



THE INCISION IS MADE (above, right), and the sternum is cut through (above, left). The enlarged aorta is then exposed (below) and the operation is underway.



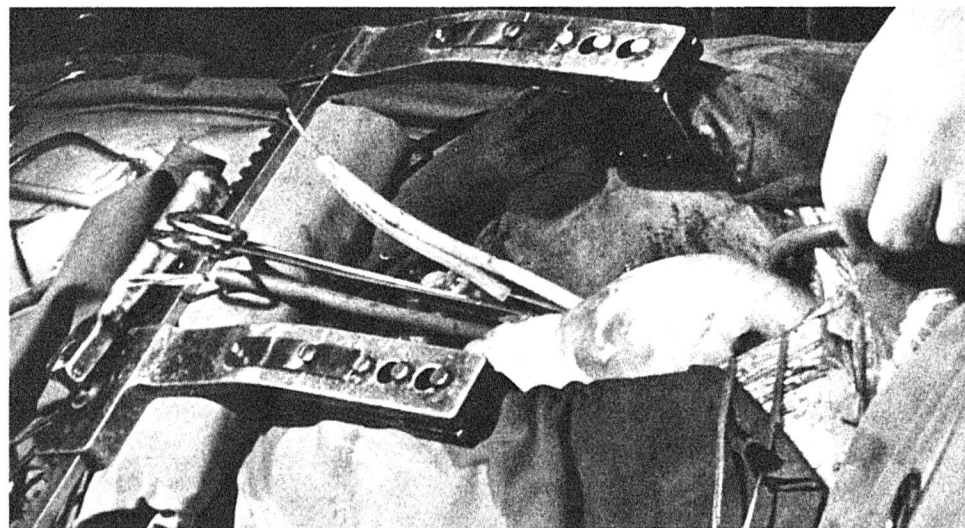
Marfan's syndrome

Diagram A shows the dilated aorta whose walls are thin and dying. The shaded portion was removed and the two ends brought together.

Diagram B shows a healthy aortic valve (located at the bottom of the aorta where the blood leaves the heart).

Diagram C shows a diseased valve. This valve is incapable of closing completely and the blood flows back into the heart.

Diagram D shows the plastic valve which replaced the diseased one. It consists of a plastic ball in a wire cage.



Open heart surgery at

Six months ago a 26-year-old construction worker from Calgary developed shortness of breath and extreme tiredness. This worsened over the ensuing weeks so that by December he was unable to work. The cardiologists in Edmonton and Calgary diagnosed Marfan's syndrome.

