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 re-
volving-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 sur-
face 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 be-
tween 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 ap-
plications 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 posi-
tion of the two and placing them as when, by draw-
ing 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-sheets.
Pillar-card, in form of a ribbon.
Breaking-card. Finishing-card.
Top-card; top-flat.
b. A slice of fiber from a carding-machine.
Cardings or rolls are delivered of the length of
the card-roll, the clothing on which is in longitu-
dinal strips. See Roller-Roll; Cardino.