

THE NEW PIN

An example of new
technology in the
pre-Victorian
industries



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There are few things which more strikingly exemplify the high point of civilization to which this country has attained than the amount of capital continually expended, the inventive talent exercised, and the powerful agencies employed, as the remedy of exceedingly small evils, and the attainment of equally minute objects of convenience.

This remark cannot perhaps find a better illustration than in “The New Pin with an immoveable Solid Head.” The defect in the old pin, which it is the object of the present improvement to remedy, is, that the head of the pin being separately spun and then put on, was liable to be detached by the pressure of the thumb. The principle of the improvement consists in this – that the head being formed of the same piece with the body of the pin, the inconvenience attending its slipping is effectually prevented.

This is the minute improvement in a minute article, the accomplishment of which has cost the patentees several years of attentive application, and the expenditure of a large capital, according to their own statement, which, when the extent and character of the machinery employed are considered, there can be no reason to doubt. At the

same time, it must be taken in connexion with this improvement, that the patent pin is altogether produced by machinery, instead of partly by hand processes.

“The Patent Solid-headed Pin-works” are situated about a mile from Stroud, on the Bath and Birmingham road. The principal building consists of five floors, each of them one hundred feet in length, and completely filled with machinery. A large iron water-wheel, on which a stream acts with a power equal to that of forty horses, gives motion to all the mechanical apparatus which is so ingeniously constructed as to perform every essential operation for converting a coil of wire into the perfect pin with scarcely any noise and little apparent effort. Upon the old system, this comparatively insignificant article had to go through fifteen or sixteen hands before it was finished; but this curious machine effects the whole without manual assistance, or any extraneous aid whatever; for, the wire being placed on a reel, and the machine set in motion, all the mechanical combinations, so numerous and dissimilar in their movements, are simultaneously performing their various functions with a rapidity and precision truly surprising. While one portion of the apparatus is drawing out and straightening the wire, and cutting it off at the required length, another combination is pointing and polishing the pin, and another compressing a portion of the wire into dies to form a perfect and neat round solid head.

The various movements are completely at command, and susceptible of instant alteration and adjustment to

pins of any length, and heads of any form, while the machine is working at its ordinary speed. Each machine operates on four wires at once, and from forty to fifty pins are with facility produced in a minute by each of the 100 machines which are completed, and in constant operation at the work.

As a more particular detail of the process would not be well understood without engravings, we shall only further state that the works, with the present number of machines, are capable of producing upwards of two tons of pins weekly, or, stating the amount numerically, 3,240,000 pins daily, 19,440,000 weekly, supposing all the machines to be in operation twelve hours daily. It is stated that altogether twenty millions of pins are daily manufactured in this country for home consumption and for the foreign market.

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