Card-grinding Machine. A machine for grinding the card clothing of carding machines, to give the shape and sharpness to the ends of the wires.

The card roller or flat is placed in bearings or clamps in the machine, and the grinding wheel traverses back and forth in front of it. The wheel runs clear past the end of the roller or flat, as the case may be, before it stops and commences the backward motion. The traversing grinding roller is held to be an improvement upon a full-length roller, the inequalities of which are repeated upon the card-roller or flat.

Fig. 642 represents the Hardy traverse-wheel grinder, for grinding from 1 to 4 top-flats at a time, with a cylinder.

Fig. 643 shows Roy's mode of traversing the grinding-wheel; the motion is rapid, the wheel traversing from 10 to 20 times per minute, according to the length of the card. The motion of translation is by an endless chain and bevel gear inside of the stove, which is at the same time the axis of the wheel.

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It has a cylinder 12" in diameter, and can have a fan applied. It occupies but a small space. The flat passes slowly over the cylinder while grinding, and returns quickly, thus saving time in grinding. This is a small-sized machine, but they are made to grind two or more rollers or flats, as required.

In the machine of M. A. Fortnum, of Philadelpia, the grinding cylinder has an angular thread cut from one end to the other, and the card cylinder rests in bearings on the frame and is revolved by a belt from a pulley on the grinding-shaft. Flour of emery and oil are used, and the shape of the end of each wire on the card agrees with that of the angular tooth.

In the carding machine of Platt Bros., of Oldham, Britain, the card clothing on the flats is ground when the machine is in full work, thus avoiding any loss of time and any necessity for a separate grinding machine.