A NEW METHOD FOR HARVESTING SMALL GRAIN AND GRASS PLOTS.

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In varietal testing and in soil fertility plot work one of the most serious difficulties encountered is that of obtaining accurate yields of the several plots included in the test. While the harvesting and weighing of the entire product of the plot should, theoretically, be most satisfactory, this method is attended by certain difficulties that make it practically impossible to get accurate results. The lodging of the grain, the depredations of birds and mice, and losses incident to weathering are some of the more serious difficulties met when the entire plot is harvested. When plot work is being conducted in several sections of the State another difficulty is encountered, namely, the supplying of suitable machinery to thrash the grain from the small plots separately.

These difficulties have been overcome to a certain extent by harvesting a number of small areas from each plot and calculating from these the yield of the entire plot. The chief objections to this method are (1) the inconvenience encountered in laying off the small areas, and (2) the difficulty of obtaining representative areas.

To overcome the first objection the writer has recently constructed, for the work at the Maryland Agricultural Experiment Station, a small apparatus to be used in harvesting accurate areas of grass, wheat, or other small grains. The essential details of this harvester are shown in figure 7. For the harvesting of grain that has been seeded in drills only the grain board (A) and the two spears (B, B') are used, the method of procedure being as follows: With the spears withdrawn the grain board is placed in position parallel and close to the outside drill row of the plot and fastened in this position by means of two short spears (not shown in the drawing) which project into the soil from the lower edge of the board. The long spears, B, B', are now thrust through the metal sleeves at C, C' and into the plot, thus marking off two parallel lines at right angles to the drill rows. The distance between these spears should be such that 4 or 5 drill rows thus marked off will give an even fraction of an acre.

For grass and for grains that are seeded broadcast the manipulation is essentially the same as for the drilled grain except that, since