

VII. Description of a Method of causing the Bobbin of the common Spinning-Wheel to move backward and forward, by which the Time lost in stopping the Wheel, to shift the Thread from one Staple to another, on the Flyer, is avoided; the Danger of breaking the Thread, and losing the End, obviated; and the Spinner enabled to do much more Work, in a given Time, than by any common Spinning Wheel hitherto in Use. By Mr. JOHN ANTIS, of Fulneck, near Leeds.

WITH A PLATE.

From the TRANSACTIONS of the SOCIETY for the Encouragement of ARTS, MANUFACTURES, and COMMERCE.

Twenty Guineas were voted to Mr. ANTIS, for his Invention.

IN an introductory letter Mr. Antis observes, that his contrivance may be added to old spinning-

ning-wheels, of whatever construction they may be; and that it would add very little to the expence of a new one, if made so from the beginning. He says also, that he had it tried by a lady who sometimes spins for her diversion, who was much pleased with the invention, and thought it might save a person at least two hours, if not more, in a day.

In a second letter Mr. Antis says—"Having had opportunity to try it sufficiently, I do not at all doubt but it will answer. I made every thing as simple as possible, so that it might be in the poorest person's power to obtain it, and still it could be more so; for, had I had a turner at hand, I would have made all on the wheel of wood; for a good piece of hard sycamore might have been so contrived, that, instead of the iron wire on the wheel, a rim might have been left standing, and cut in the same shape, which would answer as well; only, in that case, the pin on the lever would be better if it were a roller. There is a small lead weight, which goes over a pulley, and inclines the bobbin always one way."

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“ The invention has also this advantage, hat whereas, at best, the old method always winds in ridges; if a thread breaks, by reeling the yarn, one may as well throw the whole bobbin away, as the thread cannot easily be found again; but this always winds it across upon one another, by which means the thread can never be lost.”

DESCRIPTION OF MR. ANTIS'S IMPROVED SPINNING-WHEEL. See PLATE III.

The method of causing the bobbin to move backward and forward (which is the improvement here meant to be shown) is effected by the axis of the great wheel being extended through the pillar next the spinner, and formed into a pinion of one leaf, A. which takes into a wheel B. seven inches diameter, having on its periphery ninety-seven teeth; so that ninety-seven revolutions of the great wheel cause one of the lesser wheel. On this lesser wheel is fixed a ring of wire *c c c*; which, being supported on six legs, stands obliquely to the wheel itself, touching it at one part, and projecting nearly three quarters of an inch, at the opposite one.

Near

Near the side of this wheel is an upright lever, C, about fifteen inches long, moving on a centre, three inches from its lower extremity, and connected at the top to a sliding bar, D. from which rises an upright piece of brass, E. which, working in the notch of a pulley, drives the bobbin F. backward and forward, according as the oblique wire forces a pin G. in or out, as the wheel moves round. To regulate and assist the alternate motion, a weight H. hangs, by a line, to the sliding bar, and, passing over a pulley, I. rises and falls as the bobbin advances or recedes, and tends constantly to keep the pin in contact with the wire. It is evident, from this description, that one staple only is wanted to the flyer, which being placed near the extremity, K. the thread passing through it is, by the motion of the bobbin, laid regularly thereon.

