the bottom of the wells are machined such that the surfaces are flat and parallel to less than 0.0025 cm. Placing the liquids in the three wells allows for measuring the shock front at approximately the same distance from the explosive interface as the shock front in the dural; this tends to keep attenuation differences to a minimum. The pin circles are placed far enough from the edge of the plate and the sides of the wells that the perturbing waves which originate there do not affect the velocity measurements. Using the pin circle arrangement specified in Figs. 10 and 11, the flat bottomed holes are drilled in the dural to specified depths of 0.889, 0.779, 0.559, and 0.459 cm from the top surface with six holes at each of the four depths. The actual depths are obtained by inserting a small diameter steel rod in the hole and measuring the distance it extends above the surface of the surface of the plate. This distance is then subtracted from the known length of the steel rod yielding the actual depth. With this procedure, the hole depths can be measured to a precision of 0.00065 cm. Coaxial pins are then placed in the holes and secured to the plate by epoxy. To prevent movement, each pin is held upright and against the bottom of the hole with a spring loaded jig while the epoxy cures.

In each of the liquids, 24 coaxial pins are arranged on circles of 2.03 and 3.05 cm diameter in a similar manner to the dural. A Textolite disk suspended on three legs 2.5 cm long provides the support for the pins used in each sample. The pins are mounted in holes drilled in the disk and set at distances of 0.01, 0.11, 0.33, and 0.43 cm from the plane defined by the bottom of the three support legs. The actual setbacks are measured to a precision of 0.0007 cm on a comparator after the epoxy around the pins has cured. Then the