kinds of close laboratory-operating room research that goes on in heart surgery. The heart-lung machine itself must be improved constantly as surgeons are led to attempt heart repairs never possible before.

Right now, in Boston, a whole new cabinet is being made to the staff's order. It

will give the machine a new function and there are several critical heart operations waiting its completion. The mechanical addition will allow a flow of oxygenated blood separately into the aortic arteries and will mean that surgeons can work on the aortic valve an indefinite time instead of the present 15-minute limit.

**Sense of Urgency**  
"There are men scheduled for surgery in March who cannot be operated on without this addition to the machine," Dr. Starr said. "We have a terrible sense of urgency."

Of the 102 open heart operations that have been done at the medical school hospital, an average of two a week, 97 were on children whose cases were worked up by the staff.

**Figure Moving**  
"Records show that one in every 200 births has a congenital heart defect," Dr. Richard Sleeter, director of the division, said. He believes

has to be expensive. It calls for four surgeons, an anesthesiologist, cardiologist, several surgical nurses and other technicians—besides the preliminary team work-up of the case.

The presence of the heart lab and a center of cardiac surgery at Oregon's medical school is an illustration of the combined teaching-research-public benefits that are possible now through federal and foundation investment in colleges and universities. In this case, the extensive work of the crippled children's division with congenital heart victims, and the division's unusual organization as virtually a department of the medical school were prime reasons for the thousands of dollars of gift funds involved.

the figure "is moving closer to one in 150 births."

With the evidence of the numbers of children needing help—numbers which could not possibly be taken care of by sending them to the few medical centers in the country doing open heart surgery, Dr. Sleeter took his case to the children's bureau.

The fact that the number of patients necessary for a productive heart research program were available through the crippled children's division, and that the medical school offered facilities and use of the heart lab in teaching, brought a five-year grant of \$130,000 from the children's bureau. Later grants from the U.S. public health service and medical research foundation of the medical school have been added.

Open heart surgery has made cure of the heart-damaged child possible. But for the increasing number of children who live with the mul-

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iple damage of cerebral palsy and other neurological and sensory disorders there can be few "cures"—only amelioration of their handicaps.

(Third, and last article on the crippled children's division: The long-time treatment of the multihandicapped.)

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**TINY PATIENT**—Tiniest patient on a recent heart clinic day at the crippled children's division at the medical school was this seven-weeks girl getting fluoroscopic examination by radiologist. Her bluish-red color contrasted ominously with healthy appearance of her twin.



**TRACINGS TAKEN**—Three-year-old Christopher Ward has been under the watchful eyes of the Crippled Children's division since his defective heart was discovered at birth. Here he has EKG (heart tracings) taken during regular visit to Children's center at the medical school. Chris whose activity has to be strictly limited, will have open heart surgery before too long.

## Couple Closes Eyes; Tombstone Disappears

Billings, Mont. — Someone put a tombstone in the yard behind the house of Mr. and Mrs. Nicholas Sotiero.

They decided to ignore it, acting on the theory that if you close your eyes to something long enough it will go away.

A few days later the tombstone did just that, vanishing as mysteriously as it had appeared.

Queen Elizabeth's 9-year-old daughter drew in a royal breath and told fellow Brownies:

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## Small Worlds Around Us

By Lynn M. Watkins

### The American 'Stork' Is a Strange Bird

Nursery stories picture the stork perched atop a chimney-pot, apparently awaiting orders, and always ready to carry a "precious bundle" anywhere in the world at any time. Of course, in these United States we are terribly short of chimney-pots; but we do have storks scattered throughout the southern and eastern parts of our country. At least they are reasonable facsimiles of storks, for the large wading bird called the ibis belongs to the stork family and is the only representative of the family in the new world.

The wood ibis is a strange bird, inhabiting low coastal areas of the southeastern United States. They are large birds, often with a wing spread of six feet and have long legs and a short and a comical tail. The head and neck are bare of feathers, which gives the bird a peculiar appearance, and prompted someone to name them "flint-heads" or "ironheads."

