two years' results as a measure of consistency. The 1972 experiment with X *Cupressocyparis leylandii* will form an essential part of this comparison and detailed results of this experiment are, therefore, not given in this interim report.

THE LONG ASHTON BUDWOOD DE-LEAFING MACHINE

C.G. THOMAS
University of Bristol
Long Ashton Research Station

At the Long Ashton Research Station large quantities of budwood of virus-tested apples, pears, plums, cherries and ornamental *Malus* are distributed to the nursery industry each year. The preparation of this material takes considerable time and the leaves must be removed immediately to reduce water loss by transpiration. The need arose for a De-Leafing Machine which would reduce this time to a minimum.

Machines have been constructed before using razor-blades and a few are in use in Europe, particularly in Holland. It proved impossible to purchase a machine and it was decided that one should be designed and built to our own specifications by the Long Ashton Instrument Workshop (Fig. 1).

The machine is powered by a 12v motor which can be run off the electrical system of a Land Rover vehicle in the field or with the aid of a small transformer by mains electricity. A belt drive from the motor rotates a cylindrical stainless steel cutting blade mounted on a nylon core at a speed of approximately 3000 r.p.m. (Fig. 2). The nylon core acts as a guide to ensure the leaf is removed leaving a portion of petiole (for use as a 'handle' during budding) and the bud left undamaged. The notched blade is used to reduce the need of the frequent sharpening and replacement that many of the European machines require (Fig. 3).

The nylon core can be changed to deal with the variations in budwood thickness which occur; e.g. the ornamental *Malus* species require a much smaller diameter core than more vigorous apple

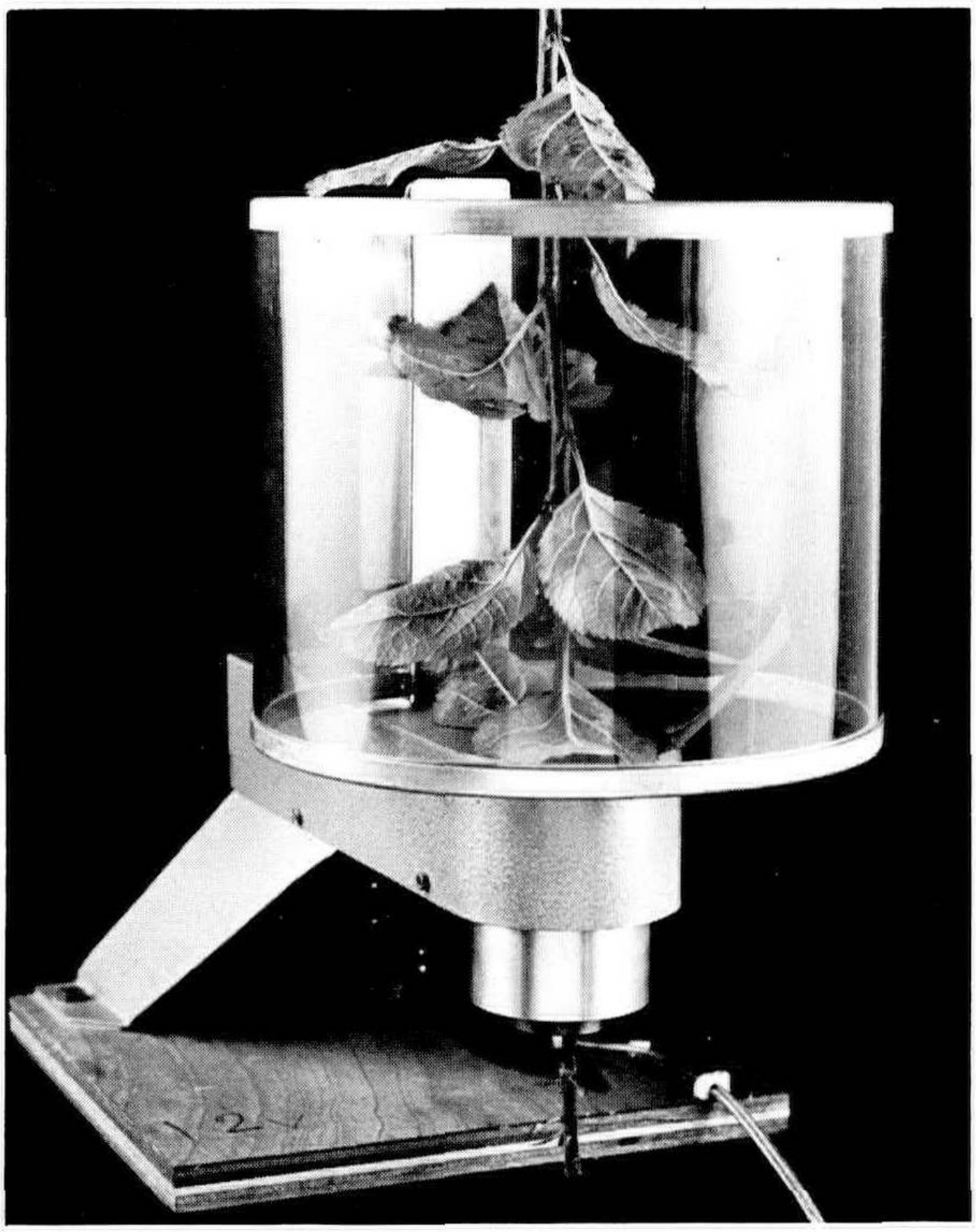

Fig..1. The Long Ashton budwood de-leafing machine. NOTE (1) Well guarded cutting blade; (2) Budstick inverted to present leaf petioles at correct angle.

