No. 713,727. Patented Nov. 18, 1902.

P. E. WIBERG.

PROCESS OF MANUFACTURING SAFETY PINS.

(Application filed Apr. 29, 1901. Renewed Jan. 15, 1902.)

(No Model.)

FIG. 1.

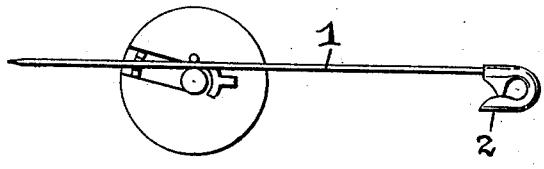


FIG. 3.

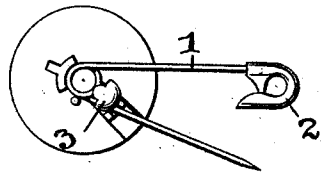


FIG. 2.

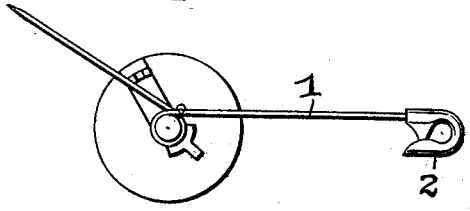


FIG. 4.

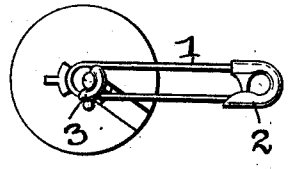
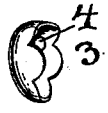


FIG. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

PETER E. WIBERG, OF BLOOMFIELD, NEW JERSEY.

PROCESS OF MANUFACTURING SAFETY-PINS.

SPECIFICATION forming part of Letters Patent No. 713,727, dated November 18, 1902.

Application filed April 29, 1901. Renewed January 15, 1902. Serial No. 89,923. (No specimens.)

To all whom it may concern:

Be it known that I, PETER E. WIBERG, a citizen of the United States, and a resident of Bloomfield, in the county of Essex and State of New Jersey, have invented a certain new and useful Process of Manufacturing Safety-Pins, of which the following is a specification.

This invention relates to the process of manufacturing safety-pins, and more especially to that step which involves the coiling of the pin and the slipping on and attaching to the pin of a coil-guard.

Heretofore the coiling operation and the coil-guard-attaching operation have been successive and entirely dissimultaneous and have constituted two distinct operations independent of each other. In the old process the pin has been completely coiled and closed automatically—that is, the point inserted into the head of the pin and dropped from the machine coiling it. It has then been opened at a subsequent time and the guard attached to the coil and the pin closed again. Of course if the pins are not closed it is not necessary to open them again; but usually the machine closes the pin. This method is crude and undesirable on account of the time lost in the subsequent handling of the pins.

The object of my invention is to reduce the length of time and cost of production and to increase the perfection of the product. This is accomplished by making the coiling operation and the guard-attaching operation steps in a single, cosimultaneous, and interdependent operation, thus doing away with the necessity of subsequent handling of the pin.

In the drawings I have illustrated the various stages of development of the pin during the coiling operation and the slipping on of the guard according to my process.

Figure 1 shows the pin perfectly straight before the coiling operation begins. Fig. 2 shows the pin partially coiled and at the moment when it is ready to receive the guard. Fig. 3 shows the pin nearly coiled and the guard nearing its proper position on the coil. Fig. 4 shows the pin completely coiled and closed with the guard in its proper position. Fig. 5 is a perspective view of the coil-guard. Similar numerals of reference indicate corresponding parts in the different views.

I shall describe a process of coiling a safety-pin and attaching a guard to same, and afterward point out the novel features in the claims.

1 indicates the pin, shown in this instance as being provided with the cap 2.

3 is the coil-guard, provided with a perforation 4 for the reception of the pin.

The pin is coiled partially, preferably to the position shown in Fig. 2, when the coiling operation is stopped and the guard slipped on. The coiling operation is then continued, the guard meanwhile being gradually brought to its proper position, as shown in Fig. 3. When the coiling operation is completed, the guard will have assumed its proper position on the coil 5, as shown in Fig. 4, when it is clenched.

The process herein disclosed may conveniently be carried out in connection with the means disclosed in a sister application, executed by me on the 5th day of April, 1901, Serial No. 57,923.

Having thus described my invention, what I claim is—

1. The process of manufacturing safety-pins, which consists in coiling a pin, and, interdependently therewith and prior to the completion of the coiling operation, to attach a coil-guard to the pin.

2. The process of manufacturing safety-pins, which consists in partially coiling the pin, then slipping a coil-guard on same, then completing the coiling operation and clenching the guard in position.

3. The process of manufacturing safety-pins, which consists in partially coiling the pin, then stopping the coiling operation, then slipping a coil-guard on the pin, then resuming and completing the coiling operation and clenching the guard in position.

Signed at New York, in the county of New York and State of New York, this 5th day of April, A. D. 1901.

PETER E. WIBERG.

Witnesses:
AXEL V. BEEKEN,
ARTHUR L. HELMES.