G. H. BLELOCH.

Sewing-Machine Needle.

No. 165,204. Patented July 6, 1875.

Fig. 3.

Fig. 1.

Fig. 4.

Fig. 5.

Fig. 2.

Witnesses

Chas. H. Smith

Harold Sewell

Inventor.

George H. Bleloch.

per Lemuel W. Serrell

atty.

UNITED STATES PATENT OFFICE.

GEORGE H. BLELOCH, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN SEWING-MACHINE NEEDLES.

Specification forming part of Letters Patent No. **165,204**, dated July 6, 1875; application filed January 8, 1875.

To all whom it may concern:

Be it known that I, GEORGE H. BLELOCH, of Springfield, in the State of Massachusetts, have invented an Improvement in Sewing-Machine Needles, of which the following is a specification:

Needles for sewing-machines have heretofore usually been made with cylindrical shanks, and with the axis of the needle in line with the axis of the shank. In constructing sewing-machines it is usual to make the shuttle or looper run close to the side of the largest needles; but when fine needles are introduced there is a greater distance between the shuttle and the side of the needle, and the operation, hence, is not as reliable, because the shuttle, being farther from the side of the needle, may not enter the loop properly.

Efforts have been made to rectify this difficulty by making the small needles eccentric to the shank, so as to preserve a uniform distance between the shuttle and side of the needle regardless of the diameter of the needle itself. Difficulty, however, arises in manufacturing needles in this manner, and they are liable to be misplaced in the machine. Needles have been "slabbed" off flat on one side of the shank, as a guide in placing the needles.

My invention is made with reference to obtaining the combined advantages of the needles heretofore constructed, without their difficulties or objectionable features.

In almost all sewing-machines the shank of the needle is received into a hole, or clamped between two surfaces grooved to correspond with the cylindrical portion of the needle-shank.

My improvement relates to a sewing-machine needle with the shank at the opposite side to the groove removed in the arc of a circle corresponding, or nearly so, to the surface of the cylinder, so that the bearing-surface of the shank at the shuttle or looper side of the needle shall be at a definite position relative to that side of the needle, and the surface of the shank at the portion removed shall fit the hole or groove in the needle-bar adapted to the full cylindrical shank. Hence, the said needle will be held as firmly in its correct position as a needle with a full shank, because the bearing or clamping surfaces fit each other, and there will be an additional advantage that, the shank being thicker in one direction than the other, the operation of clamping will bring the needle to its correct axial position, because the needle-shank will be turned in its bearing by the pressure until that pressure acts in the line of the shortest diameter of the shank.

In the drawing, Figure 1 is an end view of the largest needle and shank. Fig. 2 is a similar view of a small needle, showing the crescent shape that is removed from the side of the shank. Fig. 3 is a side view of the needle shown in Fig. 1; and Fig. 4 is a similar view of the needle shown in Fig. 2. All these figures are upon a magnified scale. Fig. 5 is a view similar to Fig. 2, but in still larger size.

The shank *a* is of the size to fit the hole in the needle arm or bar, and the largest needle *b* usually will not require the shank to be reduced at one side.

My improved needle, Figs. 2, 4, and 5, is made with a shank, *c*, that has a crescent-shaped segment removed from one side, so that the surface of the shank is an arc of a circle of the same radius, or nearly so, as the wire composing the shank, and this segment that is removed is of greater or less size according to the needle *d*, so that the distance between the shuttle-side of the needle and the bearing-surface of the shank will be the same in a large or a small needle, as illustrated by the dotted lines.

I claim as my invention—

The sewing-machine needle, as described, with a portion of its shank removed at the shuttle or looper side of the needle, and rounded to the same arc of a circle, or nearly so, as the other portions of the shank, for the purposes set forth.

Signed by me this 30th day of December, A. D. 1874.

GEO. H. BLELOCH.

Witnesses:

STEPHEN E. SEYMOUR,

EDWIN L. KNIGHT.