

A HYGROTHERMOGRAPH PUZZLE.

W. H. LARRIMER, U. S. Entomological Laboratory, Lafayette, Indiana.

In the course of the investigation of some biological problems it is frequently desirable to secure temperature and humidity records for possible correlation with the behavior of the individuals under observation. At a one man observation station it sometimes happens that the attendant's services are badly needed elsewhere on the particular day, usually Monday, when the record sheets of recording instruments are to be changed. In order to take advantage of such occasions and at the same time have the records continue uninterruptedly, a scheme was

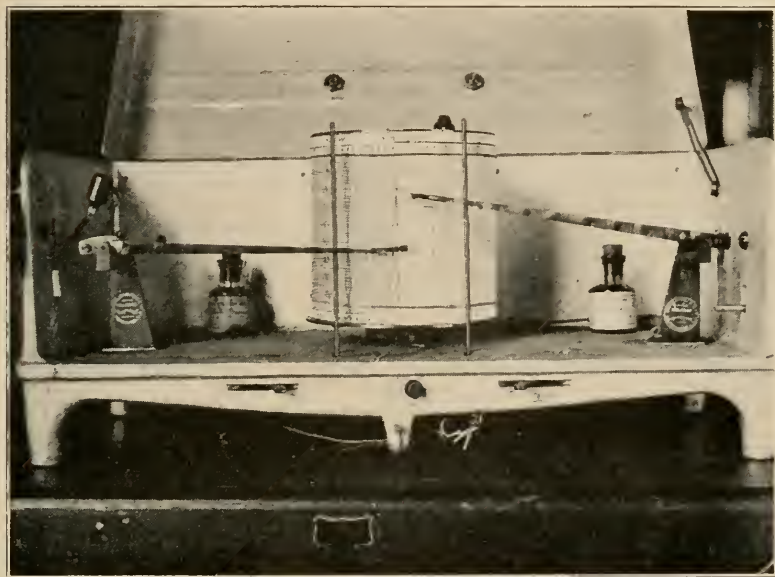


Fig. 1. Hygrothermograph showing the recording pens in position as they pass from the old to the new record sheet without interruption of records.

originated by which the attendant could put on the new record sheet before his departure and so arrange it that the graph would continue from the old to the new sheet on Monday without further attention.

On the day of departure the clock is wound and a new record sheet is placed in position in the usual manner. Most of the used portion of the old sheet is folded under so that the new sheet is left exposed until the same day of the following week. The edge of the unused portion of the old sheet is folded snugly under and arranged so that the respective time arcs and horizontal percentage or degree lines are coincident with those of the new sheet. (See Fig. 1.)

The bar which usually is furnished to hold the record sheet in place can very well be replaced by strong elastic bands at the top

and bottom of the cylinder. These have been found to hold the sheets more snugly to the cylinder in most cases than does the bar. The recording pens are then set to continue the graphs on the old sheet and when it is finished they pass on to the new sheet in their proper respective positions. When the attendant returns, the old record sheet is removed and the new one is left in place for records until the next regular time for change.

By actual test with the record sheets thus arranged and snugly adjusted to the cylinder, the acceleration caused by the extra thickness of paper due to the folding of the old record sheet, was found to be scarcely, if at all perceptible even for the accumulation of a period of three days.