

Offshoot of NASA research

Eye-controlled wheelchair aids handicapped

A motorized wheel chair directed and controlled solely by movements of the occupant's eyes was accepted recently for evaluation and testing by the Institute of Rehabilitation Medicine at New York University Medical Center.

The electric motor-driven chair is controlled by a sight switch, using technology developed under direction of the National Aeronautics and Space Administration.

Dr. Howard A. Rusk, director of the rehabilitation center, estimates that more than 100,000 quadriplegics (persons with no use of their arms and legs) can achieve mobility if this device can be made available to them.

"I would say that 100,000 is a conservative estimate of the number of handicapped people who could be benefited in the United

States alone," Rusk said.

Eighth in a series of prototype chairs built by the Missile and Space Support Division of Hayes International Corp., Huntsville, Ala., the chair was presented to NYU by George Scharffenberger, president of City Investing Co., the Hayes Corporation's parent firm. Hayes developed the sight switch control under contract to NASA.

Early in NASA's manned space flight program, space engineers saw a need for a device that would permit astronauts to operate spacecraft controls when strong "G" forces would prevent movement of their arms.

Engineers found that G forces would not be as severe a constraint as anticipated and astronauts could control their space

vehicles without resorting to the sight switch device.

The Hayes Corporation has continued to develop commercial applications of the sight switch technology under a licensing agreement with NASA.

Five other chairs are being tested in hospitals and rehabilitation centers and two more are in regular use by individual quadriplegics in a continuing testing program. NYU Medical Center technicians noted that handicapped patients have been able to learn reasonable facility in operating the chair in as little as two or three hours use.

Members of the rehabilitation center's staff and representatives of the manufacturer emphasized that many more months of evaluation would be needed before the

device would be widely available commercially.

But Bob G. Weaver, the Hayes engineer who demonstrated the chair, described it as "one of the most encouraging instances to date of the direct use of NASA-developed technology to meet an urgent need in the private and public sector."

The Hayes sight switch-controlled wheel chair incorporates a battery-powered commercially available wheel chair with a sight switch control device using high-reliability solid-state components. Presently the chair itself costs about \$700. With the sight switch device added, total cost of the chair is about \$1,500, Hayes representatives said. A considerably lower total price is anticipated

if the chair is produced commercially.

The sight switch itself is mounted on a conventional spectacle frame worn by the chair operator. The device directs low-intensity beams to each of the patient's eyes. A photo-detector mounted adjacent to the light source senses the intensity of light normally reflected from the white of the eye.

When the eye is moved so that the darker iris intersects the beam, a sudden decrease in reflected light is sensed by the photodetector and a signal is generated to initiate an action.

The left eye switch controls the forward-reverse motion of the chair and the right eye switch controls steering. Start-stop and reverse impulses are sequential,

with one impulse imparting forward motion, the next stopping the chair and a third reversing it.

To go from reverse motion to ahead, the operator signals once to stop and then again to go forward.

Since the light reflecting properties of the eyelid and the eyeball are nearly the same, false actuation by blinking the eyelids is eliminated. The sight switch sensor is aimed at the upper outside eyelid area when the eye is looking straight forward.

The operator can blink, look ahead, look hard to the left or right, or look directly upward without actuating the switch. But a definite upward and outward diagonal glance will actuate the switch.

College of Veterinary Medicine honors 30

Twenty-four students, five faculty members and a student's wife were honored Thursday night during the annual Honors Convocation for the College of Veterinary Medicine.

The program recognizes the top first, second and third year students in the professional college, and faculty accomplishments.

Dr. Michael R. Herron, assistant professor in the Small Animal Section of the Veterinary Medicine and Surgery Department,

received the Norden Teacher Award for outstanding teaching.

A plaque and \$200 cash award is made by Norden Laboratories Inc., with the selections judged on responsiveness of students, moral character and leadership.

Dr. Charles L. Hall, also assigned to the Small Animal Section, was presented the Student Chapter, American Veterinary Medical Association Faculty Appreciation Award.

The award, selected by the stu-

dent members, is based on teaching ability, leadership, individual integrity and efforts made in student relations.

The Texas Veterinary Medical Association made two \$100 awards to a member of the teaching faculty and a member of the research faculty.

