TEXTILE MACHINERY.

19.582. F. A. Holt, A. Seeley, and G. Kershaw, Rochdale, Lancs. Winding &c. Yarn. [6 Fig.] September 26, 1900.—In machinery for winding, doubling, and twisting yarn, and with the object of economising space and labour; a frame has set up upon it the winding-ou spindles in several rows, one above and behind the other. The yarn to be wound on the spindles may be in the form of a chain, ball, or beam warp, or several beams, or it may be mounted in a core. The winding spindles are driven positively or by friction, and the yarn may be wound upon flanged bobbins or upon tubes. When winding yarn on flanged bobbins, a differential motion may be used for varying the speed of the winding on spindles, or varying the speed of the delivery rollers, or other delivery of yarn to the spindles; while for building bobbins with one or both ends exposed on to tubes, a diminishing lift motion, in addition to the differential motion where such is employed, would be required. In one arrangement a stationary spindle is fixed in the lifting rail and supported near the middle by a bolster, on which is mounted the driving wharf with a friction surface upon which rests a second friction surface carrying the flyer with one or two legs. To the spindle above the wharf is secured a stop collar to determine the position of the bobbin, tube, or quill.

When the bobbin, tube, or quill is secured to the spindle, the drap is given entirely by the flyer, but if desired, it can be divided between the flyer and the bobbin, tube, or quill, by making a frictional contact between either of these and the spindle. (Accepted October 3, 1900.)

12.946. J. Pullman, Teddington, and E. E. Pullman, Surbiton, Bleaching Vegetable Fibres. June 21, 1899.—In the preparation of vegetable fibres, and of yarn and fabrics made from such fibres, for subsequent treatment of different kinds in papermaking, bleaching and dyeing, a process of boiling with lime (usually in the form of milk of lime) is used. The chemical actions of the lime in such boiling process are, however, much impeded by its relative insolubility in water; in consequence of which it penetrates the fibre or fibrous fabrics with extreme slowness. According to this invention, in order that the fibres may become rapidly and thoroughly impregnated with the active oxide, they are first treated with a solution of calcium chloride; and secondly, after being strained or squeezed to remove excess of solution they are treated with caustic soda (or other equivalent soluble alkali), which decomposes the calcium salts, and deposits the resulting calcium oxide, or lime (hydrate), in and upon the fibres, thus ensuring its presence in uniform and intimate distribution throughout the mass of the fibrous substance. (Accepted October 3, 1900.)