

WHITMORE ENTERPRISES

DESIGNING AND MANUFACTURING

BLOOD PRESSURE MONITORING & RECORDING DEVICES • HYPOBARIC & HYPERBARIC CHAMBER CONTROLS
RESEARCH TREADMILLS, ERGOMETERS, & HUMAN BODY VOLUMETERS
AND SPECIALIZED MEDICAL & AEROSPACE RESEARCH DEVICES

RT. 5 BOX 369

SAN ANTONIO, TEXAS 78211

Henry B. Whitmore
(512) 624 - 2121
or 532 - 3344

12 January 1976

Report, Monthly Progress

Contract No. NAS 9-14858

Development of Treadmill

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SELECTION AND TEST OF MATERIALS TO BE USED IN FABRICATION OF ROLLERS FOR FUTURE TREADMILLS: Test results on Prototype No. 2 Treadmill proved the phenolic wheels used on this model to be satisfactory in every respect except for the noise produced by the hard rollers operating on a steel track.

SELECTION OF MATERIALS TO BE USED IN FUTURE ROLLER CONSTRUCTION: During this past month we manufactured a complete new set of rollers. These were machined out of a hard rubber core wheel with a softer rubber tread. These were machined to size and fitted with a pair of ball bearings for each wheel. We replaced the phenolic wheels on Prototype No. 2 with these wheels and conducted a series of tests. The noise level was greatly reduced and treadmills performance was essentially the same, except for a higher resistance in operating the treadmill with the softer wheels. The treadmill needed to be adjusted to a steeper angle to operate at the same speed as before with the phenolic wheels.

We feel the advantages of the new wheels outweighs the disadvantages of the higher resistance and this will further be decreased on the next treadmill when components will be much lighter in return reducing the resistance.

THE CONSTANT SPEED AND INERTIA DEVICE: On Prototype No. 2 the constant speed and inertia device was installed on the top front portion of the treadmill. In this location the obstruction gave the feeling of walking or running with your toes up to a wall or obstruction.

We relocated this device inside the treadmill frame leaving the top of the treadmill completely unobstructed. This gives a greater freedom in walking and running. Some more work is required to overcome some of the mechanical problems in this area.

Whenever it is convenient for the Technical Monitor to visit Whitmore Enterprises we would appreciate his evaluation of these areas.