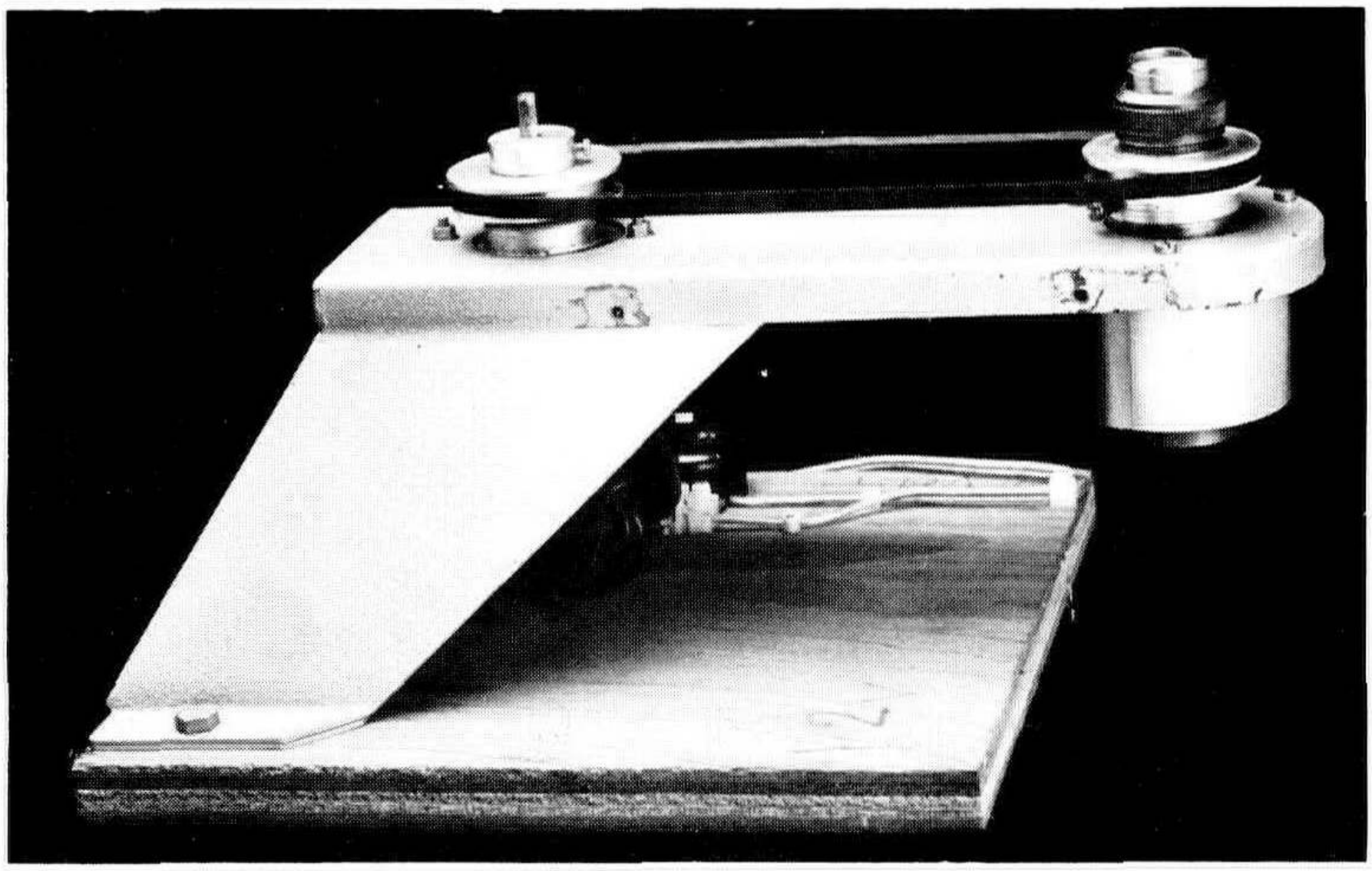

Fig..2. The Long Ashton budwood de-leafing machine. Belt drive from 12 volt motor to cutting blade.

Fig..3. The Long Ashton budwood de-leafing machine. Cutting blade. NOTE (1). Notched cutting blade; (2) Nylon core for correct placement of shoot.

cultivars such as 'Bramley's Seedling.' Slight modifications to the nylon core are necessary to deal with bud wood of roses and similar material which is rarely as straight as that of top fruit.

The machine was used extensively during the 1972 budding period and enabled two people to deal with the preparation of the budwood instead of the team of four or five used in previous seasons.