

A New Glass Tubing Machine

DOWN-DRAWING OVER A PLATINUM-CLAD MANDREL

A new vertical down-draw tubing machine installed at James A. Jobling & Company's Wear Glass Works, Sunderland, is producing tubing in Pyrex glass from about $1\frac{1}{4}$ to 8 inches in external diameter, while its range will eventually be extended to tube of 10 inches diameter. The machine was developed by the Corning Glass Works of America, with whom Joblings are associated, and will in due course replace a Woods up-draw machine. The down-draw machine gives a fifty per cent greater output and greater dimensional accuracy. It also extends Jobling's range of machine-made tubing, as hitherto all tubing from $4\frac{1}{2}$ to 18 inches external diameter has had to be hand-blown.

The new machine draws molten glass, from a reservoir supplied through a forehearth, downwards over a rhodium-platinum sheathed base metal mandrel. Beneath the mandrel is a vacuum chamber through which the tube passes. The external diameter of the tube is determined partly by the size of the mandrel and partly by the degree of vacuum induced in the chamber. Tubing is produced at a maximum rate of approximately fifty feet per minute. On leaving the machine the tubing descends at a speed controlled by pulling units into a pit beneath the level of the workshop floor, where it is cut into lengths. The smaller sizes of tubing will continue to be made on a Vello horizontal-draw machine.



The new down-draw tubing machine at James A. Jobling & Company's Wear Glass Works. Pyrex tubing is produced by drawing molten glass over a platinum-clad mandrel.