Dr. Charles F. Hall, professor of veterinary microbiology, received the research award, and Dr. James G. Anderson, assistant professor of veterinary physiol-

ogy and pharmacology, was awarded the teaching honor.

Dr. A. B. Childers, assistant professor of veterinary public health, was recognized by the Southwestern Veterinarian for his contributions to the official student publication of the college.

Named outstanding senior wife was Mrs. Pat Mathis, the former Lee Hobrecht of Blanco. The mother of two children, she received a five-inch engraved Revere bowl.

Dr. Lawrence D. McGill, a Ph.D. student in veterinary pathology, was presented the John Paul Delaplaine Award which recognizes outstanding interest, ability and contributions in animal diseases research.

A native of Nebraska and DVM graduate of Oklahoma State University, McGill will be assistant professor of veterinary pathology at the University of Minnesota this fall.

Third year students, those graduating in August, who received awards included Bernard A. McGowan, the AVMA Auxiliary Award, John H. Milliff Award for highest scholastic average in veterinary anatomy, and the Microbiology Award; Jerry P. Gurfory, Award of Merit, TVMA Auxiliary Award; Gary C. Brantley, Bexar County VMA Auxiliary Award, and Blaine Purcell, Southwestern Vet-

erinarian Award.

Second year students honored are David M. Miller, Borden Award; James W. Rundell, Pfizer Award; Douglas C. Bronstad, Award of Merit, Danny L. Davis Award and Tarrant County Veterinary Medical Association Auxiliary cash award; Clayton M. McKinney, Dallas County VMA Auxiliary Award; Lory Jay Absher, Student AVMA Auxiliary Award; Larry C. Hollis, Student AVMA Auxiliary Award; Walter L. Riggs, Marsteller Award, and James M. (Mike) Heitmann, Mark Francis Scholarship Award.

First year student Allen G. Koonsen also received the Award of Merit and a cash award from the TVMA Auxiliary.

Ten student members of the Southwestern Veterinarian staff were given certificates of appreciation for work on the student magazine.

DISCOUNT MEAL
COUPON BOOKS ARE ON
SALE AT THE FOOD
SERVICES MANAGER'S
OFFICE, MSC

MONDAY EVENING SPECIAL

BROILED SALISBURY STEAK
W/SAUTEED ONIONS
Choice of two vegetables
Rolls - Butter
Tea or Coffee
\$0.99

TUESDAY EVENING SPECIAL

YANKEE BEEF POT ROAST
Potato Pancake
Choice of One Vegetable
Rolls - Butter
Tea or Coffee
\$0.99

WEDNESDAY EVENING SPECIAL

CHICKEN FRIED STEAK WITH CREAM GRAVY
Rolls - Butter
Tea or Coffee
and
Choice of any two vegetables
\$0.99

THURSDAY EVENING SPECIAL

ITALIAN CANDLELIGHT DINNER
ITALIAN SPAGHETTI
Served with
Spiced Meat Balls & Sauce
Parmesan Cheese
Tossed Green Salad
Choice of Salad Dressing
Hot Garlic Bread
Tea or Coffee
\$0.99

FRIDAY EVENING SPECIAL

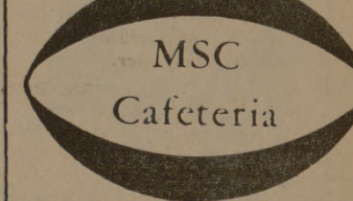
OCEAN CATFISH FILET
Tarter Sauce
Cole Slaw
Grandma's Cornbread
Rolls - Butter
Tea or Coffee
and
Choice of any two vegetables
\$0.99

SATURDAY SPECIAL

NOON AND EVENING
TWO TENNESSEE SMOKED-CURED PORK CHOPS WITH SPICED CRAB APPLE
Choice of Two Vegetables
Rolls - Butter
Tea or Coffee
\$0.99

SUNDAY SPECIAL NOON AND EVENING

ROAST TURKEY DINNER
Served With
Cranberry Sauce
Cornbread Dressing
Rolls - Butter
Tea or Coffee
Giblet Gravy
and your choice of any two vegetables
\$0.99



For your protection we purchase meats, fish and poultry from Government inspected plants.
"Quality First"

