



FIGURE 4.—Sorting slotted cards by means of a needle.

Figure 5 shows the pack of cards sorted by size of farm. The cards included between the limits of each continuous groove represent all farms within the limits of each corresponding interval described in the legend at the top of the picture.

Having sorted the cards once, we are now in position to note several characteristics of these farms as they relate to this sort. In other words, the relationships of the various characteristics to size of farm are now visible. The reader's attention is probably first drawn to the column indicating possession of an automobile. In this column the frequency of slots is greater than in any other and indicates that a very high percentage of the farms report automobiles. But the frequency of slots is not uniform throughout the length of the column. At the top of the column, only an occasional card is not slotted, but as the eye travels downward the unslotted cards become increasingly numerous. It is evident that a greater proportion of the operators of the smaller farms are without automobiles than is the case with the operators of the larger farms.

Tenure also changes with size of farm. In the farms of less than 70 acres (those included in the first two size bands in the lower portion of the picture) the proportion of full owners is much higher than in farms larger than 70 acres. Another very noticeable item is that there are practically no part owners operating these smaller farms. However, near the top of the part-owner column, particularly on farms of 260 acres and over, there are more part owners than full owners.

The next observation of interest is the fact that the slots in the "Yes" column of the mortgage group tend to increase in frequency with increase in size of farm when compared with the slots in the "No" column. Therefore, it can be definitely stated that on the farms represented by these cards, the proportion of mortgaged farms increases as the size of farm increases.

In the field of cooperative business, little is shown in the groups of less than 70 acres, but it is rather uniform above this point.

Proportion of later model automobiles (1936 and later) seems to increase with size of farm.

Some relationship can be seen between trucks and size of farm.

Farms reporting tractors very definitely increase with size of farm.

Farms with electricity available (distribution line within 1/4 mile of operator's dwelling) are relatively more numerous in the smaller sizes, but telephones are distributed in the opposite direction—more of the larger farms reporting telephones.

Summarizing the above observations:

1. Items which vary directly with size of farm—
 - a. Part-owner-operated farms.
 - b. Proportion of owned farms reporting mortgage.
 - c. Cooperative business.
 - d. Automobiles.
 - e. Trucks.
 - f. Tractors.
 - g. Telephones.
2. Items which vary inversely with size of farm—
 - a. Full-owner-operated farms.
 - b. Availability of electricity.

The discussion up to this point has been for the purpose of acquainting the reader with the general features of the system before including too many details as to how it may be used. The main purpose of this chapter will be to present to the reader as clearly as possible by means of illustrations and descriptions the general features of the system leaving its adaptation to particular fields of research to the imaginations of the research workers interested.