

THE GRANITE AND SLATE LAUNDRY TUB INDUSTRY.

In this vicinity laundry tubs are now made principally of slate, soapstone, and granite. The slate is quarried in Nelson County, Virginia, and the soapstone is from Bangor, Pennsylvania. They are sawed into slabs of proper length, width, and thickness at the quarries, the manufacturer buying the slate at a cost of 16 cents and the soapstone at 30 cents per running foot. The slabs run from 4 feet to 6 feet in length, about 16 inches in width, and about $\frac{1}{8}$ of an inch in thickness. The smallest of the slate tubs, which are divided into two compartments when completed, are 4 feet in length, 16 inches in depth, and 24 inches in width, the largest being 6 feet in length and of the same width and depth with three compartments. The

machine, where the waste, overflow, and cock holes are bored. These holes, which are from eight to twelve in number in each, according to the size of the tub, run from 1 inch to $1\frac{3}{4}$ inches in diameter. About ten sets of holes are drilled per day.

From the drilling machine the slabs pass to the revolving rubbing bed. This bed is made of cast iron, 8 feet in diameter and 2 inches thick. The front edges of the tub are placed on this bed, which travels at the rate of fifteen revolutions per minute, and a $\frac{3}{8}$ inch bevel ground on the slab. Water and sand is used on the bed which grinds the material, it taking about one hour to bevel each tub. The next operation is the fitting up of the iron frames in which the slabs are set. The corners and joints of the frame are first covered

netting is a cap strip about 1 inch in width made of zinc. The waste and overflow connection is then placed in position, and a wooden mould or frame clamped tightly together placed around the form. The interior of the mould frame when in position is the same shape and size as the exterior of a tub. The wire netting projects up through the center of this space, which is about 1 inch between the frame and the cores.

The mixture of crushed granite and cement is then jammed down into the space between the cores and frame by hand with a steel-bladed rammer, the operation taking about eight minutes. The material is then left to set for about eighteen hours. The mould containing the tub is then turned over and the cores



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weight of these tubs, when completed, ranges from 350 to 600 pounds each. The soapstone tubs are made in three sizes, the smallest or single tub being about 2 feet square and of the same depth as the others. The larger sizes of soapstone tubs are of the width, depth, and length of the others, and range in weight from 150 to 750 pounds each. The granite tubs are made of a mixture of crushed bluestone, water, and Portland cement.

The first operation in the manufacture of the slate and soapstone tubs is the grooving of the ends and sides of the slabs. This is performed by a machine having a steel gouge attached to the end of a horizontal movable slide, which, when the operator sets it in motion, moves forward, cutting or grooving the ends of the slabs. This slide makes a stroke every six seconds, it taking about three-quarters of an hour to make eleven grooves about $\frac{3}{4}$ of an inch in depth in each set or tub. About fifteen sets of slabs are grooved per day. After grooving they are taken to the drilling

inside with a cement composed of litharge, boiled oil, whiting, and lampblack.

The slabs are then placed into the frame on the cement, which fills up and fastens the joints solidly together. The tub is then clamped into a wooden frame and the brass caps fitted on the corners. After the cement becomes hard the tub is then cleaned up and sandpapered and oiled. The overflow and waste connection is then put on and the iron work japanned. The first operation in the manufacture of granite tubs is the setting up of the cores. The cores are made of spruce, lined on the outside with zinc. They are made the same shape and size of a tub compartment. They are first placed bottom up on a spruce frame, a small space being left between them about the width of a partition. A strip of No. 21 galvanized wire netting is then placed around the cores. This strip when stretched out is about 12 feet in length and made so as to fit around the cores, leaving a space of about $\frac{1}{2}$ an inch between the two. Soldered to the bottom of the

drawn out. The operation is performed by means of a derrick. Projecting from each end of the apparatus is an iron bolt having a nut at each end which is slipped underneath a slotted iron brace attached to the sides of the core. The operator by turning the handles or levers above causes the nuts underneath the braces to tighten, the pressure of which loosens the core from granite. The cores after being loosened are taken out by hand and the metal work put in and then floated with a cement composed of water, white sand and soapstone powder to the depth of about $\frac{1}{8}$ of an inch. It is then left to stand for eighteen hours. The tub is then turned over and the outside frame taken off. The exterior of the tub is then floated with cement as before and left to dry for about one week and then sandpapered and cleaned for the market. The sketches were taken from the plant of the Union Granite Company, Weehawken, N. J., who with nineteen hands turn out about two hundred tubs monthly.