A NEW TYPE OF COTTON SORTER

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While making selections of cotton in the field during the fall of 1931, the attention of the writer was called to the need of some machine that could be used in making fairly quick and accurate determinations of the amount of short fiber or "substaple" contained in the lint of the various plants studied.

Cook makes the following statement: "That cottons of all varieties have substaple or under fiber can readily be seen by pulling out the long fibers from combed samples and leaving the short fibers attached to the seed."

When the amount of this short fiber is either noticeably small or large, selection or rejection of plants otherwise satisfactory can be made in the field. However, when large numbers of plants are to be studied, separation on this basis becomes difficult because differences in most cases are not great enough to be estimated with any degree of accuracy. It was felt that some means was needed whereby accurate determinations could be made and a numerical value given to each plant.

At first it was thought that possibly a Johansen sorter which was available might be used for this purpose. After several trials this machine was found to be unsuited to the work for numerous reasons. As the lint can be straightened by combing while it is still attached to the seed much more easily and quickly than by hand pulling after it is ginned, it was desirable to use unginned samples consisting of 10 seeds from each plant. The lint on these seeds was combed out straight, as shown in Fig. 3, and then placed on the Johansen sorter so that it could be pulled out into 1/16-inch classes. It was found that only about five seeds could be placed on the sorter at one time due to the short length of the combs. This size sample was not considered

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