

a commercially available aluminum boat of about the same dimensions.

The airboat handles well after a short period of practice with the tiller. The larvicide has been generally applied from a hand sprayer, using a side-to-side sweeping motion of the wand. It could be released into the propeller blast if preferred.

NOTE: Early in 1965, during the training program that was held at the South Cook County Mosquito Abatement District, Bob Hedeon, the Manager-Entomologist, and Brice Johns, the District's Engineer, demonstrated an improved egg separator that Brice had developed for SCCMAD. The separator is unique in many ways, one special feature being the fact that it was electronically operated, rather than on a gear ratio plan. Brice has written the following description of the unit. He also has diagrams and pictures, which are available to anyone who wishes to copy the apparatus.

P. B. B., JR.

REDESIGNED MOSQUITO EGG SEPARATION MACHINE

BRICE E. JOHNS, P. E.

The South Cook County Mosquito Abatement District recently completely overhauled the timing mechanism of its egg separation machine, changing from gear timing to electronic timing.

The District machine, originally developed at the University of Illinois by Horsfall, *et al.* (1956), was a hand operated machine. Shortly after the organization of this District, the prototype of the power driven machine was built by a local firm for the District. The timing mechanism was a series of gears, cams and switches to give approximately twenty-five revolutions and then reverse and repeat.

During the last few years, this gear and switch arrangement gradually deteriorated and was replaced by relays and enclosed switches. In December, 1964, with a failure of the centrifugal switch, the old machinery was completely removed and a completely new system installed.

The heart of the new system is three Amperite

delay relays wired so as to give the desired time circuits. On starting the machine, a 45-second delay relay is activated; the machine will operate for the delay time in the first direction of rotation. At the end of 45 seconds, the machine stops, and a 10-second relay starts and holds the electric motor off until the drum stops turning from momentum. The machine then starts again and runs in the opposite direction for 45 seconds, timed by the third delay relay, and then stops. The 10-second relays take over control again for the drum coasting period and the machine then repeats the procedure.

As the delay relays are only momentary contact relays and have only single contact poles, they are used in conjunction with the DPDT conventional relays that hold the circuit and cancel each other out on signal from the delay relays. The heavy duty relays are used with the motor circuits to stop and start and determine direction of the split phase motor.

Wiring diagrams are available at the District.

SOME RECENT BULLETINS THAT MAY BE OF ASSISTANCE TO OTHERS IF THEY DESIRE TO SEND FOR THEM:

The first one is titled "*The Hose Handbook*" published January, 1962, by the Rubber Manufacturers Association, Incorporated, 444 Madison Avenue, New York 22, New York. This handbook describes the various rubbers as used in hoses and briefly outlines their general properties and intended uses. Yarns and methods of weaving are also well described. The book is full of helpful information, including hints on storage and care for a longer life of a hose. This association (Rubber Manufacturers) has established a standard for quality and these standards are described for particular sizes of hoses. One of the most useful parts of this publication is the Glossary of Hose Terms.

A second booklet concerns flexible hose lines for fluid systems. This is printed and copyrighted by the Aeroquip Corporation of Jackson, Michigan. It gives a very good description of the various types of flexible hose lines and the couplings recommended for specific purposes. Special hose fittings and hand assembly of some of the couplings are well described.