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The world's largest electrically-operated doors, at the Glenn L. Martin Company new airplane assembly hall, weigh 32 tons, can be opened as a unit in 68 seconds. In three parts, they close one wall of an obstruction-free space large enough to accommodate three football fields, plus stands for 20,000 spectators.

MEDICINE

Acclimatization Has Brought Success in 11 Gland Grafts

New Feature of Transplantation Technique Has Increased Successes, But Failures Remain Numerous

THE CASE of a woman who as a result of a gland graft operation has for six years been able to live and to remain well enough to earn a living for herself and her child has come to light, along with 11 other apparently successful cases of gland transplantation in humans, through a research report to the Carnegie Institution of Washington.

Acclimatization is the new feature of the transplantation technic which is believed to contribute much to the success of the operation, but even with this feature, 15 failures must be chalked up alongside the 12 successes.

Details of the operations were reported by Drs. Harvey B. Stone, James C. Owings and George O. Gey of Baltimore to a group of physicians at the Mid-South Post-Graduate Medical Assembly. Further report of the experimental work has just been made by Dr. Gey to the Carnegie Institution of Washington.

"The practical utility of the methods of endocrine gland grafting in human cases," the three doctors state in their report to the medical group, "is not great at the present time and cannot become so until a way is found to insure

a dependable supply of suitable tissue for grafting."

Transplantation has been tried in both human patients and animals with thyroid, parathyroid and adrenal glands and pancreas, the insulin-producing gland. If grafts from the latter gland could be made successfully, diabetics would not need to take insulin to make up for deficient insulin production of their own glands. They would simply get a new gland to replace the old one. Unfortunately, the one diabetic patient on whom this was tried did not derive any observable benefit. Although two grafts were made in this case, the physicians believe the failure was probably due to the fact that not enough gland tissue was given.

All sorts of difficulties stand in the way of getting a large supply of gland tissue for grafting or transplantation. The gland used must, of course, be free from germs and from any kind of disease. Glands removed at operation are for these reasons often not suitable for transplantation.

Healthy glands can be obtained after death, but must be removed within a few hours, and it is not easy to get the necessary permission and make arrangements for what amounts to a surgical operation in short enough time. Enough gland tissue must be grafted to keep the patient in health for the rest of his life, because the tissue cannot be counted on to grow large enough after transplantation to meet the patient's needs.

Getting the graft to grow after transplantation is another problem. This has been met by growing the gland outside the body for two weeks in material containing some blood from the person who is to receive the graft. This acclimates the gland tissue to the new surroundings in which it is to live. The gland tissue is usually not transplanted into the normal place for the gland but into the groin or the armpit instead.

Another difficulty is that conclusions cannot be drawn from experience with one case or one animal species. Thyroid gland grafts, for example, were successful in dogs but not in human patients. Adrenal and parathyroid gland grafts were unsuccessful in dogs but successful in some human cases.

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California once had an abundance of native game birds; now only the quail remains in considerable numbers.

In 47 states of the Union, hospital technicians who make laboratory tests are required to obtain a state license.

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