BATTALION CLASSIFIED

WANT AD RATES
One day 5¢ per word
4¢ per word each additional day
Minimum charge—75¢
Classified Display
\$1.00 per column inch
each insertion
DEADLINE
4 p.m. day before publication

FOR SALE
1968 Outlass. Fully automatic, air-conditioned, new shocks, new battery. Excellent condition. 36,500 miles. Call 846-4995 or 846-3616. 1321f

Furnished mobile home. 12 x 60 1970 Parkwood. Two bedroom, utility room. Washer, dryer, central air and heat. After 5 p.m. call 822-2302. 1317f

Birmanian cattery registered Lilac Point blue eye Siamese kittens. Championship parents. Litter trained and vaccinated. 823-5178. 1294f

1968 Volkswagen. 846-8995. 1285f

8 track tapes 298 magazines and pocket books 1/2 price. Brand new 8 track factory tapes \$4.95. Aggie Den. 1271f

Posters! Posters! Posters! Posters! Posters! Posters! The kind Aggies like! Aggie Den. 1271f

YOU CAN MOVE IN FOR AS LOW AS \$295. DOWN RENTAL PURCHASE PLAN
Nelson Mobile Homes
811 S. Texas, C.S.

7' 8" David Nuuhwa surfboard. Round rails, fast, excellent condition. Call 822-2353 after 5:30 and weekends or see at 2809 Villa Maria. Best offer. 1061f

TRY BATTALION CLASSIFIED

TROPHIES PLAQUES
Engraving Service
Ask About Discounts
Texas Coin Exchange, Inc.
1018 S. Texas 822-5121
Bob Boriskie '55

COINS SUPPLIES
Havoline, Amalie, Conoco. 35¢ qt.
Prestone—\$1.69 Gal.
—EVERYDAY—
We stock all local major brands. Where low oil prices originate.
Quantity Rights Reserved
Wheel Bearings - Exhausts
System Parts, Filters,
Water and Fuel Pumps,
Almost Any Part Needed
25-40% Off List
Brake Shoes \$3.60 ex.
2 Wheels — many cars
We Stock
HOLLEY CARBURETORS
EILCO
EDELBROCK
HURST
MR GASKET
CAL CUSTOM
Other Speed Equipment
Alternators
\$19.95 Exchange
Starters - Generators
Many \$13.95 exch.
Your Friedrich Dealer
Joe Faulk Auto Parts
220 E. 25th Bryan, Texas
JOE FAULK '32
Our 25th year in Bryan

CHILD CARE
Aggie wives needed for church nursery. Attendants for child care during Sunday worship services. Call 822-1324 First United Methodist Church, Bryan. \$1.50 per hour. 1281f

HUMPTY DUMPTY CHILDREN CENTER. 3400 South College, State Licensed. 823-8626. Virginia D. Jones, R. N. 991f

FOR RENT
One bedroom house. Nicely furnished. 8651 846-8327. 1301f

MOBILE HOME PARK Four spaces available. Highway 21 East 1 1/2 miles beyond city limits. Utilities available, water furnished, facilities for a horse. Call 823-4683 after 5 p.m. All day Saturday and Sunday. 1324f

New 2 bedroom furnished mobile home. Central air and heat. \$150 month. Deposit required. 823-4683 after 5. 1324f

ATTENTION STUDENTS
Now completing new apartments 1 & 2 bedrooms, designed for students. A beautiful place to live. Lots of grounds for outside activities. Lake for fishing. Washateria located on grounds. You will find all of this at beautiful University Acres. An area developed for married students. A truly country atmosphere, yet located two miles from center campus. For further information, call 823-0934. After 5 call 846-3408 or 846-5509.

D. R. CAIN COMPANY,
3508 E. 29th Street, Bryan. 901f

Casa Del Sol Apartments
One Bedroom
Furnished & Unfurnished
Bills Paid \$135-\$145 671f

VICTORIAN APARTMENTS
Midway between Bryan & A&M University
STUDENTS !!
Need A Home
1 & 2 Bedroom Fur. & Unfur.
Pool and Private Courtyard
3 MONTHS LEASE
822-5041 401 Lake St. Apt. 1 401f

WHITE AUTO STORES Bryan and College Station can save you up to 40% on auto parts, oil, filters, etc. 846-5626.