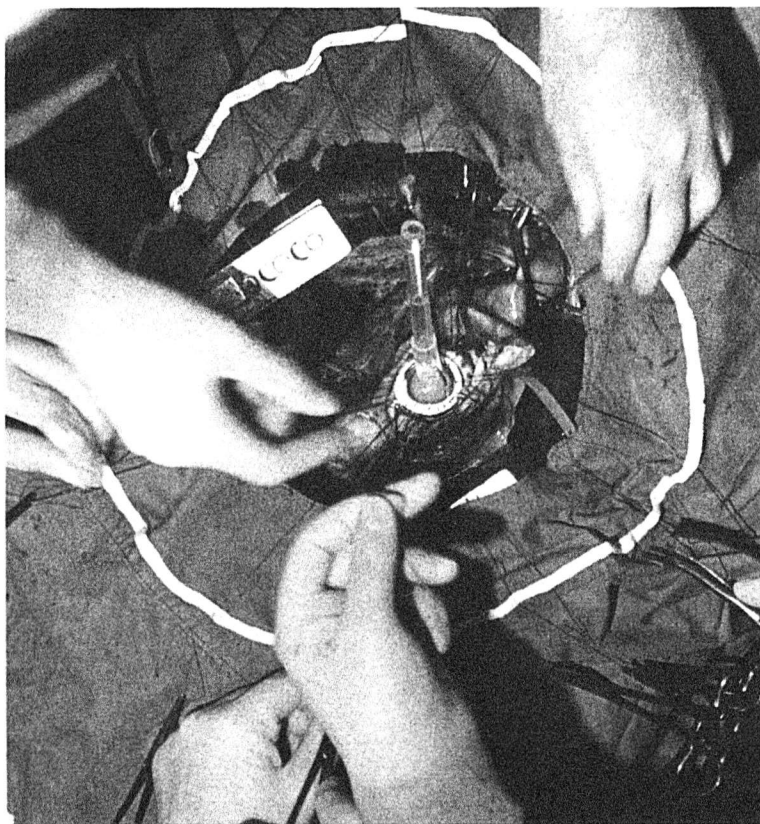
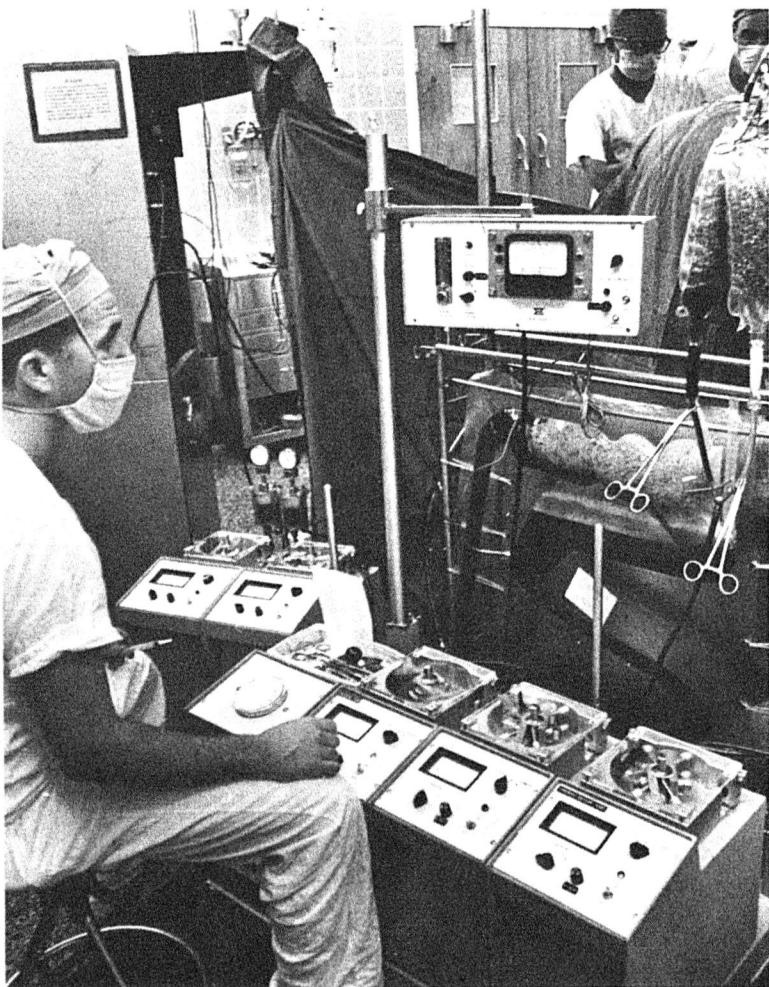
In this disease the aorta (main artery coming off the heart (diagram A), dilates

and the aortic valve is made incompetent (diagram B). The heart enlarges and eventually over a few years fails, or the dilated aorta may rupture suddenly causing instant death.

On Jan. 25, Dr. C. M. Couves of the Cardiac Surgery division of the University of Alberta Hospital operated on the patient. In a five and one-half hour operation he removed the valve and put in a plastic one, and then repaired the diseased aorta.

feature by ron yakimchuk

The question of repairing the aorta poses



THE HEART-LUNG MACHINE (left) takes over for the patient's own heart and lungs, and a new valve is inserted at the base of the aorta (above). The next step is the removal of the diseased portion of the aorta, and the rejoining of the aorta sections (right).

