
REPERTORY
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NUMBER LXIV.

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XXXII. *Specification of the Patent granted to Mr. RICHARD VARLEY, of Damside, in the Parish of Bolton-in-the-Moors, in the County Palatine of Lancaster; for his improved Method of carding, roving, and spinning Cotton, Wool, and Silk, and for the Machinery and Cards made Use of in the same.*

WITH A PLATE.

Dated March 17, 1796.

TO all to whom these presents shall come, &c.
Now KNOW YE, that in compliance with the
said proviso, I the said Richard Varley do hereby
describe and ascertain my said invention of a new
and improved method of carding, roving, and
VOL. XI. F f spinning

spinning cotton, wool, and filk, by the annexed plan and description thereof, as followeth : Fig. 1, (Plate XI.) is a side-view of the machine. A, is the frame part. B, the main cylinder. C, C, two doffing cylinders, one at each side of the cylinder, the cards of which are made of one entire piece of leather, so as exactly to cover the cylinder, and set in stripes of one inch, or any other width that is thought necessary; with spaces betwixt each stripe of the cards, of exactly the same width as the stripes are.

Fig. 2, is a representation of one of these cards, for an eight-inch cylinder, twenty inches wide, with inch stripes. These cards are so placed upon the doffing cylinders C, C, and the cylinders so adjusted by screws, that, when the machine works, the one will take off ten perpetual cardings, and the other will exactly take off the main cylinder what the first leaves by the vacant spaces, and so on for any other width or dimensions. D, D, (Fig. 1.) are the two doffing knives; that on the feeding side of the engine strikes upwards, and the other downwards. E, is the feeder. The cardings are conveyed to the back of the rollers F, F, into a brass plate, having slots counter-funk and grooved in such a manner, for each carding, as to deliver it in the form of a roving to the rollers, the drawing of which is regulated according to the fineness of the twist or **west**
wanted

Fig. 1.

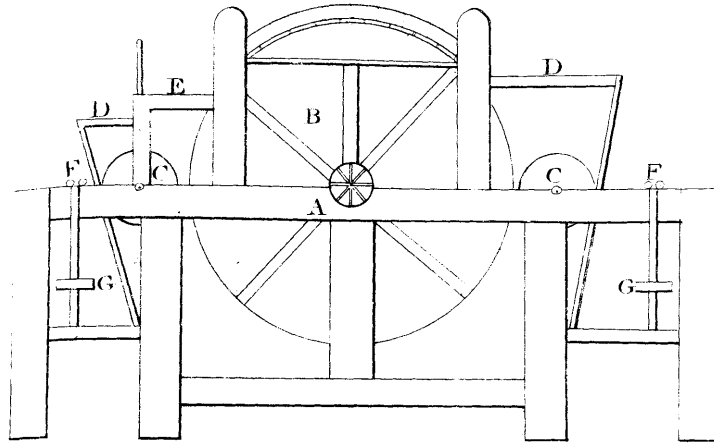


Fig. 2.

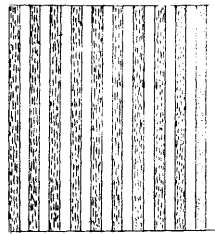


Fig. 3.

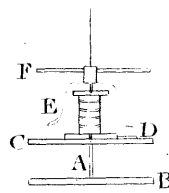


Fig. 4.

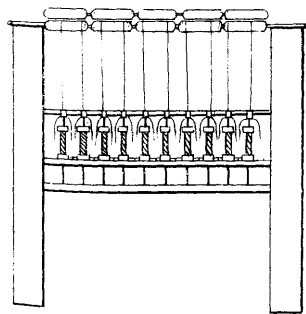
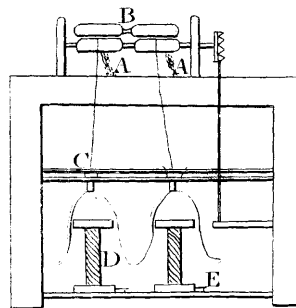


Fig. 5.



wanted to be spun: these rollers deliver it to the spindles in front of the machine. G, G, are the two shafts and drums that turn the spindles.

Fig. 3, is a view of one of these spindles. A, is the spindle, which is screwed or made fast in B, the spindle board. C, the lifter, which is worked by a traverse motion, to lay the thread on the bobbin. D, is a spring, which regulates the draft of the bobbin: these springs are all coupled together on the lifting board, and hardened as the bobbins fill, by a small catch-wheel at the edge of it. E, the fly, which runs on the top of the spindle, and is turned by a strap or string on the back part of it. F, a front plate, which the top of the fly runs against, and which is made to open in such a manner as to stop the fly at one place, that the thread may be pieced without difficulty, or the bobbin and fly taken off the spindle. The thread is conveyed through a grooved line in the head of the fly, and confined to the centre by a small spiral wire at the top of the fly: motion is given to the whole from the main cylinder, with the method of which every mechanic is well acquainted, and which I have omitted describing in the plates, to avoid confusion.

Fig. 4, is a front view of the machine, with the spindles and rollers.

F f 2

Fig.

Fig. 5, shews two spindles of a roving-frame. A, A, are the drawings, which are taken up by the rollers B, and drawn to any fineness required. C, the fly, which runs in two plates, and is turned by a strap or string, which runs on the fore part of them, betwixt the plates: the roving is conveyed through a hole in the centre to the bobbin D, which runs on a spindle rather shorter than them, and is fixed in the spindle-board E; which spindle-board is lifted by a traverse motion, suitable to the bobbin; and every bobbin is regulated by a spring, the same as in Fig. 3. This spindle will serve to spin with also; and any number of spindles that is desired may be fixed in a frame; and the bobbin may be made of any size, from three inches to six inches, more or less. In witness whereof, &c.