SPECIAL NOTICE
Scholarship available to student interested in chemical marketing. Apply in Francis Hall Room 255. 13014

Hoover's Tennis Service. One block south of tennis courts. Open 1:30 to 6:30 p.m. 846-9738. 821f

Service For All Chrysler Corp. Cars
Body Work — Painting
Free Estimates
HALSELL MOTOR COMPANY, INC.
Dodge Sales and Service Since 1922
1411 Texas Ave. — 823-8111 871f

HELP WANTED
If you are retired, want extra money, a position with prestige and permanency. Consider **RESTER MEMORIAL PARK.** Call for appointment. 282-1782. 1321f

Registered nurse for school infirmary. Live in, furnished apartment, utilities, meals, plus salary. Call 823-1290 or 846-3603. 1301f

WORK WANTED
Term papers, thesis, dissertations, done with professional efficiency and speed. Contact the Baggett Employment Agency 822-0351. 1304f

Experienced manuscript and dissertation typing. 846-2650. 1304f

Typing, experienced, full time, IBM Electric symbols. Call 846-7848. 691f

Typing. Electric symbols, experienced. 846-8165. 1321f

Symbols. Notary Public. 823-6410 or 823-3838. 1321f

TRY BATTALION CLASSIFIED

AUTO INSURANCE FOR AGGIES:
Call: George Webb
Farmers Insurance Group
3106 S. College 823-8051

- Watch Repairs
- Jewelry Repair
- Diamond Senior Rings
- Senior Rings Refinished

C. W. Varner & Sons Jewelers
North Gate 846-5816

OFFICIAL NOTICE
THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Baldwin, Thomas Richard
Degree: Ph.D. in Industrial Education
Dissertation: PREPARATION OF COLLEGE TEACHERS IN SELECTED DOCTORAL PROGRAMS
Time: July 27, 1971 at 1:15 p.m.
Place: Room 8-E in the M.E. Shops Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Pattillo, Leroy Baker Jr.
Degree: Ph.D. in Educational Administration
Dissertation: HINSON - HAZELWOOD COLLEGE STUDENT LOAN ITEMS AS CORRELATES OF REPAYMENT RECORDS.
Time: July 19, 1971 at 1:30 p.m.
Place: Room 402-A in the Academic Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Kutner, Michael Henry
Degree: Ph.D. in Statistics
Dissertation: MAXIMUM LIKELIHOOD ANALYSIS OF BALANCED INCOMPLETE BLOCK MODELS
Time: July 16, 1971 at 9:00 p.m.
Place: Room 102 in the Teague Research Center Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Kartye, Joseph Peter
Degree: Ph.D. in Educational Psychology
Dissertation: A BEHAVIOR SHAPING PROGRAM FOR INSTITUTIONALIZED SEVERELY AND PROFOUNDLY RETARDED FEMALES
Time: July 15, 1971 at 10:00 a.m.
Place: Room 223 in the University Library
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Fowler, John Clemons
Degree: Ph.D. in Poultry Science
Dissertation: THE RELATION OF CAGE SIZE AND BODY WEIGHT TO PERFORMANCE OF LAYING HENS.
Time: July 19, 1971 at 9:00 a.m.
Place: Room 200 in the Agriculture Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Khasyt, Abdul Fatah
Degree: Ph.D. in Plant Breeding
Dissertation: GENETIC VARIANCES AND COEFFICIENTS OF VARIATION OF PROTEIN, BUSHEL WEIGHT, HEADING DATE AND PLANT HEIGHT IN HARD RED SPRING WHEAT (TRITICUM AESTIVUM L.)
Time: July 18, 1971 at 9:00 a.m.
Place: Room 223 in the Main Library
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Lock, Joe Taylor
Degree: Ph.D. in Wildlife and Fisheries Sciences
Dissertation: THE EFFECTS OF FERTILIZATION ON THE FISHES OF A CENTRAL TEXAS FARM POND.
Time: July 16, 1971 at 8:30 a.m.
Place: Room 405 in the Biological Sciences Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Yilmaz, Salih Mehmet
Degree: Ph.D. in Animal Parasitology
Dissertation: STUDIES ON THE BIOLOGY OF TOXOPLASMA GONDII (NICOLLE AND MANCEAUX, 1908) AN IMPORTANT PARASITE OF MAN AND MANY ANIMALS.
Time: July 13, 1971 at 2:00 p.m.
Place: Room 313-B in the new Biology Sciences Bldg.
George W. Kunze
Dean of the Graduate College

