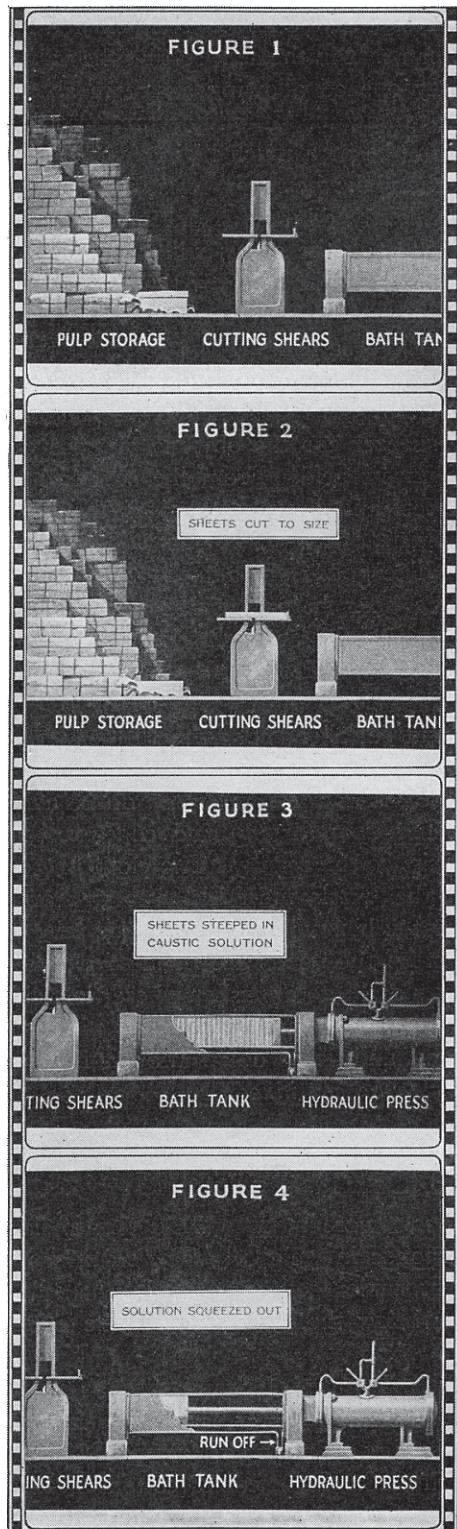


How Rayon Yarn Is Made

A Diagrammatical Explanation of The Viscose Process



The following diagrammatical explanation of the Viscose process is part of an animated diagram in The Viscose Company's moving picture, "The Quality-Control Plan." By courtesy of the Company it is reprinted from the June and July issues of *The Crown News*, and we believe that the highly instructive picturization and clear presentation of an otherwise highly complicated process will be of interest and benefit to our readers.

FIGURE 1. The raw material, wood or cotton, is converted into pulp, and shipped to the yarn mill ready for the first step in the manufacture of rayon yarn.

FIGURE 2. The first step is to cut the sheets of pulp to the proper size.

FIGURE 3. The sheets are then mercerized by being placed in a bath tank containing a solution of caustic soda.

FIGURE 4. When the sheets are completely saturated, the solution is squeezed out until exactly the desired amount of soda remains.

FIGURE 5. The damp sheets are then placed in a kneader, which turns them into a white, fluffy substance, called crumb.

FIGURE 6. The crumb is placed in a churn and a chemical added; the churning process transforms the crumb into cellulose xanthate, an orange-colored substance.

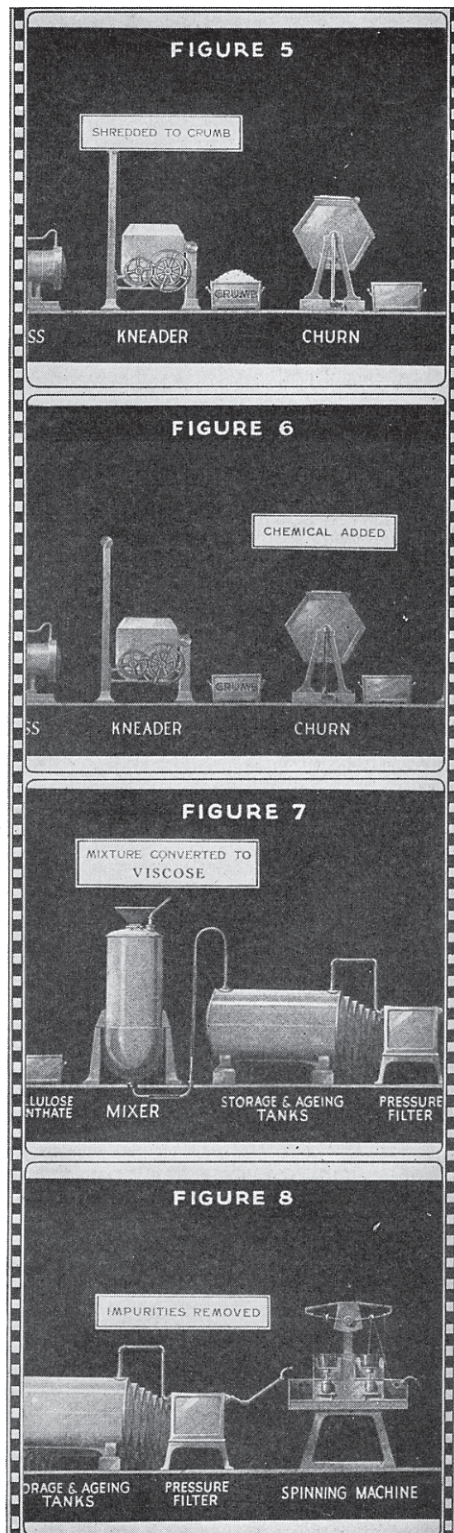


FIGURE 7. The cellulose xanthate is put in a mixer, and converted at last into the Viscose spinning solution. FIGURE 8. After being properly aged, the spinning solution is placed in the pressure filter, where impurities are removed, preparatory to the actual spinning.

FIGURE 9. We now have the "Viscose" solution ready for spinning, and this solution, a sticky, syrupy substance, is forced through the "spinnerette" cap into the acid bath. This cap contains a number of minute holes (the size and number of these holes determine the

denier and filament of the yarn) and presto! the liquid becomes a soft, pliable, strong thread!

FIGURE 10. The filaments are twisted together and pulled over pulleys into a box, where they are wound into a cake-shaped form.

FIGURE 11. We now have a pure coil of unbleached Rayon yarn, but many more operations are necessary before the yarn will be ready to be converted into cloth.

FIGURE 12. The next step facilitates the handling of the yarn in its subsequent treatment; it is put on a reeler, which converts it from cake to skein form.

FIGURE 13. The skeins of yarn are now placed in a machine which first washes, then bleaches them, and gives them the degree of lustre desired.

FIGURE 14. The bleached skeins are then wrapped in cloths and placed in the centrifugal extractor. This machine revolves at a tremendous rate of speed and literally forces moisture from the skeins.

FIGURE 15. As a further precaution against moist yarn each skein, after leaving the centrifugal extractor, is sent through a drying machine.

FIGURE 16. The dried and bleached yarn is now carefully inspected by trained inspectors, then weighed, bundled, and packed ready for shipping.

