
R E P E R T O R Y
OF
ARTS AND MANUFACTURES.
NUMBER X.

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.

F f

said

faid proviso, we, the faid Henry Wright and John Hawksley, do hereby describe and ascertain the nature of our faid 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 and 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 cylinder, with three rows of teeth, to be either horizontal, as drawn, or perpendicular; L, a wheel with one hundred and forty-four cogs; M, a pinion 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;

¶ P,

PP, two wheels, of equal numbers, to turn the long cogged wheels QQ, which wheels are to draw the wool from the cylinder K; RR, two rollers, to conduct the wool into a can or basket. Fig. 2. Feeding-frame. AA, two long cogged wheels, working in pinion S in Fig. 1; BBB, three rollers, round which a linen cloth is making constant revolutions, to conduct the wool forward to the wheels AA; 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; FFF, three pulleys, by which the rollers receive their motions with bands or cords; GG, the two linen cloths above-mentioned; HH, 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 *noils* off the teeth, and close to it is fixed a row of teeth, to take the *noils* 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

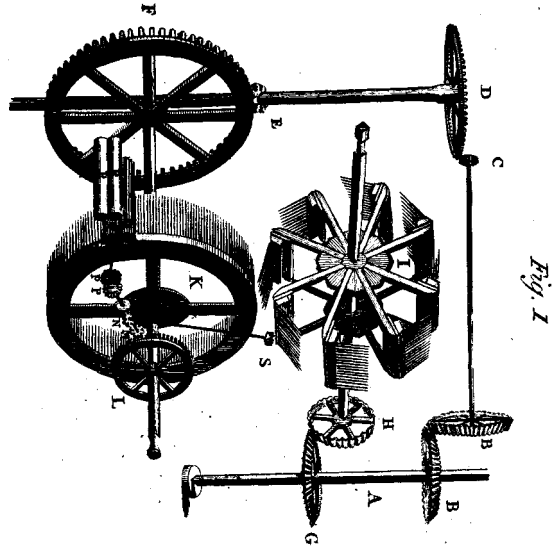


Fig. 1

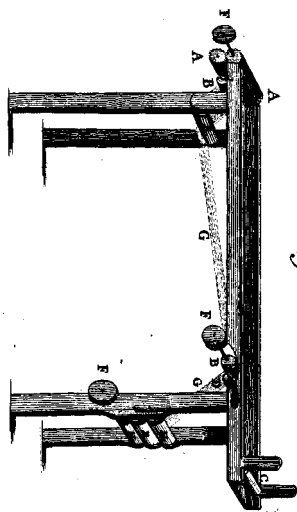


Fig. 2



Fig. 3



Fig. 4

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.

XXX,

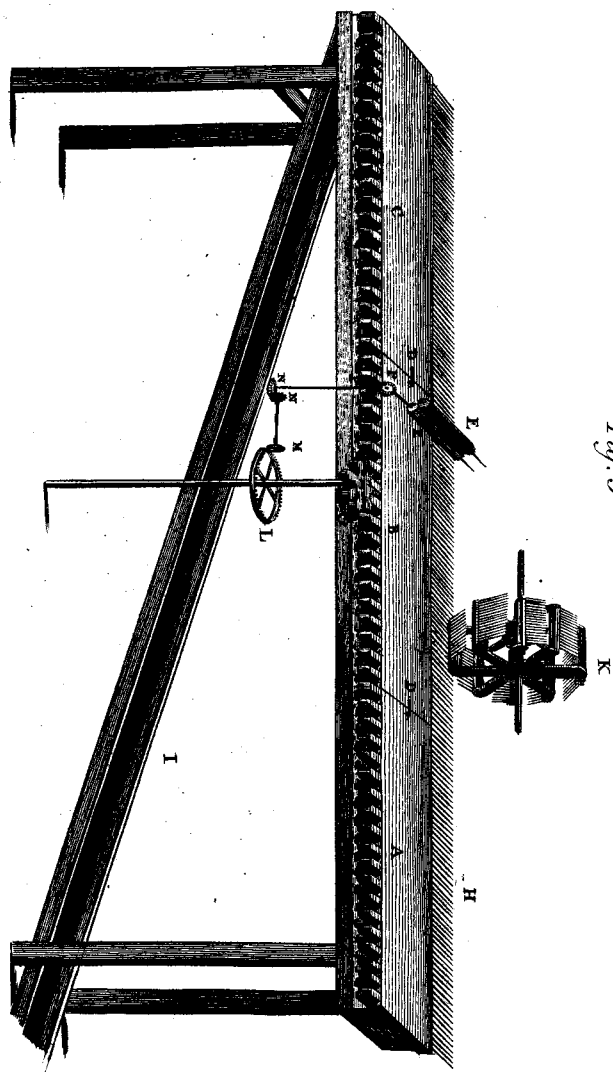


Fig. 5