

Drawing. 1. (*Fiber.*) Extending a sliver for the purpose of drawing its fibers parallel and increasing its length. The *drawing* and *doubling process* first draws out the slivers as produced by the finishing card by means of drawing-rollers, and then unites several of these into one. The object of the first operation is to draw each fiber past the next one, thus placing them still more completely parallel to each other; while that of the second is to neutralize the inequalities in each separate sliver, and to strengthen them after having been extended. See DRAWING-FRAME.

The *drawing* of long wool for worsted is somewhat similar to the operation with cotton. The slivers are combined, attenuated, and twisted ready for the farther operation of *spinning*.

Flax is drawn in substantially the same manner as cotton, some modifications in the arrangements adapting the machinery to the material.

The hackled flax, having been carefully sorted into grades of quality by the *sorter*, is spread upon a feeding-cloth by hand, in such a manner that the forward ends of each *strick* reach to the middle of the preceding one, so as to preserve a uniform thickness on the feed-cloth, the *stricks* of hackled flax being smaller at the ends than in the middle.

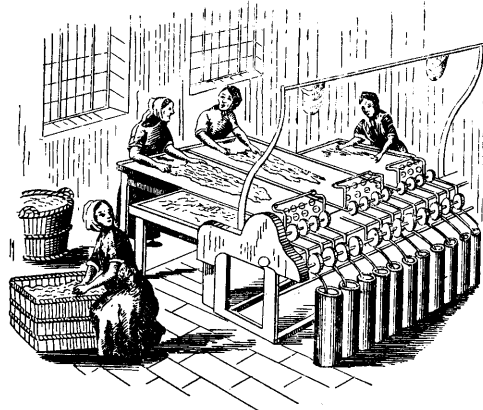
The flax is thus fed to one pair of rollers, which deliver it through *gills* or hackle-points to a second pair of rollers revolving at a greater speed. It is then conducted to a can.

These *slivers* are next taken to the spreading-frame, where a number of them are laid together and drawn into one length by passing between consecutive pairs of rollers, each pair rotating at a rate above that of its predecessor.

The arrangements vary in the production of dif-

2. (*Weaving.*) The arrangement of the heddles in accordance with the requirements of the ornament to be exhibited. The *draft* or *cording* of the loom.

Fig. 1749.



Drawing Flax.

ferent yarns, but in a given case eight slivers may be drawn into one in the first frame, twelve into one in the second, fifteen into one in the third.

The sliver when sufficiently equalized and attenuated proceeds to the *roving-machine*, which gives it a slight twist and winds it on bobbins ready for *spinning*.