THE GRADUATE COLLEGE
Final Examination for the Doctoral Degree
Name: Yilmaz, Salih Mehmet
Degree: Ph.D. in Animal Parasitology
Dissertation: STUDIES ON THE BIOLOGY OF TOXOPLASMA GONDII (NICOLLE AND MANCEAUX, 1908) AN IMPORTANT PARASITE OF MAN AND MANY ANIMALS.
Time: July 13, 1971 at 2:00 p.m.
Place: Room 313-B in the new Biology Sciences Bldg.
George W. Kunze
Dean of the Graduate College

SOUTHGATE VILLAGE APARTMENTS
134 Luther St.
College Station, Texas
846-3702

SOSOLIK'S
TV & RADIO SERVICE
Zenith - Color & B&W - TV
All Makes B&W TV Repairs
713 S. MAIN 822-2133

Rentals-Sales-Service
TYPEWRITERS
Terms
Distributors For:
Royal and Victor
Calculators &
Adding Machines
Smith-Corona Portables
CATES TYPEWRITER CO
909 S. Main 822-6000

2 receive awards from Upjohn Co.

Ronald O. Streid of Round Rock and Barry E. Powell of Menard were presented Upjohn Awards Wednesday night during a dinner for graduating students at the University's College of Veterinary Medicine.

The Upjohn Co., a pharmaceutical company, sponsored the dinner and presented the plaque and cash awards at the Ramada Inn.

Powell received the award recognizing the graduating student who displayed outstanding clinical proficiency in small animal clinics.

He graduated from Menard High School in 1965 and enrolled

6 cadets commissioned Friday, A&M's first midyear group

Six Texas A&M cadets were commissioned as Air Force officers Friday, becoming the first group of new second lieutenants sworn in at the university during mid-year.

Commissioning is normally held in conjunction with regular fall and spring commencement.

Receiving the gold bars were 2nd Lts. Armando A. Dennett of McAllen; Darryl S. English, Houston; Teed M. Moseley, Grand Prairie; Robert R. Peavey, San Antonio; James W. Walker, Wichita, Kan., and Gregg K. Weaver, Midland.

The oath was administered and bars were presented by Lt. Col. Thomas W. Comstock, acting professor of aerospace studies.

Comstock said the mid-year commissioning became possible by the department offering for the first time senior level aerospace studies courses during the summer.

Under previous scheduling, the six students would have been required to return for the fall semester to get the course and complete commissioning requirements.

Among requirements are satisfactory completion of the academic degree program and attendance at summer field training. All six of the students attended camp last summer.

Maj. Charles Haney of the Aerospace Studies Department said two other cadets will be commissioned on completing the program in August.

6 cadets commissioned Friday, A&M's first midyear group

commissioning became possible by the department offering for the first time senior level aerospace studies courses during the summer.

Under previous scheduling, the six students would have been required to return for the fall semester to get the course and complete commissioning requirements.

Among requirements are satisfactory completion of the academic degree program and attendance at summer field training. All six of the students attended camp last summer.

Maj. Charles Haney of the Aerospace Studies Department said two other cadets will be commissioned on completing the program in August.

6 cadets commissioned Friday, A&M's first midyear group

commissioning became possible by the department offering for the first time senior level aerospace studies courses during the summer.

Under previous scheduling, the six students would have been required to return for the fall semester to get the course and complete commissioning requirements.

Among requirements are satisfactory completion of the academic degree program and attendance at summer field training. All six of the students attended camp last summer.

Maj. Charles Haney of the Aerospace Studies Department said two other cadets will be commissioned on completing the program in August.

If you rent or if you buy
You pay for the home you occupy
But if you buy instead of rent
You save the money you would have SPENT!

Some "EXTRA SPECIALS"

Wayside—12x60—2 b/r—Front kit.
"Spanish Decor"only \$5248

Wayside—14x70—3 b/r—1 1/2 baths
reduced to\$6600

Ritzcraft—12x65—2 b/r—2 full baths
clearance price\$5688

NELSON MOBILE HOMES
813 So. Texas College Station
822-2133