

Houldsworth is said to have attained a fineness represented by No. 10,000, one pound of which would extend 4,770 miles. This is marvelous.

Yarn is made into hanks on a reel $4\frac{1}{2}$ feet in circumference, 80 revolutions of which make a *lay* of 120 yards; 7 *lays* to a *hank* of 840 yards.

Previous to the invention of the mule, the limit of fineness ordinarily reached in England was No. 200. The natives of India reached from Nos. 300 to 400. As appears by the above figures, the *mule* has revolutionized this matter, leaving all mere hand skill far in the rear.

2. Worsted yarn has 560 yards to the *skein*.

Woolen yarn has 1,600 yards to the *skein* or *run*.

3. Linen yarn is wound upon reels, and made up into *leas*, *hanks*, and *bundles*.

The reels differ in size, being respectively $2\frac{1}{2}$ and $1\frac{1}{2}$ yards round.

120 threads of $2\frac{1}{2}$ yards =	300 yards = 1 <i>lea</i> .
10 <i>leas</i>	= 3,000 yards = 1 <i>hank</i> .
20 <i>hanks</i>	= 60,000 yards = 1 <i>bundle</i> .
3 <i>bundles</i>	= 180,000 yards = 1 <i>bunch</i> .

Of the smaller reel: —

100 threads of $1\frac{1}{2}$ yards =	150 yards = $\frac{1}{2}$ <i>lea</i> .
10 $\frac{1}{2}$ <i>leas</i>	= 1,500 yards = $1\frac{1}{2}$ <i>hanks</i> .
40 $\frac{1}{2}$ <i>hanks</i>	= 60,000 yards = 1 <i>bundle</i> .

The fineness of linen yarn is reckoned by the number of *leas*, of 300 yards to the pound (cotton, it will be recollected, is reckoned by the number of *hanks*, of 840 yards to the pound), so that 25 or 400 *leas* represent that those rather extreme numbers have that number of *leas* in the pound weight; 7,500 yards and 120,000 yards, respectively, in length of thread.

Another mode of reckoning the grade of a linen yarn is by the weight of the bundle of 60,000 yards. Thus, a bundle of

25 *leas* to the
pound weighs 8
pounds; a bundle
of 100 *leas* to the
pound weighs 2
pounds; etc.

Yarn. Thread prepared for weaving.

1. Cotton yarn is numbered according to the number of hanks contained in a pound of 7,000 grains. Each *hank* or *skein* measures 840 yards.

At the great exhibition of industry, London, 1853, Mr. Houldsworth of Manchester exhibited cotton yarn Nos. 100 to 2,150.

No. 100 single cotton yarn weighs 70 grains.

No. 500 single cotton yarn weighs 14 grains.

No. 700 single cotton yarn weighs 10 grains.

One pound weight of No. 2,150 extends upwards of 1,000 miles in length.