XXIX. Specification of the Patent granted to Messrs. Henry Wright and John Hawksley, of Arnold, in the County of Nottingham, Worsted Manufacturers; for their Invention of certain Machinery for combing and preparing of Wool, Cotton, Silk, Flax, Hemp, and Mohair, for the purpose of Spinning.

WITH TWO PLATES.

Dated June 8, 1793.

To all to whom these presents shall come, &c. Now know ye, that, in compliance with the Vol. II. ff said
faid proviso, we, the said Henry Wright and
John Hawksley, do hereby describe and ascertain
the nature of our said invention, and the manner in
which the same is to be performed, as well by the
figures or delineations of the machinery, as by the
description or explanation set forth; that is to say,
Fig. 1. A, (Plate XIII.) is an upright shaft, revolving
about forty times a minute; B B, a pair of wheels,
of equal number of teeth or cogs; C, a pinion with
nine cogs; D, a wheel with seven-one cogs; (both
the pinion E and wheel F to rise or fall according
to the length of the wool;) G, a wheel with forty-one cogs; H, a wheel with thirty-two cogs, giving
motion to the comb-wheel I, which has three rows
of comb-teeth on each arm; K, combing cylin-
der, with three rows of teeth, to be either hori-
zontal, as drawn, or perpendicular; L, a wheel
with one hundred and forty-four cogs; M, a pi-
nion with sixteen cogs; O, a worm, working into
the wheel N; N, a wheel on the upright shaft to
the feeding-frame wheels A A in Figure 2; S,
a pinion working into a wheel to be put on the
end of the rollers or wheels A A in Figure 2;
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PP, two wheels, of equal numbers, to turn the long cogged wheels Q Q, which wheels are to draw the wool from the cylinder K; R R, two rollers, to conduct the wool into a can or basket. Fig. 2. Feeding-frame. A A, two long cogged wheels, working in pinion S in Fig. 1; B B B, three rollers, round which a linen cloth is making constant revolutions, to conduct the wool forward to the wheels A A; C, a roller, round which a linen cloth is wrapped, with wool spread on it, the end of which passes over roller D, and down to roller E; where, having at D conducted and got quit of its wool, it wraps itself up again, and so on in succession with others by which it is replaced; F F F, three pulleys, by which the rollers receive their motions with bands or cords; G G, the two linen cloths above-mentioned; H H, two rollers, the bottom one, revolving by the pulley F, causes the two upper ones to revolve also, the roller E consequently wraps up the cloth, and that above it is meant to be of a sufficient weight to prevent its rising up, and to press upon it sufficiently to make it revolve. Fig 3, a fly with brushes and F f 2 rollers,
rollers, working with spiral springs, to lay the wool close to the teeth of the cylinder K in Fig. 1, and to be fixed, with a relative motion, over the long cogged wheels Q Q. Fig. 4, a circular brush, fixed at the back of the combing cylinder K, (Fig. 1), revolving quick to take the nails off the teeth, and close to it is fixed a row of teeth, to take the nails off the brush as it revolves, and to be cleared occasionally as they fill. Fig. 5, (Plate XIV.) is another combing-machine, either as a preparer, or finisher, or both. A, a straight range of combs in three compartments, A, B, C; connected together by a hook or catch at the top, as at D D, and moving in a slide or groove, and made to remove or take off after they have passed the long cogged wheels E E, when they will have got quit of the wool; F, a rack which has a very slow sliding motion, and is moved by the pinion G; E E, two long cogged wheels, to draw the wool from the comb-teeth, against which are to be placed two conducting rollers, for the same purpose as R R in Fig. 1; H, three rows of comb teeth. The motion of the straight range of combs
combs A B C, being slowly progressive from A to C, it follows that when the straight range of combs has advanced the length of one compartment, that part must be taken away, and discharged of its noils, and then passed to the other end of the machine, on the inclined plane I, or otherwise, and fixed in the vacancy which will then be at A, and so on alternately; by which means a perpetual fliver of wool will be produced. K is the same comb-wheel as I in Fig. 1, and moving with the same velocity. The feeding frame is the same as Fig. 2. L, is a wheel with one hundred and forty-four cogs; M, a pinion with sixteen cogs; N N, two wheels with equal numbers of teeth; P P, two wheels with equal numbers of teeth; H, the teeth, drawn horizontally, but also to be placed perpendicularly, in case of need or choice. In witness whereof, &c.