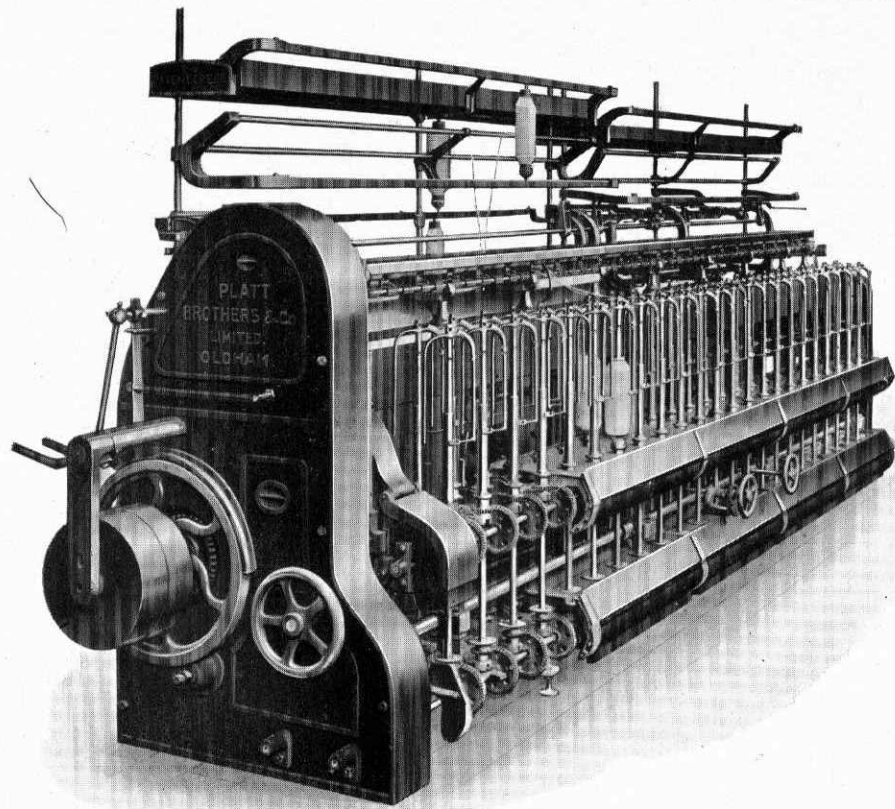


collar or bolster of the spindle C C. Both the spindles and the bobbins revolve in the same direction, but at different speeds, so as to cause the fibre to be wound on and twisted at the same rate as it is delivered from



the rollers. By means of a shortening apparatus the length of traverse is reduced as each layer of roving is placed on the bobbin, and at the same time the strap on the cones E E receives a definite movement, and the variable speed from the bottom cone is then transmitted through the patent winding motion on the driving shaft F to the bobbins B B. In these frames, as well as in spinning machines, it is usual to have at least the front row of fluted rollers case-hardened. The spinning into yarn from the roving bobbin is at present done on either the self-acting mule or the ring spinning frame.

INTERMEDIATE OR ROVING FRAME