besides giving support to the fine pins and rendering them stiffer, gives in the opinion of some people, a better "sort," on account of the "buffing" or beating action which they exercise on the flax confined between them.

The tendency of the age towards cheapening production through the substitution of machines for manual labor has led to the introduction of a piece of mechanism, called an "ending machine," which, by removing the impurities from the ends of the piece, effects more or less successfully the work of the hackler or sorter. These ending machines are of two kinds, effecting desired object in different ways, either by cutting off the impure ends or by removing the impurities by means of quick and fine hackles. Impurities in the ends of flax may be natural or they may have been produced during the process of hackling. Natural impurities usually take the form of coarse and flat root fibres, upon which the pins have little power of subdivision, or of small pieces of boon, forming portions of a branch, and consequently found in the top end. "Naps" are, perhaps, the commonest impurity, and the most difficult of removal. They are usually produced in the hackling of fine flaxes, more especially Courtrai, where the reed is already broken up small When the pins are passing through the piece, only those fibres with which they are in contact are rigidly held. Those which occupy the spaces between the pins are free, and occasionally run up and form little round balls of fibre, called "naps." This effect is particularly noticeable if the flax be not properly dry. Fine reeded flaxes have a tendency to form into strings towards the ends, an effect which many old hands still maintain is due to the flax being twisted in its growth, but which the writer believes to be due to excessive finishing on the "handles" and handling in the making up. Whatever be the cause, the flax which possesses this peculiarity shows the greatest tendency to form into naps.

Erskine's Ender is perhaps the most in use. Its construction has been much improved quite recently, and it is rapidly gaining in favor. It is a small machine placed under the projecting end of the "channel" at the fine end of an ordinary hackling machine. The apparatus for removing the end of the flax consists in a pair of rollers of dissimilar diameter, and running at different surface velocities in opposite directions. These rollers are pressed together by levers and weights, and are driven by a chain from the brush shaft, and can be adjusted as regards height or vertical distance from the channel at its lowest point. A pair of clamps actuated by the descending "head" grip the flax near the nip of the ending rollers, so that their action may not break away valuable fibre. When these machines are used, the flax in each parcel should be of as uniform lengths as possible. The boys should screw the root end to gauge, and the ending rollers be set, both as regards root and top, to take off the required quantity of the end. Since there is always a variation in the length of the flax even in the same parcel, and also in the quality of the ends, this mode of setting is not all that is required. An improvement consists in making the height of the ending rollers for the top end readily adjustable by means of a hand wheel which is manipulated by a boy who, a graduated scale being attached to the channel and another to the framing of the ending machine, is enabled to read off for each piece the length of pure flax from the holder downward, and to set the ending rollers to remove the remainder. The other type of ending machine referred to is placed in the same position as the last, and is just like an ordinary hackling machine in miniature, with one round of fine hackles. These sheets of hackles are adjustable as regards height and speed, and can be set in such a way as to remove any impurities from the ends alone without touching the pure and already sufficiently hackled portion of the piece.

After weighing the line and tow resulting from the hackling machines, we will follow the parcel into the hackling or sorting shop, where the finer and more valuable flaxes almost invariably undergo a further dressing and a careful classification by experienced men into their various qualities. The arrangement of the sorting shop corresponds with that of the roughing shop, both as regards size and ventilation. A good light is indispensable, but blinds should be provided to keep off the strong sun. The operation of dressing and sorting, briefly described, is as follows: Each workman has two tools—a "ten" and a "switch." The sorter, placing a machine room tipple to the left of his tools, with the root ends from him, loosens the ends and, taking a piece, spreads the root end flat upon his ten and grasps it firmly in his right hand, close to the "holder mark." Keeping it flat and well spread out in his hand, thumb uppermost and square across the piece, he draws it through the hackle, near but below the points of the pins, at the same time supporting the piece with his left hand. Besides bringing up the quality of the piece, the support of the left hand keeps the fibre from breaking and adds to the yield. After one or two "blows" on the ten, the sorter usually catches the extreme end of the piece in the fingers of his left hand and, placing it loosely round the touch-pin, breaks off any loose or irregular fibres. Straightening the fibres again by one or two more blows on the ten, he draws the piece once or twice through the switch, and then, after "nipping" off the loose fibres from the end upon the corner or front pins of his tool, he turns the piece in his hand and proceeds to repeat the operation upon the top end. In turning, the piece must be kept flat and well spread out. If gripped close to the holder mark in the first instance, when turned it must be caught an inch or so upon the other side of the mark, thus ensuring the proper opening of the centre of the piece. When the sorter has finished dressing the piece, he holds it in his left hand and laps a small portion or edge of the root end over the rest for the purpose of keeping the pieces separate when built in a bunch. While working the piece, the operator has had an opportunity of forming an opinion as to its quality, and can usually, without further examination, place it to form part of a bunch of similar fibre.

In Ireland and upon the Continent hackled flax is usually classified upon the warp basis—say, 30's, 35's, 40's, etc.- 30's being fibre which would make a fair warp yarn of 30 leas per lb., and so on. For coarser work the flax may be classified upon the Scotch dry-spun basis, and