Sap stained lumber loses markets in competition with bright lumber. Small mills have been losing these markets because small production has not warranted the installation of large boilers, kilns, or dipping vats effective in stain control. The recent work of the Division of Forest Pathology, Bureau of Plant Industry, at the Southern Forest Experiment Station, from whom further information can be obtained on cold dips, has opened to the small mills an opportunity to put out bright lumber. This development practically means that the small mills will either have to dip or discontinue cutting stain-susceptible timber as some progressive concentration yards are buying only dipped lumber and every mill dipping hastens the time when the consumer can completely fill his requirements from unstained lumber.

The following recommendations as to equipment and layouts for dipping at the portable type of mill apply where prompt trucking from saw to concentration yard is practiced. Dipping is done after the final sawing. (Fig. 1) The tail edgerman slides the lumber into the dip over a roller that is attached at the same height as the top of the edger table to the end of a long narrow tank containing the dip. The level of the dip is kept about 4 inches from the top of the tank, that is, 24 inches from the ground. The lumber is removed from the tank immediately by one man who lifts one end of a board out of the tank, pivots the board on a roller alongside the tank, pauses an instant to expel the dripping, and then slides the board over another roller to a scaffold. The scaffold supports hold the lumber high enough for a truck to be backed underneath. (Fig. 1) Blocks are so fitted to the high end of the scaffold supports that they can be knocked out, thus bringing one end of the lumber pile down into the truck. The truck is then started and the other end of the lumber pile pulled entirely free of the scaffold. The whole operation requires the services of only one man beyond the tail edgerman and the use of about 15 gallons of liquid to each thousand board feet of lumber dipped. Where rehandling is practiced, such as yard drying or bulk piling direct from the saw into box cars, the lumber is placed on dollies instead of scaffolds.

Tank materials are 8/4-inch plank 17 inches by 17 feet for each side, one plank 16 inches by 17 feet for the bottom, and two short end pieces of narrower plank caulked at joints, totaling these widths. Two 4 by 4-inch by 17-foot braces held in place by 1-inch rods clamped at the ends reinforce the sides, and strips 1 by 4 inches by 17 feet nailed to the top edge of the side minimize splash waste. (Fig. 4) The tank is 17 feet long, 20 inches wide at the top, 12 inches wide at the bottom, and 16 inches deep. A tight tank is attained by bevelling the sides at contact with the bottom, indenting or grooving slightly packing the groove with wicking, notching the side boards 3/8-inch deep for the ends, grooving and packing the ends at junction with sides and bottom, and fastening together with lag screws. (Fig. 4) The scaffold dimensions apply where 1-1/2 ton trucks are used, but the blocking shown in Figure 3 can be increased or decreased to suit other truck heights.

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*See outline in Small Sawmill Improvement Working Plan, March 1930, for explanation of indexing system proposed
FIG. 1 - SIDE VIEW OF TANK AND SCAFFOLD

FIG. 2 - TOP VIEW OF TANK AND SCAFFOLD

FIG. 3 - SCAFFOLD DETAILS

FIG. 4 - TANK DETAILS