

Brookins Rotary Grader

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Recently John Brookins of Jerry Brookins, Inc., Orchard Park, New York devised and put into operation a new time saving method of weight grading.

In the past, much time has been wasted waiting for the indicator of the scale to quiet down. Perhaps for this reason alone, many people have stayed away from weight grading. The Brookins' Method has eliminated this wasted or idle time and has made weight grading simple enough for unskilled workmen.

This new method utilizes a turntable with four C. S. W. scales (Figs. 1 & 2), a curved table with bins for accumulating the graded flowers (Figs. 5 & 6), and color symbols for grades.

The turntable is made of 3/4" plywood and is four feet in diameter. It is turned by a 1/12 h.p. ratio-motor with 90 in. lbs. of torque at 34.5 r.p.m., which drives by friction against the bottom of a second plywood disc of 11 inches diameter. A 1 1/2" pulley built up to 2" was used on the power shaft of the ratio-motor to drive on the disc. The speed can be varied by moving the pulley in or out on the drive disc. The most efficient speed for the Brookins' Organization is 7.5 r.p.m.

There are two bearings which hold the table in position. The upper is a radial ball bearing and the lower is radial-thrust ball bearing.

Above and below the drive disc are collars which allow the drive disc to be placed at any desired height.

The flange immediately below the table is held in position by two set screws against the vertical steel shaft. The flange used was a large sprocket but most anything with a 12-16 inch diameter can be used. A circular disc made of heavy sheet metal welded to a collar would make an excellent flange to offer support to the table top and also furnish means of attaching the shaft to the table top.

The standard scale pan of the Brookins' grader has been replaced by a 12-inch pan which makes it less likely for the flowers to fall off.

The grader requires but two people to operate. One person places the flowers on the pans as the scales pass by. The other operator reads the scales, removes the flower from the scales and places it in the proper bin.

The reading of the scales has been simplified by substituting for the regular dials, colored charts (see Fig. 4). These charts are made up of concentric circles with segments in color corresponding to the standard grade labels. White for Utility, yellow for First, green for Extra, red for Fancy, blue for Special, purple for Exhibition. These same colors identify the sorting bins and the cloth slings (see Fig. 3) used for

lifting batches of graded blooms.

The operator who is reading the scales notes the location of the pointer. If the pointer rests over the yellow segment of the dial, the bloom is placed in the yellow bin as a First Grade. If the pointer rests over the red segment, the bloom goes to the red bin as Fancy Grade, and so on.

The curved table that supports the bins is so designed that the operator can stand or sit and reach all locations. The curve is determined by standing in position and moving the right arm through its natural extended arc.

If you desire a large print of these drawings, please write to:

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Following is a list of the major materials for building the grader:

MATERIALS LIST FOR CIRCULAR GRADER

1. Four C. S. W. Scales
2. Woodwork
 - 1 - 48" diameter circle of 3/4" exterior plywood
 - 1 - 11" diameter circle of 3/4" exterior plywood
 - 1 - 1 3/4" x 24" x 30" platform
 - 1 - 2" x 11" x 11" pine
 - 1 - 3/4" x 9" x 9" pine
 - 4 - 2" x 2" x 28" pine
 - 2 - 2" x 4" x 6" pine (attached to bearings)
3. Metal
 - 1 - 3/4" steel shaft 36" long
 - 1 - Flange 13" diameter 3/4" hole
 - 4 - 3/16" x 2 1/2" carriage bolts
 - 1 - 3/4" radial ball bearing
 - 1 - 3/4" radial-thrust ball bearing
 - 4 - 3/8" x 3" lag screws w/washers
 - 2 - 3/4" collars

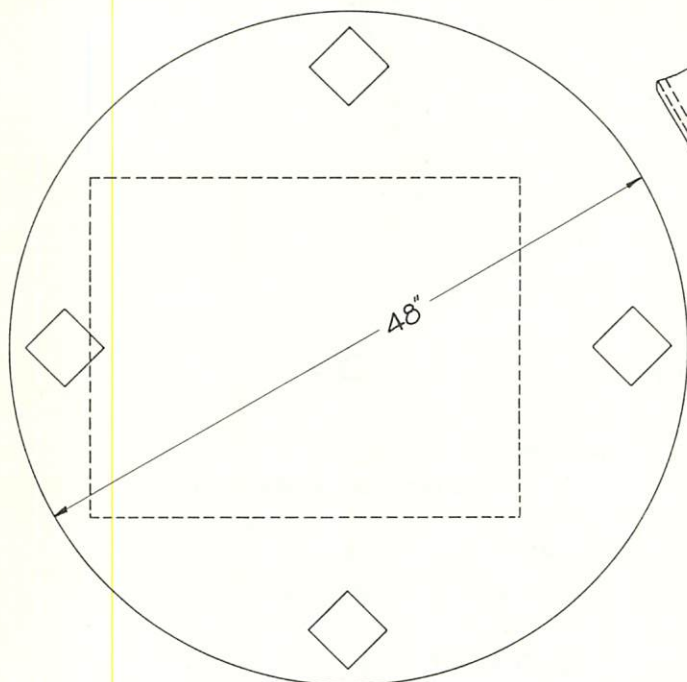


Fig. 1 Turn Table (Top View)

