

(No Model.)

L. T. WHITTEN.

PROCESS OF MAKING KNITTING MACHINE NEEDLES.

No. 246,581.

Patented Aug. 30, 1881.

Fig. 1.

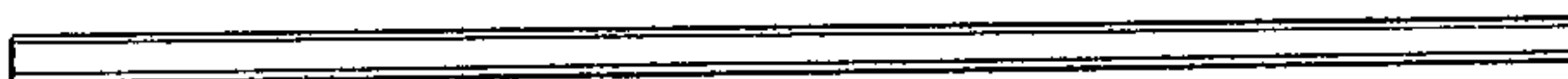


Fig. 2.



Fig. 3.



Fig. 4.

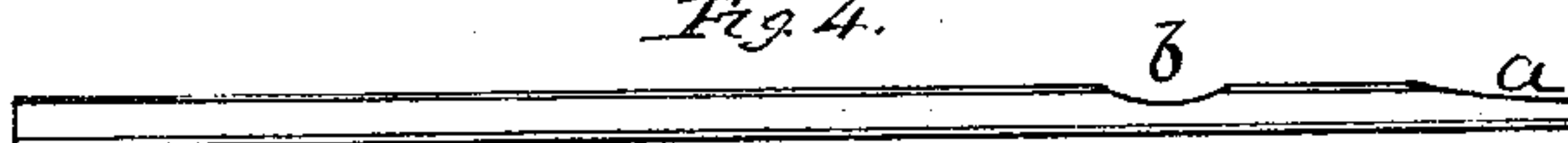


Fig. 5.

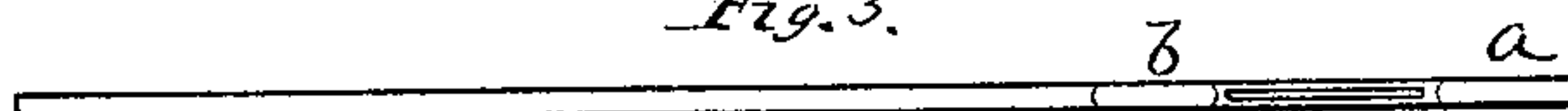
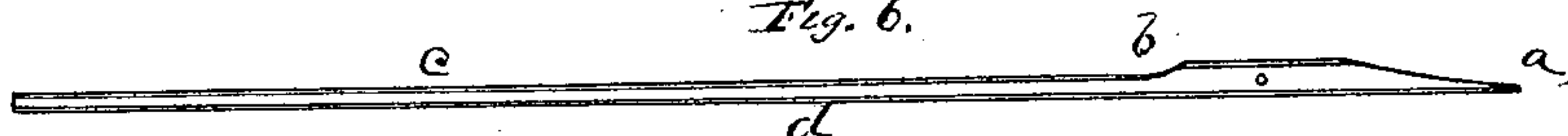


Fig. 6.



WITNESSES

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LEWIS T. WHITTEN, OF LAKE VILLAGE, NEW HAMPSHIRE.

PROCESS OF MAKING KNITTING-MACHINE NEEDLES.

SPECIFICATION forming part of Letters Patent No. 246,581, dated August 30, 1881.

Application filed July 14, 1880. (No model.)

To all whom it may concern:

Be it known that I, LEWIS T. WHITTEN, of Lake Village, in the county of Belknap and State of New Hampshire, have invented a new and Improved Process of Making Knitting-Machine Needles; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

My improvement is applied to the making of latch knitting-needles, the usual mode of forming the latch-slot in which is, first, to punch an oblong flaring cavity or slot in the round wire of which the needle is made, and then to swage the sides up into parallel positions. This method makes the sides of the slot of uneven thickness, quite thin, and consequently weak and little durable.

In the drawings, Figure 1 represents a side view of a piece of flattened wire from which a needle is formed; Fig. 2, a top view of the same; Fig. 3, a cross-section thereof; Fig. 4, a side view of the said piece or blank after the slabbing or first step of the process; Fig. 5, a top view of the blank after the latch-slot is cut, being the next step of the process; and Fig. 6, a side view of the blank after rolling down the point and shank of the same, which constitutes the third step of the process.

Like letters designate corresponding parts in all of the figures.

My improved method or process is substantially as follows: A flat wire is used for the purpose, or the needle-blank is first flattened, and for this purpose I use a wire larger than the shank or body of the needle to be made, and equal in depth or greatest diameter to the full depth which the finished needle is to have at the sides of the latch-slot, as indicated in Figs. 1 and 2 and in the cross-section, Fig. 3. The blank is then "slabbed" or cut down in the upper edge, as at *a* and *b*, near the two extremities of the part where the needle-slot is to be formed, cutting it at the end, *a*, ready to form the point or hook, and at the rear, *b*, of the slot part to the proper depth required for the needle at that part, as shown in Fig. 4. The latch-slot is then cut or sawed centrally down between the flattened sides and longitudinally between the slabbed parts, giving slot sides of uniform thickness from the front to the back edge of the needle, having suffi-

cient thickness of metal there, and consequently producing a needle of great strength and durability, as shown in Fig. 5. The needle-blank is then rolled down to a proper point at the end, and the shank part *c* is rolled down to the required size from the slabbed part *b* to the end, as shown in Fig. 5, leaving the back side, *d*, of the needle straight or of the form required for the finished needle from end to end, as shown in Fig. 6. This operation is based on the following principle, which I have discovered to be effectual: By first cutting into the blank on the upper side only, leaving a diameter equal to the ultimate diameter of the needle-shank, and then rolling down the remainder of the shank to the same thickness, the back side of the blank will remain straight or nearly so. Thus by a very simple operation I reduce the wire to the proper form, save all the metal except the little cut away in notching, and at the same time improve the needle at the sides of the latch-slot, as herein set forth. It is not essential which is first done, the sawing of the needle-slot or the rolling down of the point and shank.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In the process of forming machine-knitting-needle blanks, the reduction of a wire of larger diameter to the proper size of shank by first cutting into it on the upper side to the desired depth, and then rolling the whole shank down to the same thickness, thereby keeping the back of the needle straight, substantially as and for the purpose herein specified.

2. The process of forming machine-knitting-needle blanks, which consists in first flattening the sides of a wire equal in diameter to the full depth required at the latch-slot, cutting the latch-slot therein, notching or slabbing the upper edge only at places just before and back of the latch-slot to the thickness required for the point and shank, and then rolling down the remainder of the point and shank, thereby keeping the blank straight at the back, substantially as and for the purpose herein specified.

The foregoing specification signed by me this 4th day of June, 1880.

LEWIS T. WHITTEN.

Witnesses:

J. L. ODELL,
E. L. CHENEY.