# **Mock Circulatory System**

(Continued From Page 29)

capacitance, its flexibility in storing a variable amount of blood to correspond with the expansion and contraction strokes of the heart muscle, is adequately simulated, we believe, by the pistons.

"They are 'flexible' and can therefore accomodate more blood in diastole (expansion) than they do in systole (contraction). Just like the aorta itself "

Another important measure of how well an artificial heart delivers blood is the resistance and pressue maintained in the blood vessels. These vessels are simulated by the plastic tubes, which are constantly monitored as to fluid flow by automatic readout devices.

At one point, the tubes pass between a sandwich of flat steel plates and can thus be squeezed to simulate various levels of flow resistance in living systems.

The Penn State mock circulatory system is arranged so that either the right or left ventricle can be tested separately. The latter, feeding blood to the body as a whole, builds up a much higher blood pressure than does the right ventricle, which feeds blood to the lungs and related systems.

Artificial hearts must be tested for such factors as the effect of sac thickness on the pump's performance, how different kinds of valves respond, how well different blood-simulators work and how the size of the plastic

DELITZ

tubes simulating blood vessels affect performance.

"Not only must these units not fail during operation but their cardiac output—the delivery of blood in terms of pressure and flow rate—must be thoroughly known.

According to Brighton, the Penn State system is simple, easy to operate, and not too expensive to build. It gives a good simulation of physiological conditions. And it can be set to test different artificial hearts under identical physiological conditions.

Though the system was designed to simulate normal conditions in the body, it could be adjusted to simulate low and high blood pressure, inadequate circulation, or certain other abnormalities associated with heart disease.

### Dairymen Slate Annual Meeting

The Annual Meeting of District No. 18 of American Dairy Association and Dairy Council (which includes Lebanon, Lancaster, Dauphin, Burke, Chester, York, Cumberland, Adms, Franklin Counties) will take place at Loganville Community Park at 12:00 noon on Thursday, August 10, 1972, according to John Ç. Krone, secretary.

In addition to a report on the year's activities, election of District No. 18 Board of Committeemen will be held. The terms of George E. Moyer, Myerstown and John Lesher, Lykens, expire. Also, one person will be elected to fill the unexpired term of Earl Patches, Annville.

Dairymen will have an opportunity to see and hear an audiovisual presentation by John Sliter, manager, on the expanded milk promotion programming taking place in the milk shed.

Tickets for the meeting may be obtained from, in addition to Mr. Krone and Mrs. Lesher, Charles Laughman, Glen Rock, Homer Campbell, Elizabethville, Richard Funk, Annville and Raymond Witwer, Lititz, Membership Communications staff, ADA & DC.

## **PUBLIC AUCTION** 65 HEAD REGISTERED & GRADE FRESH & SPRINGING HOLSTEIN HEIFERS

Sale to be held in the dairy barn arena at the Aberdeen Sales Co. in Churchville, Harford Co., Md. located on Md. Rt. 22, 6 mi. east of Bel Air, Md. (via U.S. Rt. 9) and 6 mi. west of Aberdeen, Md. (via I-95 or U.S. Rt. 40) on

## FRIDAY, AUGUST 11, 1972

#### 8 P.M. Sharp

This sale features 20 head of top fresh and springing Holstein heifers from Mr. John Bell of Loudoun County Virginia. Mr. Bell tells us these heifers are as good as any he has shipped to us yet. Don't miss them.

We have 2 consignments of top local heifers that are either fresh or close springers. All are artificially bred, show top production and good size. All fresh animals will have milk weights and freshening dates available.

This is the sale to attend to buy additional heifers to make base or to improve your herd. Plan to be with us for this excellent offering of top Holsteins.

### **TERMS: CASH**

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# FALL FARM EQUIPMENT SALE

### WED., AUGUST 16, 1972

#### 10:00 A.M.

Located 4 miles west of Manheim, 1 mile west of E. Fairview Brethren Church, Lancaster Co., Pa.

### SPECIALIZING IN FALL HARVESTING EQUIPMENT

### TRACTORS—PICKERS—HARVESTERS OF ALL KINDS—TRUCKS—COUSIN WITH DRY GOODS—TOOLS

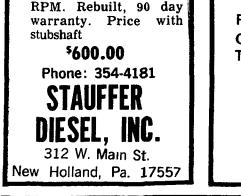
Good equipment is selling strong. We sell anything on Commission. Bring in your Equipment early. REMEMBER things brought in last will be sold last. Open to receive goods from Aug. 7 til sale day from 8 to 6.

IMPORTANT — All equipment left here on our previous sales will be resold at the buyer's expense unless we are notified by August 1.

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