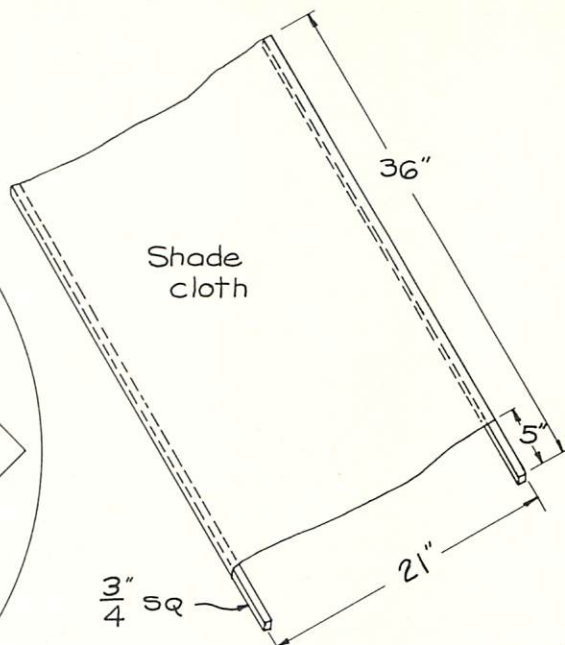


Fig. 3 Cloth Sling

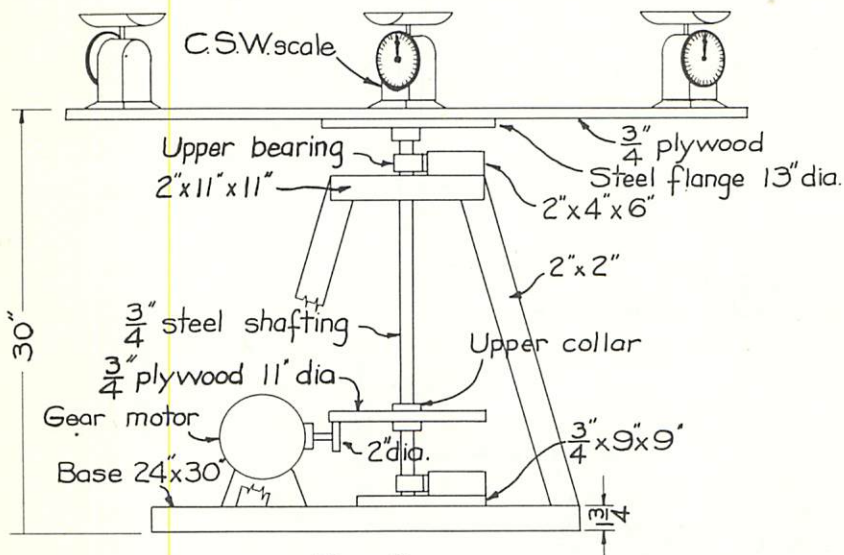
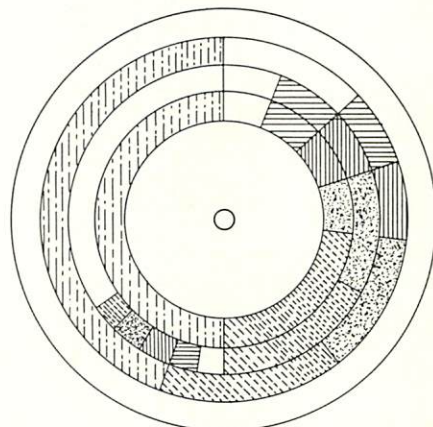


Fig. 2 Turn Table (Front View)



