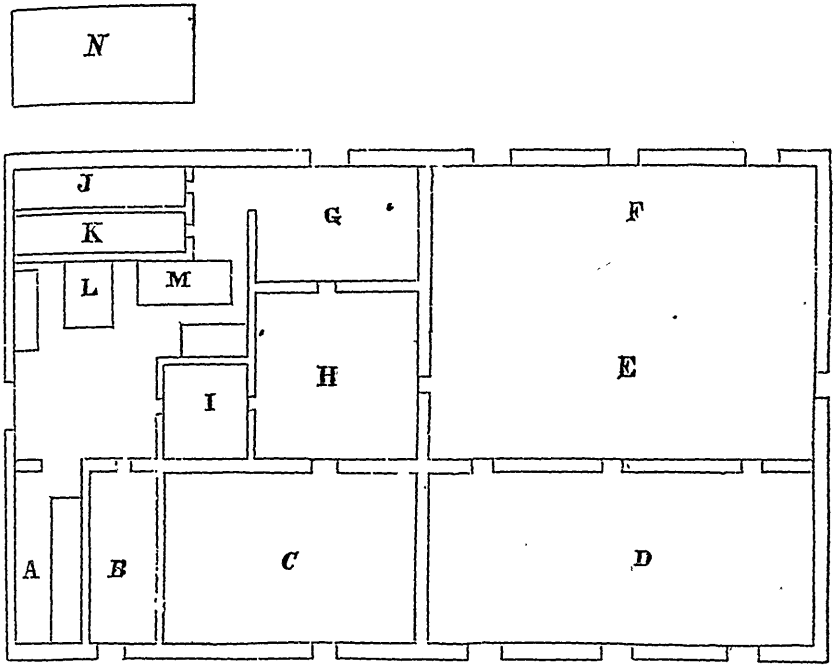
The remainder is called long-middles. The object of cutting is to remove all scabs and impurities which generally exist in the ends of Flax.

After cutting, it is hackled by machinery and taken to the sorting department, where it is selected for different numbers, either for warps or wefts acccording to the judgment of the operator.

The tow from the hackling machines is carded and spun to 40 s. and 50 s., for coarse fabrics, as towels, sheetings, &c. It is called first, second and third machine tow.




[Scale 40 feet to the inch.

Fig. 28.

Flax, after dressing, is taken to the spread ard, where the cut-line is spread in four slivers. ese are seized in the retaining rollers, and afwards caught on the reach by the gill. The ch is the distance from the retaining to the ivering roller. This varies according to the ility of Flax worked. The delivering roller es from twenty to thirty revolutions for one the retaining, thereby drawing the sliver nty or thirty times.

four slivers are united into one, and receiving can holding a certain quantity, which is anced by the ringing of a bell, when the can offed. The cans so doffed are put up for a nd drawing behind another frame, pass over reach as before, are drawn twelve times, and ve slivers united into one or two. We have 12 x 20 = 240.

ese slivers are taken to the third drawing e, where the same process is repeated, that gai drawn out twelve times, therefore 24n= 2880, which is the number of times original sliver has been extended.

e cans are now set behind the roving frame, where the sliver passes over the reach, and i delivered on a bobbin, receiving a twist from the flyer.

Bobbins from the roving frame are taken to the spinning frame. Here they pass through troughs in which water is heated from 100 degrees to 150 degrees by steam, thence to fluted rollers, the reach of which is longer or shorter as the sort spun is finer or coarser.

Finer numbers receive more twists than coarser.

Yarns pass from the spinning to the reeling room. Reels are 90 inches in circumference; each contains 20 hanks, each hank 12 cuts, and each cut 300 yards.

These yarns are taken to the drying loft, and subjected to a high temperature, and when dried made up into bunches for market. Here I will leave them, merely remarking that they are now ready to appear as a textile fabric; assuming the appearance of ordinary linen, or a damask table cloth. In either case before showing themselves in the warehouse of the merchant, they must undergo the operation of bleaching, which itself supports large manufactories.