**Soar Skyward**  
In the late afternoon or early evening great flocks of these birds take to the air and soar skyward on currents of ascending air that rise from the hot earth. Upon reaching

the clouds high in the sky, they fold their wings and plummet earthward, only to arrest their descent at the last moment before plunging into the tree tops and taking advantage of another ascending air current, rise high into the air again.

This game often lasts for hours, the birds apparently getting a tremendous thrill from the performance. The entire ibis colony may take part in the sport. Sometimes the flying or soaring bird will turn over in the air and fly a considerable distance while in an upside down position.

The wood ibis seems reluctant to rest for any length of time. When nothing else appeals to their desire for action they will select a small limb of a bush or tree much too weak to support their weight, and attempt to balance themselves on it. After the futile performance ends, the ibis will solemnly stand again on solid ground, but another bird will promptly fly up on the branch and start the hopeless "body-juggling" act.

**Unique Feeding Routine**  
The feeding routine of the wood ibis is unique among birds. They have adopted a peculiar technique of securing small fish on which they usually feed. The entire ibis col-

ony will take up positions in a shallow pool and all go into a trampling dance that churns the water into a muddy swirl. The bewildered fish come to the water's surface and fall easy prey to the long, stout bills of the homely storks.

There are many phases of the life history of the wood ibis that are not well known. The birds do some things that are not easily explainable. They have actions that bewilder the observer. Perhaps there is more to this "stork story" than has ever been told.

A group of wood ibis standing in the mud is a ludicrous sight. They look very much like a group of hump-backed dignitaries debating matters of serious importance to a world which will probably fail to listen. Perhaps the "storks" also have superstitions centered around us. Maybe that's why they always look so tired; maybe the last precious bundle they delivered was heavy.

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### Hungry Young Actor Takes Cast's Apple

Clinton, Tenn. — A youngster scheduled to have an apple shot from his head in a performance of "William Tell" noticed something important was missing—the apple.

Nine-year-old Howard Kenner had to depend on the audience using its imagination after it was discovered another member of the cast had become hungry and eaten the apple.

## Thornton Sees Outgrowth of Crime Conference

Salem — (UPI) — Attorney General Robert Y. Thornton said Wednesday that one outgrowth of the state crime prevention conference here last week may be a new provisional crime prevention division in the Oregon Department of Justice.

He said he is considering establishment of such a division.

The division would work with a new attorney general's advisory committee on crime prevention, to be appointed. Main aim would be to produce and carry out "concrete recommendations for crime prevention on city, county and state levels."

**Urgent Need Seen**  
"I am convinced," Thornton said, "that there is a urgent need for an effort at the state level to provide some leadership and action to head off at least some of these potential offenders before they start treading endlessly in and out of our courts, jails and prisons."

Thornton said there would be no additional cost to the taxpayers because he would take personal charge of the new division and it would be added to the Justice Department's regular work load.

## Decision Makers Slated for Study

Medford, Mass. — (UPI) — An unusual study of the factors that influence the making of decisions will be undertaken soon at Tufts University.

The psychological project was made possible by a \$16,000 National Science Foundation grant.

"Little is known about the individuals involved in the making of decisions and whether the person assigned to make a decision really is the right person," says Dr. Ezra Saul, one of the psychologists.

"We hope to find some new knowledge which will insure the selection of the best possible person for the making of decisions in all spheres of activity, especially in this new space and atomic era."

## Boy Believed Youngest Eagle

Kent, Ohio — (UPI) — Bill Conway is a serious young man with a serious question. Is he the youngest Eagle Scout in the country?

Bill will be 13 on Feb. 25. Local scout officials believe he replaces Francis Barnes of Montoursville, Pa., as the youngest Eagle Scout.

Bill was motivated to win the 21 merit badges required for the Eagle insignia by the record of his father, now a professor of Kent State university.

His father was once the youngest boy in the Saginaw, Mich., area ever to win the rank of Eagle.