- Key to Colored Sections
- White
 - Yellow
 - Green
 - Red
 - Blue
 - Purple

Fig. 4 Colored Chart

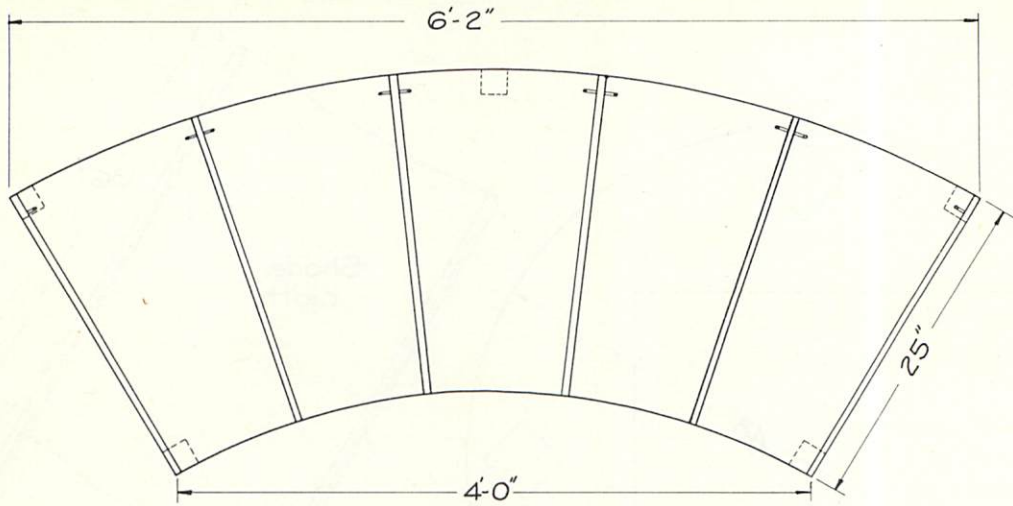


Fig. 5
Curved Table (Top View)

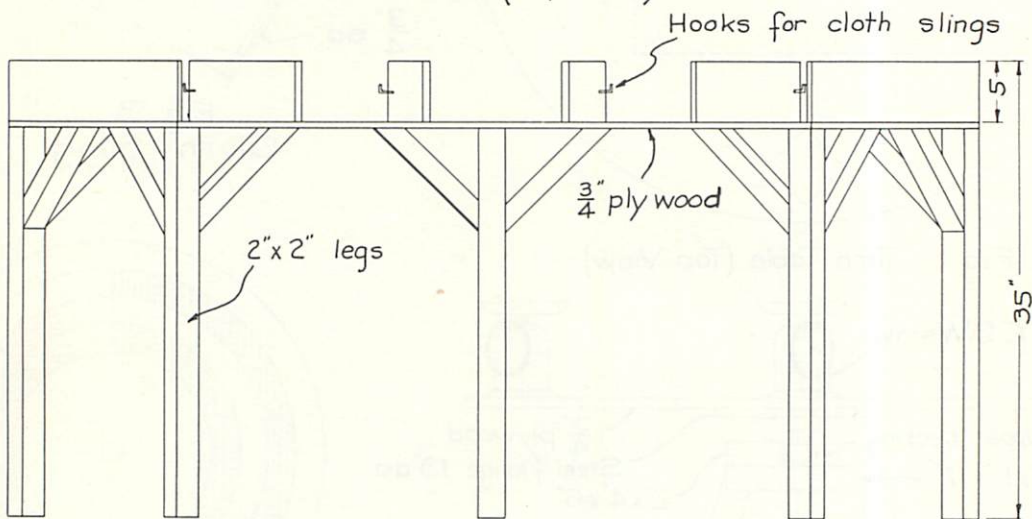


Fig. 6
Curved Table (Front View)

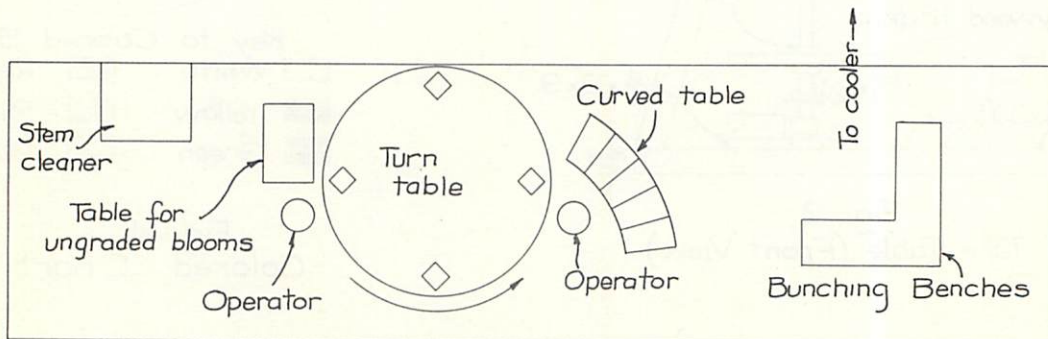


Fig. 7
Relation of Components in Grading Operation
