Ret'ting, Rot'ting, Rat'ing. (*Fiber.*) Steeping of flax or hemp, for the purpose of loosening the fiber from the *boon* and woody portion by the softening of the gummy portion which binds them.

Flax, after the removal of the bolls and seed by *rippling*, is bound in sheaves and immersed in water, the sheaves being packed loosely and resting on their butts. They are covered with sods, grass side down, or by straw and poles. The water should be soft, and in gentle motion. Fermentation softens the gum, which binds the fibers and loosens the *hare* from the *bark* and *boon*.

The process having continued till the fibers part from the *boon* (the pith or internal woody portion), the bunches are raised, drained for twenty-four hours, and then spread on the grass to dry and get wet alternately; the showers, sun, and air completing the preparation of the fiber for the mechanical treatment, — the *brake* and the scutcher. This exposure to weather is termed *grassing*.

The time occupied in *retting* is from six to twenty days, according to temperature.

Dew retting is accomplished by exposing the flax stalks to the weather, without steeping, the sun, showers, and air rotting the woody portion and washing away the mucilage.

Schenck's retting apparatus, 1851, consists of circular vats, in which the flax is placed, being kept down by a weight while it is swelled by water maintained at a heat of 90° by the introduction of steam. Passing to the acetous fermentation, the mucilage is rendered perfectly soluble and is run off, the flax being then removed and dried. The process takes about sixty hours. The flax is exposed to the air upon frames or dried by steam heat.

Bower's retting process (English) consists in alternately steeping and rolling the stalks, so as to soften and press out the mucilage by the alternate process.

Caustic ammonia, or other salt, is added to the rain water, in which the plant is steeped. (Ammonia, 1 pound; water, at 90° to 120°, 150 pounds.) The process takes about thirty hours.

Another process consists in the repeated application of an alkaline solution in a vessel exhausted of air. This is said to take but a few hours. Heat is probably applied.

The process with hemp is substantially similar to the water-retting of flax.

The stalks in bundles are steeped in running streams until the cellular portion is rotting, the gummy so much softened as to wash away, and the woody so far loosened as to readily fall away from the fiber when the stalk is dried and operated upon by the brake.