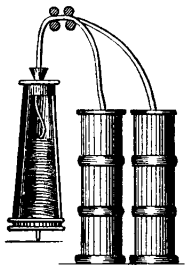
Rov'ing. (*Cotton-manufacture.*) 1. A slightly twisted *sliver* of cotton or other carded fiber.

2. A process intervening between carding and spinning, in which a number of *slivers* from the carding-machine, contained in separate cans, are associated by being conducted between pairs of rollers (see DOUBLING), and then between other successive pairs, by which the combined sliver is reduced and elongated (see DRAWING-FRAME); the sliver, as it issues from the last pair of rollers, being brought to the condition of a *rove*, *roving*, or *slub* by being slightly twisted by mechanical means, which may consist of one of the three following: —

a Arkwright's plan was to conduct the slivers from the separate cans to a pair of rollers where they were coalesced (*doubling*), then between a pair more rapidly revolving, by which they were attenuated (*drawing*), and from thence the combined and lengthened *sliver* was conducted to a rapidly revolving can, which gave it a twist and brought it to the condition of a *roving* or *slub*.

Fig. 4433.



Roving-Machine.

b. Another plan was the *jack-frame* or *jack-in-a-box*, in which the twist was given by the revolution of the can as before, but instead of being coiled up within the can, the roving was wound upon a bobbin inside the can, the bobbin being rotated by wheel-work with a surface velocity corresponding to that of the delivery drawing-rollers. See JACK-FRAME.

c. A third plan, which is later and preferred to the before-mentioned, belongs to the domain of spinning, its functions being similar and differing only in the degree to which the twist is carried.

The machine is called the BOBBIN AND FLY FRAME (which see). The slivers are wound on bobbins, and the latter are arranged upon a *creel*. The slivers pass from the bobbins through a set of drawing-rollers, and thence to the spindles on which they are wound.

The *sliver* passes through the axial opening of the flyer, and thence down the hollow arm of the flyer, from whose end it is wound upon the bobbin, which has an up-and-down motion by means of the *copping rail*, so as to wind the yarn into a regular form, called a *cop*. See COP.

The *spindle* and flyer revolve together, and give the twist to the *sliver*, but the degree of twist depends upon the ratio of the surface speed of the delivery-roller and the rate of the spindle.

The spindle and the bobbin are revolved by different means and at different rates, in order to wind the thread upon the bobbin; the difference between the motions of the bobbin surface and the delivery arm of the flyer being equal to the surface motion of the delivery-roller, the thread is wound as fast as it is paid out, receiving a twist *in transitu*. See EQUATIONAL BOX.

Bobbin and fly frames are of two kinds, *coarse* and *fine*, or *first* and *second*. The former is fed with *slivers* from *cans*, and the latter with *slivers* wound on *cops* made in the *coarse roving-frame*. See BOBBIN AND FLY FRAME.