

**Card.** 1. (*Cotton and Wool Manufacture.*) *a.* An instrument for combing wool, flax, or cotton, to disentangle or tear apart the tussocks and lay the fibers parallel in order for spinning.

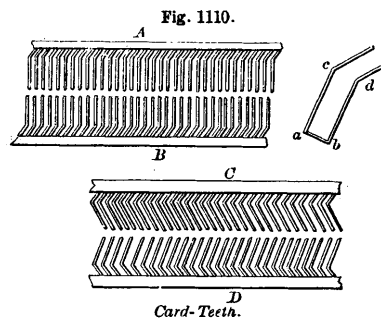
The work is analogous in some of its effects to that of hackling, in which flax for the distaff is brought into a condition for being drawn out by the hand, in the old modes of spinning. With cards and in the carding-machine shorter fiber is operated upon than in the case of hemp or long flax, of which a hank is taken and switched down upon the teeth of the hackle.

A *card* is a wire brush in which the teeth are inserted obliquely through a piece of leather, or of cotton, linen, or india-rubber, which is then nailed to a wooden back.

With hand-cards, they were operated by drawing them past each other, so as to disentangle the bunches of fiber and lay the filaments straight. A similar effect is produced in the carding-machine (which see), but the opposing cards are upon a large revolving-cylinder, and a number of circumjacent wire rollers and flat cards.

The leather or other material to be furnished with *teeth* is pierced with numerous holes, in which are fixed bent pieces of hard drawn wire called *dents* or *teeth*.

Each piece is first bent at right angles at *a* and *b*, and afterwards a second bend at *c d*, at an obtuse angle, which must be invariable for the same set of



cards. Strict uniformity is necessary as to the size, shape, obliquity, and length of the teeth, and also in the angle which they bear to the cylindrical surface around which they are placed.

The action of the cards is as follows : —

If the two cards *A* and *B* be moved in opposite directions with a tangled tuft of cotton-wool between them, the fibers will be seized by all the teeth, one card pulling them one way and the other pulling them the other, until, by repeated applications of the cards, the fibers are disentangled and laid in parallel lines, each card taking up and retaining a portion of the cotton. All the cotton may be gathered on one card by reversing the position of the two and placing them as when, by drawing the upper card *C* over the lower one *D*, the teeth of the lower one offer no resistance, but give up their cotton to the upper card.

Just as by the persistence of application of the hand-card the bunch of cotton is at last reduced to order, so in the carding-machine the operation is repeated between a central carded cylinder, and several carded rollers and flat cards, so arranged as to return imperfectly reduced knots again and again to the main cylinder. See CARDING-MACHINE.

*Cards* are distinguished by quality, the form of the backing, or position ; as, —

*Sheet-card* or *card-sheet*.

*Fillet-card*, in form of a ribbon.

*Breaking-card*.

*Finishing-card*.

*Top-card* ; *top-flat*.

*b.* A *sliver* of fiber from a carding-machine.

*Cardings* or *rolls* are delivered of the length of the card-roller, the *clothing* on which is in longitudinal strips. See ROLLER-BOWL ; CARDING.